

the Voyage of the Mayflower

Prevailing Ocean Currents →

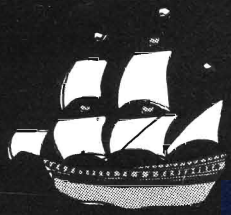
Prevailing Winds → → →

June 12, Week 8
Plymouth



June
Week

Mayflower I



CADMEAN Discover

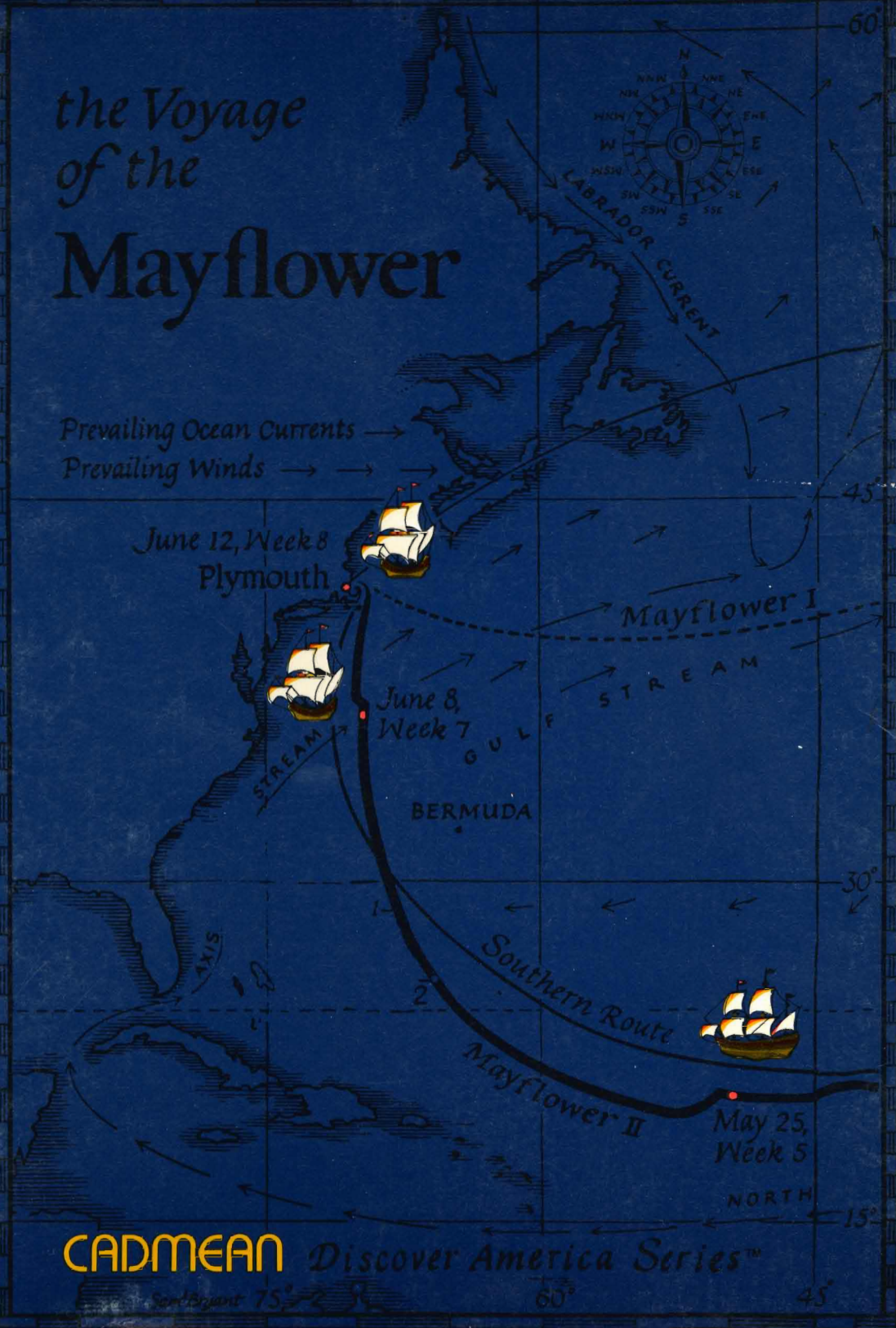
Sam Bryant 75

the Voyage of the **Mayflower**



CADMEAN

the Voyage of the Mayflower



CADMEAN Discover America Series™

Scale 1:100,000 75° 60° 45°



The Voyage of the Mayflower

From a distance of more than 350 years it's easy to forget the danger and hardship that the Pilgrims endured crossing the treacherous Atlantic in the original Mayflower. They set sail with limited information, crude navigation tools, and charts that were only rough sketches. Putting their lives and future into the hands of God and Captain Christopher Jones, they voyaged into the unknown. Without their steady courage the America of today would be a far different place. That they survived at all was remarkable. That they founded a successful colony against great odds is a testament to the strength and stubbornness of their faith and character.

The Pilgrims left Leyden and England for the New World in order to live their faith freely. The fact that they ended their voyage in Massachusetts rather than Virginia as they had planned turned out to be a blessing. Their freedom to worship and conduct their lives on their own terms was greater in the Bay Colony than it could have been elsewhere. Their struggles and triumphs set the direction of all that was to follow.

When Alan Villiers and his crew sailed the Mayflower II across the ocean in 1957, they experienced a reality close to the original voyage and gave us a new view of great oceans and tiny ships. As you make the voyage in your own Mayflower, remember the brave dreamers who have gone before you and made their mark on history.

Welcome aboard Captain. May you do as well as they did. Godspeed.

A HISTORY OF MARINE NAVIGATION

W. G. MAY

W. W. NORTON & COMPANY N. Y.

THIS IS SAILING - A COMPLETE COURSE

RICHARD CREAGH-OSBORNE

SAILBOOKS, INC. BOSTON 1980

THE COMPLETE BEGINNER'S GUIDE TO SAILING

A. H. DRUMMOND, JR.

DOUBLEDAY AND CO. N. Y. 1971

ENCYCLOPEDIA OF SAILING

EDITORS OF YACHT RACING & CRUISING

HARPER & ROW, N. Y. 1978

BOATING WEATHER

SALLY TOWNSEND AND VIRGINIA ERICSON

DAVID MCKAY COMPANY N. Y. 1978

INSTANT WIND FORECASTING

ALAN WATTS

DOOD, MEAD & COMPANY N. Y. 1975

WEATHER WISDOM

ALBERT LEE

DOUBLEDAY & CO. N. Y. 1976

BIBLIOGRAPHY

THE MAYFLOWER
KATE CARRBY
STEIN & DAY 1974 NEW YORK

THE SECOND MAYFLOWER ADVENTURE
WARWICK CHARLTON
BOSTON LITTLE, BROWN 1957

1
NATIONAL GEOGRAPHIC

NAVIGATION DICTIONARY
U.S. NAVAL GEOGRAPHIC OFFICE
U.S. GOV'T PRINTING OFFICE: 1969

910.45
Vi 3522
p09

R-623.89
Ba

623.8
Vi

W. O. Ocean

THE VISUAL ENCYCLOPEDIA OF NAUTICAL TERMS UNDER SAIL
BASIL W. BATHS ED.
CROWN PUBLISHERS INC. NEW YORK 1978

ALAN VILLIERS

→ WILD OCEAN (The Story of the North Atlantic and the men who sailed it)
McGraw-Hill, N.Y. 1957

→ MEN SHIPS AND THE SEA Villiers and others
NATIONAL GEOGRAPHIC SOCIETY 1962

THE WAY OF A SHIP
CHARLES SCRIBNER'S SONS N.Y. 1953

Ko 551.5
57
623
LE

BIBLIOGRAPHY : Mayflower 1620 Crossing

- Banks, Charles E. The English Ancestry and Homes of the Pilgrim Fathers.
Baltimore : Genealogical Pub. Co., 1980.
- Bradford, William. Of Plymouth Plantation, 1620-1647. New York : Alfred
A. Knopf, 1952. Samuel E. Morison, ed.
- Higginson, Francis. "Higginson's Journal of his Voyage to New England."
in Young, Alexander. Chronicles of the First Planters of the Colony
of Massachusetts Bay. Boston : Little & Brown, 1846.
- Josselyn, John. "An Account of Two Voyages to New England." in
Collections of the Massachusetts Historical Society. Ser.III.
Vol. 3. Cambridge : Metcalf & Co, 1833.
- Thrower, W.R. Life at Sea in the Age of Sail. London : Phillimore, 1972.
- Waters, D.W. The Art of Navigation in England in Elizabethan and Early
Stuart Times. New Haven : Yale University Press, 1958.
- Willison, George F. Saints and Strangers. New York : Reynal & Hitchcock, 1945.
- Young, Alexander. Chronicles of the Pilgrim Fathers of the Colony of Plymouth.
Boston : Little & Brown, 1844.

The Voyage of The Mayflower

Type: Educational Simulation.

Documentation: Internal Only. Includes historical narrative, instructions, reading and vocabulary lists.

Author: Cadmean Corporation - part one of the "Discover America" series.

System: Commodore 64.

Media: Disk.

Suggested Retail Price: \$29.00

Description: The Voyage of The Mayflower is a simulated recreation of the voyage of 1620 from Plymouth, England to Plymouth, Massachusetts. The simulation has full color graphics and sound and is organized on five progressively difficult levels. The participant must organize and allocate supplies of food, drink, and supplies both before and during the voyage.

Representations of actual ocean currents, prevailing winds and other natural phenomena are provided to challenge the navigation and sailing skills of the voyager. As the difficulty levels increase more historical, geographical and meteorological knowledge is required to achieve success.

Function: The program stimulates interest in the settlement of America, the challenges of transoceanic voyaging under sail and creates a multitude of decision making opportunities. Simultaneous exposure to navigation, meteorology, geography and history fosters the development of logical, strategical, tactical and research skills and provides a context in which to use those skills.

1/5/11	150,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000
2/5/11	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000
3/5/11	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000
4/5/11	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000
5/5/11	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000
6/5/11	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000
7/5/11	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000
8/5/11	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000	1,700,000
9/5/11	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000	1,700,000	1,800,000
10/5/11	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000	1,700,000	1,800,000	1,900,000
11/5/11	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000	1,700,000	1,800,000	1,900,000	2,000,000
12/5/11	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000	1,700,000	1,800,000	1,900,000	2,000,000	2,100,000

Ken Ludwig

Year 2

ASSUMPTIONS: RETAIL PRICE \$15 UNIT

NUMBER OF TITLES 14 INCREASING TO 100 IN NOVEMBER

GROSS INCOME \$6 PER UNIT SOLD

C.O.G.S \$4 UNIT INCLUDES PUBLICATION AND PACKAGING

24000 UNITS PER TITLE SOLD

ROYALTIES TO TEAMS 20% OF NET PROFIT

UNITS MO DEC 7375 HR ONE	J	F	M	A	M	J	J	A	S	O	N	D
NUMBER TITLES	14	→	→	25	→	40	→	70	→	100	→	→
UNITS SOLD	28K	→	→	50K	→	80K	→	140K	→	200K	→	1,214K
INCOME \$6 UNIT	168K	→	→	300K	→	480K	→	840K	→	1,200K	→	7,284K
C.O.G.S	112K	→	→	200K	→	320K	→	560K	→	800K	→	4,856K
GROSS PROFIT	56K	→	→	100K	→	160K	→	280K	→	400K	→	2,428K
EXPENSES	50K	→	→	60K	→	80K	→	100K	→	150K	→	1,030K
NET BEFORE ROYALTIES	6K	→	→	40K	→	80K	→	180K	→	250K	→	1,398K
ROYALTIES	1.2K	→	→	8K	→	16K	→	36K	→	50K	→	271.6K
NET PROFIT	4.8K	→	→	32K	→	64K	→	144K	→	200K	→	1,126.4K

YEAR 2 ALTERNATE 6 BOTTLES — 60 BOTTLES

	J	F	M	A	M	J	J	A	S	O	N	D	
# BOTTLES	6	6	10	→	20	→	40	→	60				
# UNITS SOLD	12K	12K	20K	→	40K	→	80K	→	120K				564K
INCOME \$/UNIT	72K	72K	120K	→	240K	→	480K	→	720K				3,384K
C.O.G. % U.	48K	48K	80K	→	160K	→	320K	→	480K				2,256K
GROSS PROFIT	24K	24K	40K	→	80K	→	160K	→	240K				1,128K
EXPENSES	32K	32K	32K	→	44K	→	50K	→	60K				502K
NET BEFORE ROYALTIES	(8K)	(8K)	8K	→	36K	→	110K	→	180K				626K
ROYALTIES	0	0	0	→	7.2K	→	22K	→	36K				123.6K
NET PROFIT (LOSS)	(8K)			→	28.8K	→	88K	→	144K				402.4

KEN LEWIS

STIA SYSTEMS AND ASSOCIATES
 ENTREPRENEURIAL TRAINING PROGRAM

Week 4 - Days 3,4,5
 STUDENT HANDOUT # 35

Scenario 2
 WITHOUT CAPITAL
 CASE BASIS

PREVIOUS YEAR AND PROJECTED PROFIT AND LOSS STATEMENT 1983

	Past Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
SALES										300	300	300	300	1200
COST OF SALES										150	150	150	150	600
GROSS PROFIT										150	150	150	150	600
CONTROLLABLE EXPENSES:														
Salaries														
Payroll Taxes														
Electricity COMPUTERS ETC.								50	50	50	50	50	50	300
Advertising											150			150
Automobile								20	20	20	20	20	20	160
Dues and Subscriptions														
Legal and Accounting														
Office Supplies								10	10	10	10	10	10	60
Telephone								20	20	20	20	20	20	120
Utilities														
Miscellaneous								10	10	10	10	10	10	60
TOTAL CONTROLLABLE EXPENSES								110	110	110	260	110	110	810
FIXED EXPENSES:														
Depreciation														
Insurance														
Rent														
Taxes and Licenses														
Loan Payments/Interest														
TOTAL FIXED EXPENSES														
TOTAL EXPENSES														810
NET PROFIT (LOSS) (before taxes)														(210)

OK

Summer Royalties for 2007 of Net

Ken Ludwig

STIA SYSTEMS AND ASSOCIATES
ENTREPRENEURIAL TRAINING PROGRAM

Week 4 - Days 3,4,5

STUDENT HANDOUT # 35

PREVIOUS YEAR AND PROJECTED PROFIT AND LOSS STATEMENT

: 1984

	Past Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
Scenario 2 WITHOUT CAPITAL TAX SHELTER Sold 14 Aug.														
SALES	1200	3800	3800	5000	10000	15000	15000	18000	25500	27500	29500	37500	37500	326000
COST OF SALES	600	650	650	0	1250	2500	2500	4000	4500	5000	5500	20000	20000	67500
GROSS PROFIT	1600	3150	3150	5000	8750	12500	12500	14000	21000	22500	24000	17500	17500	250000
CONTROLLABLE EXPENSES:														
Salaries		1000	1000	1000	2000	2000	2000	4000	7000	16000	10000	11000	11000	120000
Payroll Taxes		300	300	300	600	600	600	600	2100	3000	3000	3300	3300	33000
Security Computers		300	200	300	600	600	600	4000	1000	1000	1000	1000	1000	15000
Advertising		150	150	150	500	500	500	500	4000	15000	15000	15000	15000	150000
Automobile		120	20	20	20	20	20	100	800	800	800	800	800	8000
Dues and Subscriptions									500	500	500	500	500	5000
Legal and Accounting					200	1000	2000	2000	2000	2000	2000	2000	2000	20000
Office Supplies		60	10	10	20	20	20	40	200	200	250	250	250	2500
Telephone		120	25	25	25	25	25	150	300	450	450	500	500	5000
Utilities														
Miscellaneous		60	15	15	100	100	100	100	100	100	100	100	100	1000
TOTAL CONTROLLABLE EXPENSES	810	2970	2500	2500	5470	7345	8315	12090	32000	33000	32650	32200	32200	333000
FIXED EXPENSES:														
Depreciation														
Insurance				100	100	100	100	100	100	100	100	100	100	1000
Rent				800	800	800	800	800	800	800	800	800	800	8000
Taxes and Licenses				100	100	100	100	100	100	100	100	100	100	1000
Loan Payments/Interest				1000	1000									10000
TOTAL FIXED EXPENSES				1000	1000									10000
TOTAL EXPENSES	810			1000	1000									10000
NET PROFIT (LOSS) (before taxes)	2100	180	630	1400	2280	4185	3185	1010	12000	11650	9650	34300	34300	47000

NOTE: ELIMINATE TAX SHELTER
DELETE 8980 Legal & Accounting
ADD 9000s NOTE INTEREST 20%
750 INTEREST
1500 principle sent to Dec. 1.

Kern Ludwig

TAX SHELTER

Savings
Legal
20% of

4750

STIA SYSTEMS AND ASSOCIATES
 ENTREPRENEURIAL TRAINING PROGRAM

Week 4 - Days 3,4,5

STUDENT HANDOUT # 35

is this right?

no income

PREVIOUS YEAR AND PROJECTED PROFIT AND LOSS STATEMENT
 SCENERIO 7
 WITH INVENTURES

1982

	Past Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
SALES														
(Cost of Sales)														
GROSS PROFIT														
CONTROLLABLE EXPENSES:														
Salaries														
Payroll Taxes / BENEFITS														
Comptrol Per Annuity Supplies														
Advertising														
Automobile														
Dues and Subscriptions														
Legal and Accounting														
Office Supplies														
Telephone														
Utilities														
Miscellaneous														
TOTAL CONTROLLABLE EXPENSES														
FIXED EXPENSES:														
Depreciation														
Insurance														
Rent														
Taxes and Licenses														
Loan Payments/Interest														
TOTAL FIXED EXPENSES														
TOTAL EXPENSES														
NET PROFIT (LOSS) (before taxes)														

OK

SUBTRACT
 PROJECTED 20% OF NET

Realizing

↑

STIA SYSTEMS AND ASSOCIATES
ENTREPRENEURIAL TRAINING PROGRAM

Week 4 - Days 3,4,5

STUDENT HANDOUT # 35

PREVIOUS YEAR AND PROJECTED PROFIT AND LOSS STATEMENT

1984

	Past Year	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
SALES		2500	2500	2500	7500	7500	7500	17500	20000	45000	70000	100000	130000	412500
(COST OF SALES)														
GROSS PROFIT														
CONTROLLABLE EXPENSES:														
Salaries		10000	10000	10000	13000	13000	13000	16000	16000	16000	16000	19000	19000	19000
Payroll Taxes		3000	3000	3000	3900	3900	3900	4800	4800	4800	5700	5700	5700	5700
Electricity Computers ETC.		2000	500	500	2000	500	500	2000	500	500	500	2000	500	500
Advertising		500	500	750	2500	2500	2500	5000	5000	5000	7500	15000	15000	5000
Automobile		100	100	100	100	100	100	250	250	250	250	250	250	800
Dues and Subscriptions		50	50	50	150	150	150	150	150	150	200	200	200	200
Legal and Accounting		250	250	250	250	250	250	250	250	250	250	250	250	250
Office Supplies		250	250	250	250	250	250	250	250	250	250	250	250	250
Telephone		250	250	250	350	350	350	500	500	500	500	1000	1000	750
Utilities		200	200	200	200	200	200	200	200	200	200	200	200	200
Miscellaneous Demos		150	150	150	150	150	150	150	150	150	150	150	150	150
TOTAL CONTROLLABLE EXPENSES		16750	15250	15500	22850	21600	21600	29800	28300	28600	36000	43335	43335	323600
FIXED EXPENSES:														
Depreciation														88815
Insurance		100	100	100	100	100	100	100	100	100	100	100	100	100
Rent		750	750	750	750	750	750	750	750	750	750	750	750	750
Taxes and Licenses		100	100	100	100	100	100	100	100	100	100	100	100	100
Loan Payments/Interest		0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FIXED EXPENSES		950	950	950	950	950	950	950	950	950	950	950	950	950
TOTAL EXPENSES		17700	16200	16450	23800	22550	22550	30750	29200	29550	37000	44285	44285	323600
NET PROFIT (LOSS) (before taxes)		7300	8800	8550	4700	5450	5400	14250	11800	15450	33000	55715	85715	100000

171650
214500.50

Subtract
Payments & cost of NET

Ken Kenway

MARKETING STRATEGY

I. NATURE OF BUSINESS

- A. Internal - Develop software "tools" to facilitate the production of educational simulation programs.
- B. External - Develop, manufacture and market educational simulation programs designed to be created in series.

II. TARGET MARKETS IN ORDER OF PENETRATION - ALL ARE NATIONAL

- A. Home computer owners of Commodore 64 hardware
(440,000 in place by 12/83)
- B. Home computer owners of Vic 20 hardware
(2.5 million in place by 12/83)
- C. Home computer owners of CPM based hardware
(4 million units in place by 12/83)
- D. All other personal computers with at least
.5 million units in place

III. MARKETING STRATEGY IN ORDER OF DEPLOYMENT EXCEPT WHERE NOTED

- A. Marketing through software distributor offering complete production and packaging capability. Small mail order effort as funds allow.
- B. Distribution through national distributors - Cadmean to produce and package (This will be contracted service to specialty firm) advertising in selected magazines starting with Commodore Gazette.
- * C. Distribution by Commodore itself as part of "bundle" or as after sale. Co-op advertising with Commodore.
- D. Direct mail by us.
- * E. Mail order through catalogue sent by others.
- F. Mail order through catalogue sent by us.
- G. National distribution by Cadmean supported by full scale ad campaign.
- * H. Sales to major retail chains through distributors.

IV. MAJOR COMPETITORS IN ORDER OF PERCEIVED IMPORTANCE

- A. CBS - CCW Partnership
- B. Spinnaker
- C. Edu-ware
- D. Walt Disney
- E. All others

Cadmean's competitive edge will be its ability to produce exceptional education programs in series of a unique nature.

- * May occur simultaneously with steps A & B.

The First Product

Name: The Voyage of The Mayflower - Part one of the "Discover America" series of Cadmean Corporation Software.

Type: Educational simulation.

Function: To stimulate curiosity about the settlement of America through simulated experience. To provide simultaneous exposure to the subjects of navigation, resource allocation, weather, history, geography, logic, strategy and tactics, and research. To experience the process of decision making and the effects which are the consequence of those decisions.

System: Commodore 64 to be followed by Vic 20, Apple, CPM Systems and others. Utilize disc or tape. Color monitor recommended. Specs will change for Vic 20 and other makes.

Media: Discs and cassettes. Cartridges will be evaluated.

Language: Forth - Used because it has most of the advantages of assembly language while avoiding programmer inefficiencies.

Documentation: Internal only - the programs will be complete in and of themselves.

Development Status: Conceptual and simulation design of Voyage completed for test by early August. Ready for market early September for Commodore 64. Other systems to follow at bi-monthly intervals concurrent with development of "Plymouth Colony" part 2 of "Discover America" series.

Authorship: We are a corporation which holds full copyright to those programs. Copyrights are registered immediately on completion of programs.

Biographies of Principals

Kenneth W. Ludwig

Ken Ludwig, the President of Cadmean Corporation has 20 years of experience as a community educator and businessman. He has taught in environments as diverse as mental institutions and graduate schools. He spent 4 years working for Michigan State University developing a pilot program for educating small farmers. As part of that program he worked with simulations, which involved the public in land use planning issues. He has written articles and manuals on community organizing, conference planning, restoring classic car interiors, the interactions of farm suppliers with their customers, and the customs of rural living among other publications.

Mr. Ludwig's commercial activities have included farming, providing technical support to non-profit organizations, manufacturing, exporting, and Cadmean Corporation. He has held equity positions in all these businesses, as well as primary operating responsibilities.

Mr. Ludwig's education has been as diverse as his other activities; including undergraduate work at Hofstra College, and the Emily Carr College of Art. He has done work through the Pennsylvania University extension program in agriculture, the Michigan State University Management Institute, Stia Systems Entrepreneurial Training Program and is even a graduate in Farrier Science. He has served apprenticeships in both sculpture and cabinetmaking.

Laurence A. Boyd II

Laurence Boyd, the Vice President of Research and Development of Cadmean Corporation, has been involved with programming and computer use since 1959. His experience ranges from the smallest systems to some of the largest and includes the development of firmware microcode through applications program use. He has developed and maintained large and small applications, operating systems and in/out drivers.

Mr. Boyd has pioneered in several areas of computer application. These included applying the computer to regular course-work as an undergraduate at Michigan Tech. and applying computer technology to real world engineering problems both as a graduate student at the University of Michigan and in industry. This latter work was begun under the direction of Dr. Frank Westerveldt, now of Wayne State University.

Mr. Boyd was a founder of Comshare, a pioneering time sharing service firm. While at Comshare, Boyd developed the second commercial BASIC compiler in existence, an interactive, one pass compiler which fits in 4K words of computer memory. He was responsible for day to day maintenance and development of the Comshare time sharing operating system during its early commercial use. Mr. Boyd was also an early pioneer in the use of computer graphics in solving engineering problems both at the University of Michigan and Gilbert/Commonwealth Engineering.

Mr. Boyd has been a farmer all his life and brings that experience to bear on his work within the computer industry.

CADMEAN
corporation

CADMEAN SOFTWARE SIMULATIONS

Computer Learning for Families

FOR INFORMATION ONLY

THIS IS NOT A PROSPECTUS

THIS IS NOT AN OFFER TO SELL

This document is for information only. The contents are confidential.
Please do not reproduce any or all of it. Thank you.
If you wish further information, contact our President Ken Ludwig at
309 Koch Street, Ann Arbor, Michigan 48103 - (313) 994-0845.

ann arbor, michigan

V. SALES PROJECTIONS:

First months sales projections are for 500 units to be sold through a national distributor who will sell under its own name. The 500 unit figure is based on sales of 1 program to each of 500 retail computer stores. There are 7,000 retail computer stores nationwide, 3500 of which are significant sellers of software. Informal surveys of local independent retailers indicate average sales of software to be one or two units per month per title with big sellers reaching sales of five units per month.

All indications are (from trade shows, trade publications, interviews with retailers and observations of advertising shift) that educational software will be the next great wave of sales to the home market. Teachers, buying for their classes outside the school budget are felt to be an important market segment.

July 22, 1983

Dear Mr. Skolnik,

Enclosed is the information you requested in our phone conversation a couple of weeks ago. We will be producing programs in series in a number of subject areas in order to achieve the broadest market base possible. Our first product is on schedule and, bearing significant problems will be ready to market it in early September.

We are interested in talking to you about representing us and look forward to your comments. Thank you!

*C/o Greentree Assoc. #2320
825 3rd Ave.
N.Y.C.*

CAPITAL NEEDS

Cadmean Corporation can effectively employ up to \$250,000 in outside capital. In order to accelerate our projected three-year plan, we need to employ additional people, purchase computers and software and advance the marketing/promotion timeline.

Additional programmers can be used to develop more quickly the software tools required to meet our goal of 200 programs produced annually and to translate programs to other systems. Simulation subjects can be developed through using either consulting fees or advances against royalties. Our need for additional capital is not just to operate the company, which we are able to do in any event, but to shorten the amount of time required to achieve our projections.

Cadmean's principals are well aware of the legitimate need of investors to protect their investments. We view investors as partners in the enterprise and are willing to negotiate investment terms that are satisfactory to all parties and which will allow Cadmean Corporation to reach it's maximum potential in the shortest possible time consistent with good management.

CADMEAN
corporation

August 4, 1983

Dear Dr. Cohen,

David Saffer, an old and dear friend of mine, suggested that you might have some investment interest in the enclosed information circular. We are building a company with new approaches to educational software and expect to ignite curiosity and stimulate learning in quite a few people in the next few years.

Our market research has identified quite a bit of interest in what we are doing. Manufacturers, distributors, and retailers are eager to work with us to achieve the widest distribution of Cadmean products possible. I would be happy to discuss the company with you in greater detail at your convenience.

Sincerely,

Ken Ludwig
President

KL:kk

ann arbor, michigan

July 28, 1983

Mr. Russell Powell
C/o International Gamers Association
P.O. Box 2514
La Guna Hills, California 92653

Dear Russell,

Here is the information you requested about our company and it's products. There should be enough here to determine if and how you might be of use to us. We'll look forward to hearing from you. Thanks!

Sincerely,

Ken Ludwig

kk

Cadmean Corporation
309 Koch
Ann Arbor, Michigan 48103

July 19, 1983

Midnight Oil
P.O. Box 1808
Beaverton, Oregon 97075

Dear Sir or Madam,

Please send us your catalogue on a marketing agreement.
We are a producer of educational software looking for new
distribution and marketing channels.

Thank you!

Sincerely,

Ken Ludwig,
President

KL:kk

2/21/82

For the sum of \$1.00 (one dollar) and other valuable consideration I, James Chambers sell my one third interest in Cadmean Corporation to Ken & Audrey and Lawrence Boyd II.

James W. Chambers

Wholesale Video Game Company - Petrol

CADMEAN CORPORATION

PRO-FORMA INCOME & EXPENSE STATEMENT

SEPTEMBER - DECEMBER 1983

<u>SALES</u>	\$31,200	100%
COST OF GOODS SOLD	<u>7,800</u>	25.0%
GROSS PROFIT	\$23,400	75.0%
 <u>LESS OPERATING EXPENSES</u>		
SALARIES	\$ 2,000	6.4%
BENEFITS	600	1.9%
COMPUTERS & SOFTWARE	3,000	9.4%
ADVERTISING	6,500	20.8%
SUBSCRIPTIONS	100	.3%
OFFICE SUPPLIES	300	1.1%
TELEPHONE	300	1.1%
CREDIT CARD COSTS @ 3%	936	3.0%
LEGAL AND ACCOUNTING	<u>200</u>	.6%
TOTAL EXPENSES	\$13,936	44.6%
 <u>NET PROFIT BEFORE TAXES</u>	 \$ 9,464	 30.4%

CADMEAN CORPORATION

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SUBSCRIPTIONS	100	.3%
OFFICE SUPPLIES	300	1.1%
TELEPHONE	300	1.1%
CREDIT CARD COSTS @ 3%	936	3.0%
LEGAL AND ACCOUNTING	<u>200</u>	.6%
TOTAL EXPENSES	\$13,936	44.6%
 <u>NET PROFIT BEFORE TAXES</u>	 \$ 9,464	 30.4%

The First Product

Name: The Voyage of The Mayflower - Part one of the "Discover America" series of Cadmean Corporation Software.

Type: Educational simulation.

Function: To stimulate curiosity about the settlement of America through simulated experience. To provide simultaneous exposure to the subjects of navigation, resource allocation, weather, history, geography, logic, strategy and tactics, and research. To experience the process of decision making and the effects which are the consequence of those decisions.

System: Commodore 64 to be followed by Vic 20, Apple, CPM Systems and others. Utilize disc or tape. Color monitor recommended. Specs will change for Vic 20 and other makes.

Media: Discs and cassettes. Cartridges will be evaluated.

Language: Forth - Used because it has most of the advantages of assembly language while avoiding programmer inefficiencies.

Documentation: Internal only - the programs will be complete in and of themselves.

Development Status: Conceptual and simulation design of Voyage completed for test by early August. Ready for market early September for Commodore 64. Other systems to follow at bi-monthly intervals concurrent with development of "Plymouth Colony" part 2 of "Discover America" series.

Authorship: We are a corporation which holds full copyright to those programs. Copyrights are registered immediately on completion of programs.

Biographies of Principals

Kenneth W. Ludwig

Ken Ludwig, the President of Cadmean Corporation has 20 years of experience as a community educator and businessman. He has taught in environments as diverse as mental institutions and graduate schools. He spent 4 years working for Michigan State University developing a pilot program for educating small farmers. As part of that program he worked with simulations, which involved the public in land use planning issues. He has written articles and manuals on community organizing, conference planning, restoring classic car interiors, the interactions of farm suppliers with their customers, and the customs of rural living among other publications.

Mr. Ludwig's commercial activities have included farming, providing technical support to non-profit organizations, manufacturing, exporting, and Cadmean Corporation. He has held equity positions in all these businesses, as well as primary operating responsibilities.

Mr. Ludwig's education has been as diverse as his other activities; including undergraduate work at Hofstra College, and the Emily Carr College of Art. He has done work through the Pennsylvania University extension program in agriculture, the Michigan State University Management Institute, Stia Systems Entrepreneurial Training Program and is even a graduate in Farrier Science. He has served apprenticeships in both sculpture and cabinetmaking.

Laurence A. Boyd II

Laurence Boyd, the Vice President of Research and Development of Cadmean Corporation, has been involved with programming and computer use since 1959. His experience ranges from the smallest systems to some of the largest and includes the development of firmware microcode through applications program use. He has developed and maintained large and small applications, operating systems and in/out drivers.

Mr. Boyd has pioneered in several areas of computer application. These included applying the computer to regular course-work as an undergraduate at Michigan Tech. and applying computer technology to real world engineering problems both as a graduate student at the University of Michigan and in industry. This latter work was begun under the direction of Dr. Frank Westerveldt, now of Wayne State University.

Mr. Boyd was a founder of Comshare, a pioneering time sharing service firm. While at Comshare, Boyd developed the second commercial BASIC compiler in existence, an interactive, one pass compiler which fits in 4K words of computer memory. He was responsible for day to day maintenance and development of the Comshare time sharing operating system during its early commercial use. Mr. Boyd was also an early pioneer in the use of computer graphics in solving engineering problems both at the University of Michigan and Gilbert/Commonwealth Engineering.

Mr. Boyd has been a farmer all his life and brings that experience to bear on his work within the computer industry.

CADMEAN
corporation

CADMEAN SOFTWARE SIMULATIONS

Computer Learning for Families

FOR INFORMATION ONLY

THIS IS NOT A PROSPECTUS

THIS IS NOT AN OFFER TO SELL

This document is for information only. The contents are confidential.
Please do not reproduce any or all of it. Thank you.
If you wish further information, contact our President Ken Ludwig at
309 Koch Street, Ann Arbor, Michigan 48103 - (313) 994-0845.

ann arbor, michigan

MARKETING STRATEGY

I. NATURE OF BUSINESS

- A. Internal - Develop software "tools" to facilitate the production of educational simulation programs.
- B. External - Develop, manufacture and market educational simulation programs designed to be created in series.

II. TARGET MARKETS IN ORDER OF PENETRATION - ALL ARE NATIONAL

- A. Home computer owners of Commodore 64 hardware
(440,000 in place by 12/83)
- B. Home computer owners of Vic 20 hardware
(2.5 million in place by 12/83)
- C. Home computer owners of CPM based hardware
(4 million units in place by 12/83)
- D. All other personal computers with at least
.5 million units in place

III. MARKETING STRATEGY IN ORDER OF DEPLOYMENT EXCEPT WHERE NOTED

- A. Marketing through software distributor offering complete production and packaging capability. Small mail order effort as funds allow.
- B. Distribution through national distributors - Cadmean to produce and package (This will be contracted service to specialty firm) advertising in selected magazines starting with Commodore Gazette.
- * C. Distribution by Commodore itself as part of "bundle" or as after sale. Co-op advertising with Commodore.
- D. Direct mail by us.
- * E. Mail order through catalogue sent by others.
- F. Mail order through catalogue sent by us.
- G. National distribution by Cadmean supported by full scale ad campaign.
- * H. Sales to major retail chains through distributors.

IV. MAJOR COMPETITORS IN ORDER OF PERCEIVED IMPORTANCE

- A. CBS - CCW Partnership
- B. Spinnaker
- C. Edu-ware
- D. Walt Disney
- E. All others

Cadmean's competitive edge will be its ability to produce exceptional education programs in series of a unique nature.

- * May occur simultaneously with steps A & B.

V. SALES PROJECTIONS:

First months sales projections are for 500 units to be sold through a national distributor who will sell under its own name. The 500 unit figure is based on sales of 1 program to each of 500 retail computer stores. There are 7,000 retail computer stores nationwide, 3500 of which are significant sellers of software. Informal surveys of local independent retailers indicate average sales of software to be one or two units per month per title with big sellers reaching sales of five units per month.

All indications are (from trade shows, trade publications, interviews with retailers and observations of advertising shift) that educational software will be the next great wave of sales to the home market. Teachers, buying for their classes outside the school budget are felt to be an important market segment.

CADMEAN CORPORATION

PRO-FORMA INCOME & EXPENSE STATEMENT

SEPTEMBER - DECEMBER 1983

<u>SALES</u>	\$31,200
COST OF GOODS SOLD	<u>7,800</u>
GROSS PROFIT	\$22,400
 <u>LESS OPERATING EXPENSES</u>	
SALARIES	\$ 2,000
BENEFITS	600
COMPUTERS & SOFTWARE	3,000
ADVERTISING	6,500
SUBSCRIPTIONS	100
OFFICE SUPPLIES	300
TELEPHONE	300
CREDIT CARD COSTS @ 3%	936
LEGAL AND ACCOUNTING	<u>200</u>
TOTAL EXPENSES	\$13,936
NET PROFIT BEFORE TAXES	\$ 8,464

ASSUMPTIONS: Direct mail 52,000 pieces @ \$125 per 1,000
Cost of discs & cassettes and postage \$5.00 each
Selling price = \$20.00 per unit
3% return on mailing

CADMEAN CORPORATION

CASH FLOW PROJECTION

SEPTEMBER - DECEMBER 1983

	SEP	OCT	NOV	DEC
CASH IN	\$3,600	3,600	12,000	12,000
CASH OUT	<u>3,350</u>	<u>1,850</u>	<u>8,000</u>	<u>8,550</u>
NET	\$ 250	1,750	4,000	3,450
CUMULATIVE	\$ 250	2,000	6,000	9,450

CADMEAN CORPORATION

PRO-FORMA INCOME & EXPENSE STATEMENT

1984

<u>SALES</u>	\$328,100
COST OF GOODS SOLD	<u>67,150</u>
GROSS PROFIT	\$260,950
<u>OPERATING EXPENSES</u>	
SALARIES	62,000
BENEFITS	18,600
COMPUTERS & SOFTWARE	10,900
ADVERTISING	90,000
AUTOMOBILE	4,220
OFFICE SUPPLIES	1,150
TELEPHONE	2,625
CREDIT CARD COSTS @ 3%	9,843
LEGAL & ACCOUNTING	<u>1,800</u>
TOTAL OPERATING EXPENSES	\$201,138
<u>FIXED EXPENSES</u>	
INSURANCE	1,200
RENT	10,000
TAX & LICENSES	<u>1,000</u>
TOTAL FIXED EXPENSES	12,200
TOTAL EXPENSES	213,338
NET PROFIT BEFORE ROYALTIES	47,612
ROYALTIES @ 20% OF NET	9,522
NET PROFIT BEFORE TAXES	38,090

CADMEAN CORPORATION

PRO-FORMA INCOME & EXPENSE STATEMENT

1985

<u>SALES</u>	\$3,384,000
COST OF GOODS SOLD	<u>2,256,000</u>
GROSS PROFIT	\$1,128,000
EXPENSES	\$ 502,000
NET BEFORE ROYALTIES	\$ 626,000
ROYALTIES @ 20% OF NET	\$ 123,600
NET PROFIT (LOSS) BEFORE TAXES	\$ 402,400

1986

<u>SALES</u>	\$7,284,000
COST OF GOODS SOLD	<u>4,856,000</u>
GROSS PROFIT	\$2,428,000
EXPENSES	\$1,030,000
NET BEFORE ROYALTIES	\$1,398,000
ROYALTIES	279,600
NET PROFIT (LOSS) BEFORE TAX	\$1,118,400

ASSUMPTIONS

MARKET PENETRATION	.5% by 1986
COST OF DISCS AND CASSETTES	\$5.00 Unit
SELLING PRICE	\$20.00 Unit 1984-5 \$15.00 Unit 1986
NUMBER OF TITLES	6/1984 60/1985 100/1986
STAFF OF 12 PERSONS BY 1986	

These projections include only sales through distributors. They do not include direct mail, publishing agreements or OEM agreements. No foreign sales are included.

CADMEAN
corporation

ann arbor, michigan

Cadmean Corporation can effectively employ up to \$250,000 in outside capital. In order to accelerate our projected three-year plan, we need to employ additional people, purchase computers and software and advance the marketing/promotion timeline.

Additional programmers can be used to develop more quickly the software tools required to meet our goal of 200 programs produced annually and to translate programs to other systems. Simulation subjects can be developed through using either consulting fees or advances against royalties. Our need for additional capital is not just to operate the company, which we are able to do in any event, but to shorten the amount of time required to achieve our projections.

Cadmean's principals are well aware of the legitimate need of investors to protect their investments. We view investors as partners in the enterprise and are willing to negotiate investment terms that are satisfactory to all parties and which will allow Cadmean Corporation to reach its maximum potential in the shortest possible time consistent with good management.

CAPITAL INVESTMENT BUDGET

CAPITAL BASE \$250,000

OPERATING EXPENSES

IDENTIFY TYPE OF PEOPLE

SALARIES - ~~5~~ PEOPLE ~~100,000~~ 80,000

32.0%

BENEFITS ~~30,000~~ 24,000

TOO HIGH

CONTRACTED LABOR / MOST ~~10,000~~ 14,200

AWFUL HIGH

ADVERTISING 82,000

DESCRIBE

COMPUTERS & SOFTWARE 12,000

WHAT

TYPE - How many?

TELEPHONE 2,625

Legal & Accounting 1800

Supplies 1150

TOTAL OPERATING EXPENSES 232,775

FIXED EXPENSES 12,200

WHAT FIXED EXP?

TOTAL EXPENSES 244,975
~~242,975~~

Contingency 25,025

10.0%

WHAT

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FRANK FAZERAS - BRIGLTON - MERRILL LYNCH

Sam
Bless
J.P.M.
BUS. School

Call Larry - Direct mail stuff.

TO DO

PROSPECTUS

INTRODUCTION

RULES 764-6885 764-6885

CALL, RYCUS, FUROT, HATHAWAY TORRES

COMMODORE GUY - MAILING LIST!!!

CALL SOFTWARE HOUSES

PLYMOUTH, ENGLAND

LONGITUDE

LATITUDE

~~MASS.~~

50.23N

4.10W

PLYMOUTH, MASS.

41.58N

70.40W



SIMULATION SOFTWARE

SOFTWARE SIMULATIONS

SOFTWARE STIMULATIONS

PC TELUMART INC.

(703) 352-0721

FALLAX, VA.

ON-LINE SOFTWARE LISTINGS NATIONWIDE

ZEN FLESH
ZEN BONES
↓
LAUREN

$100000 \times .03 = 3000 \times 20 = 60000 - 10000 = 50000 \text{ NET}$

FLORENCE WOLFE 1-(312)- WOLFECO. 372-2197

SAM BLESS

ASK ABOUT - Commission 64

~~525-4453~~

APPLE, OTHERS

KN6 -

~~664-3577~~

START 8600

LEAF 3800

START 800

3800

- 3800

4200 SOLD

COMMODORE 64 MAILING LIST - OWNERS
FAMILIES
LIST OF BUYERS OF SIMILAR PROD. WHO BUYER BY MAIL

Sam Brock - Marketing

FORMS OF DIRECT MAIL

LETTERS - MOST IMPORTANT

FOLDER (BROCHURE, BROCHURES ETC) - SUPPLEMENT LETTER (SOME MAILING TOO)

BOOKLET

CATALOG

ADVANTAGES

1. SELECTIVE

4. COST EFFICIENT - TARGETS AUDIENCES

2. TIMING

5. ACTION - MAKES IT EASY TO BUY

3. FLEXIBILITY

LOFC

LISTS 60% OF TIME - MOST IMPORTANT PART OF MAILING

\$30-50/1000

LISTS CAN BE BOUGHT, ^(BEST) RENTED, EXCHANGED OR COMPILED

1. SRDS - STANDARD RATE AND DATA SERVICES - BUSINESS LIBRARY

2. LIST HOUSES - ADVERTISE IN SRDS

3. LIST BROKERS - REPRESENT OWNERS OF LISTS - KNOW WHICH ONES WORK SRDS

FLORENCE WOLF - CHICAGO

4. COMPILED LISTS DIRECTORY OF DIRECTORIES - U of M LIBRARY

OFFER 20% OF TIME SPENT - TEST 1 THING AT A TIME! EASY ACCEPTANCES

FORMAT 15% OF TIME SPENT

COPY 5% OF TIME SPENT

KEEP TESTING !!

IN THE MAIL COST

\$55-\$70/1000 1 color including list & postage

CRM Q&A WRITER
SALES LETTER

PAUL BRIDGE INC. P.O. 139 HARTFORD WISC. 53027

LET ON LIST
DIRECT MAIL
BRIEFS

ACCTNG SYSTEMS

LOOSE

ADEQUATE / NEC.

DETAILED

EXTENSIVE

10000 MAILING = 1000 COST

5% RETURN = $5000 \times 25 = 12500$

COST = 5 UNIT 62500

12,500

- 3,500

9000

400000 = 20000

$\times 25$
100000
40000

500000

REPORTS

I ANNUAL

A.) TAXES - INCOME WITHHOLDING, PICA, FED & STATE

B.) FINANCIAL - BALANCE SHEET & PROFIT & LOSS

II QUARTERLY

A.) TAXES - ESTIMATED STATE & FEDERAL

B.) REPORTS TO BANKS - MAY/30

III MONTHLY

A.) TAXES - PAYMENTS

B.) FINANCIAL.

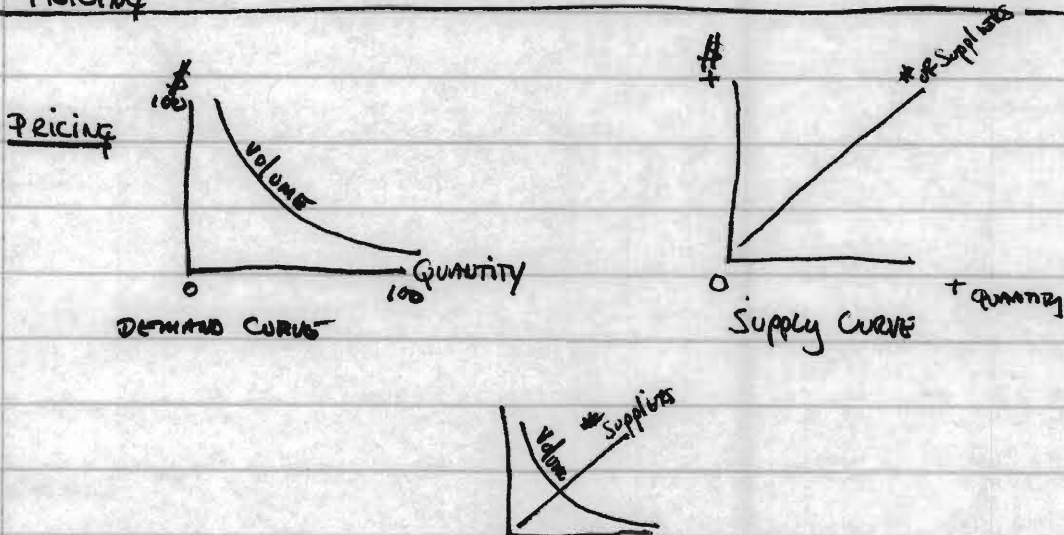
1. CASH FLOW

2. BALANCE SHEET

3. RATIOS

MARKETING MIX

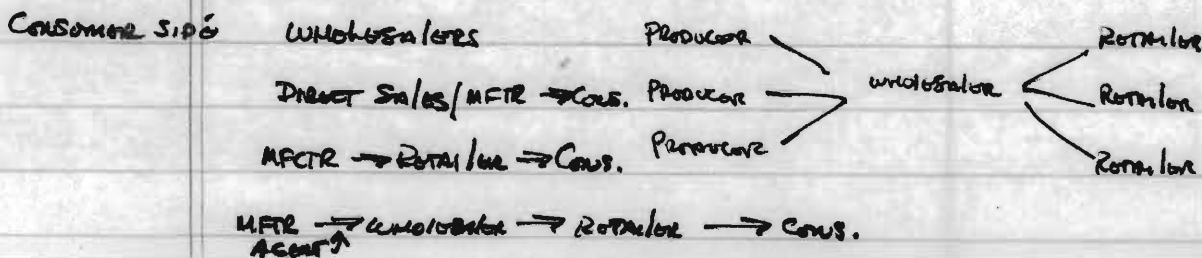
- MARKETING RESEARCH
- PRODUCT PLANNING
- PURCHASING - INDUSTRY CONTROL
- DISTRIBUTION
- CREDIT
- PROMOTION
- SALES
- PRICING



MARKETING RESEARCH

- SURVEY
- OBSERVATION - DISPLAY OR FEATURE ITEM
- SAMPLING
- DEMONSTRANCE ETC. IN LIBRARY

DISTRIBUTION



THIS SPACE FOR

DOODLING



MANUFACTURING DISTRIBUTION

MURR → SALES ENGINEER → USER

Retailing

35% of Retail outlets sell $\$30,000$ annually or less = 2.7% of total volume

70% of " " " less than $\$1,000,000$ annually sales

27% of " " " more than $\$1,000,000$ less than $\$1$ million

30% over $\$1,000,000$ sales = 44% of volume

Buyer Behavior

Physiological needs - First

Safety - Security, order, stability

Belonging, Love, Affection, Personal identification

Esteem, Success, Self Respect

Self Actualisation,

↓ Aesthetic Needs - Craving for Beauty

" TLC COMES AFTER BHT "

DAVID SHERKMAN 1953

Direct mail to
Retail Computer Stores?

Computer LAND LIST of Commodore Buyers
MAGAZ
ETC.

ACCOUNTING:

DEPRECIATION TYPES

STRAIGHT LINE

SUM OF YEARS $1+2+3+4+5=15$ $\text{Cost} \div 15 (C \div 15) \times 5 =$

ACCUMULATED COST RECOVERY SYSTEM (ACRS)

CAN USE DIFFERENT METHOD FOR DIFFERENT ITEMS

RL Polk & Co.

~~961-9476~~

RL Polk - Taylor

292-3200

PRICING: MARKUP PROFIT, COVER COSTS, BE COMPETITIVE

CREATIVE COMPUTING

ZIF - DAVIS

MAIL MARKETING

(212) 725-7545

GEOGRAPHIC

SROS





Promotional Strategy

SEE ABOUT AGENT!
SEE "DISCOVER AMERICA"
SERIES

Source

message

Destination

Good Communication

1. GAIN ATTENTION
2. REFER TO COMMON SUBJECT
3. AROUSE A NEED AND SHOW HOW TO MEET IT.

COLOMBUS
MAYFLOWER
PLYMOUTH COLONY
JAMESTOWN

Promotional Mix

ADVERTISING

CONSUMER PROMOTION (PRIZES, COUPONS ETC.)

COOPERATIVE ADVERTISING & DEALER PROMOTIONS

SHOWS & EXHIBITIONS

SERVICES

PERSONAL SELLING

Direct Selling

MUTUAL SATISFACTION OF
BUYER & SELLER

FULFILLING BUYER'S NEEDS

KNOW YOUR PRODUCT!

KNOW COMPETITION

ADVERTISABLE PRODUCTS

CAN BE DIFFERENTIATED FROM COMPETITION

HAS "HIDDEN" QUALITY THAT CAN BE TALKED ABOUT

VIEWS FAVORABLY BY PRESENT OWNERS (TESTIMONIALS OR SUGGESTED TESTIMONIALS)

CAN BE SOLD TO EMOTIONS

SUSTAINABLE MESSAGE

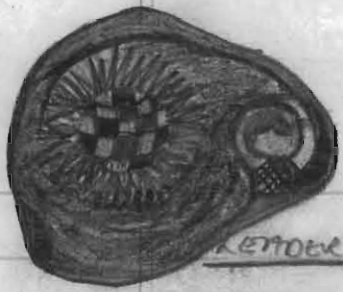
CHARACTERISTICS OF GOOD ADVERTISING

SIMPLE - EASY TO UNDERSTAND

TRUTHFUL

ORIENTED TOWARD CUSTOMER

WHO? WHAT? HOW? WHERE? HOW?



MANAGEMENT

LEADERSHIP INDICATE 4 MOST IMPORTANT

- 1 SELF-SUFFICIENCY (INDEPENDENCE)
- 2 SIMPLICITY (EXPERIENCE, UNUSUAL APPEARANCE)
- 1 3 ENTHUSIASM
- 4 TOUGH MINDFULNESS - PRACTICAL
- 2 5 CONSISTENT RESOLUTE
- 3 6 CONTROL - CONSIDERATE, CAREFUL
- 4 7 SELF CONFIDENT
- 8 TRUSTFUL - TEAM WORK



People - Hiring

Advertising

Job description

INTERVIEW

SELECTION

TRAINING

EVALUATION

INTRO.

TECH + OPOR

INCOME STATE.

FOOTNOTES

BANK LOAN - \$12,500 - COLLATERAL - 1000 DISCS/TAPES (REMI \$25,000)
PRODUCTION & MAIL ORDER Campaign (100,000 pcs) + Copyright

ED HEAKIN

JANICE Kulik

QUORUM CORP.

McKILL - Lynch

668-1695

769-4300

Bob PARKER

PEPPI I & II

BONCON INVESTMENT

LIMITED PARTNERSHIP

SLM VENTURES



WORK PLAN

CORPORATE TAXES - MARCH 15

OR 75 DAYS AFTER END OF FISCAL YEAR

DAILY: RECAP DAILY SALES

RECORD MILEAGE

RECAP DAILY EXPENSES

POST ENTRIES TO ACCOUNTING SYSTEM

DEPOSIT TO BANK

EXAMINE CASH POSITION

DETERMINE NEXT DAY'S NEED FOR CASH

WEEKLY: PAY BILLS

REVIEW CASH POSITION

PLAN NEXT WEEK'S ACTIVITIES

MAKE DRAW IF POSSIBLE

REVIEW WEEK'S WORK

MONTHLY: INCOME STATEMENT

REVIEW CASH POSITION

PLAN NEXT MONTH

REVIEW PAST MONTH'S WORK

RECONCILE CHECKING ACCOUNT

QUARTERLY: INCOME STATEMENT & REQUIRED TAX STATEMENTS

MEET WITH ACCOUNTANT

PLAN FOR NEXT QUARTER

REVIEW PAST QUARTER

ANNUAL: TAXES

FINANCIAL STATEMENT

PLAN NEXT YEAR

REVIEW PAST YEAR

Dear Mike,

We have organized Cadmean Corporation to design, develop and market software for the personal computer market under the broad heading of education. Our system of choice for developing our products is ... surprise ... the Commodore 64. We believe it to be the industry leader in graphics and sound capability and very attractive from a pricing standpoint. Lots of owners = lots of customers. Simple but it has the ring of truth. We will of course translate to other systems as time goes by but continue to develop for the 64 first.

Our choice of product type specifically is to work with simulations. Having spent 20 years as a community educator I place a high value on experiential learning and simulations are the next best thing. Our approach to developing programs is unusual in the educational field in that we do not decide, except within broad parameters, what we expect the participant to learn and when he or she will learn those things within the confines of the program. Rather we choose subject matter of interest, develop an exciting and absorbing learning environment and only when these primary tasks have been accomplished do we look for specific educational content and begin enhancing those things.

Our first product, as I told you on the phone, is the first installment of three to be called "The Discover America" series. Our marketing strategy is to produce groups of interrelated but still stand alone programs grouped around a central theme. In this first case the ^{events} ~~events~~ leading to the founding of

America.

1. NAME OF SOFTWARE: SOFTWARE SIMULATIONS

2. TYPE: EDUCATIONAL SIMULATIONS

3. FUNCTION: MIMIC EXPERIENCES TO BUILD BASE UPON WHICH TO LEARN, TO ELIMINATE RESISTANCE TO LEARNING AND THINKING CAUSED BY "SCHOOL OPHTHIA"

4. REASON D'ETRE: THE

Apple IIe Monitor 48K \$195.00

~~Printer~~ ? Printer 36.00

Cables 13.00

Modem 13.00

Deposit 2x RENTAL

MONTH BY MONTH

PROCESSED IF RETURNED

12-21

SCR# 28 UPDATED DK

DK

2

- 1 (LOADER)
- 2 (LISTER) DECIMAL
- 3 (LOADER)

4 (UTILITY FUNCTIONS)
5 (MORE UTILITY FUNCTIONS)
6 (SAILING EQUATION TABLES)
7 (MAYFLOWER ARRAYS)
8 (MAYFLOWER VARIABLES)
9 (VARIABLES CONT)
10 (HARBOR STORAGE ROUTINES)
11 (STORAGE ROUTINES CON'T)
12 (USER COMMAND ROUTINES)
13 (SAILING CONSUMPTION ROUTINES)
14 (LOW RATION WORDS)
15 (SAILING EQUATIONS)
16 (DOCK 1-3 STATUS)
17 (REVISED DISK READ) HEX
18 (REVISED DISK READ)
19 (HELP DOCKSIDE LEVEL 4)
20 (BANK SWITCHING ROUTINES) HEX
21 (WORDS BEHIND USER COMMANDS)
22 (HELP SAILING 1)
23 (HELP SAILING 4) : SP SPACES ;
24 (BIT MAP SCREEN) HEX
25 (READ UPPER CORE DATA FROM DISK) HEX
26 (START MAP INTERRUPT) HEX
27 (HELP SAILING 1)
28 (4 CONSUMPTION , OVERLOAD)
29
30 (COMPASS DIRECTION DEFINITIONS)
31
32 (OCEAN MODEL WIND)
33 (OCEAN MODEL CURRENT)
34 (SAILING COMMAND LIST LEVEL 1-3)
35 (VARIABLE DISPLAY ROUTINES)
36 (VARIABLE DISPLAY 2)
37 (MORE DOCK PRINT)
38 (MAP DISPLAY)
39 (DOCK 1-3 STATUS)
40 (DUMMY STATES)
41 (VOCABULARY START AND 1 DOCK)
42 (VOCUBLARY 4A DOCK) HERE VOCAB !
43 (VOCUPLARY 1B-3B SAILING)
44 (VOCUPLARY 4B SAILING4)
45 (SAILING4 CONT)
46 (SAIL1 STATE) : CLOSE? LONGITUDE
47 (SAIL4 STATE)
48 (SCORE KEEPING)
49 (SCORING)
50 (VOCUPLARY 2B-3B SAILING)
51 (SHIP DISPLAY ROUTINES PART 1) HEX
52 (SHIP PICTURE PART 2) HEX
53 (SCORE KEEPING)
54 (MAP DISPLAY)
55 (INTRODUCTION STATE)
56 (SCORE KEEPING)
57 (CONSUMPTION 4)
58 (DOCK PRINT 4)
59 (PRINT DOCKSIDE 4)
60 (DOCK STATUS 4)
61 (SAILING PRINT 4)
62 (SAILING PRINT 4)
63
64
65 (INTRODUCTION TO MAYFLOWER)
66 (INTRODUCTION PART 2)
67 (HINTS AND TIPS 1)
68 (HINTS AND TIPS 2)
69 (HINTS AND TIPS 3)

70 (MUSIC SETUP) HEX
 71 (MUSIC SETUP PART 2) HEX
 72 (HINTS AND TIPS 4)
 73 (HINTS AND TIPS 5)
 74 (VOCUBLARY LIST)
 75 (MORE VOCUBLARY)
 76 (VOCABULARY FOR NEW LEVEL ONE)
 77 (NEW LEVEL 1)
 78 (NEW LEVEL 1)
 79 (NEW LEVEL 1 SIMPLE)
 80
 81
 82 (END STATE)
 83 (RETURN1 STATE)
 84 (MASS1 STATE)
 85
 86 (START STATE)
 87 (DOCK1 STATE)
 88 (INTRODUCTION STATE 0)
 89 (STATE TABLE)
 90 (MAYFLOWER TOP LEVEL)

SCR # 1

(LOADER)

4 LOAD
 5 LOAD 6 LOAD 7 LOAD 8 LOAD 9 LOAD
 10 LOAD 11 LOAD 12 LOAD 13 LOAD 14 LOAD
 15 LOAD 20 LOAD 26 LOAD 16 LOAD
 70 LOAD 71 LOAD 24 LOAD 51 LOAD 52 LOAD
 19 LOAD 21 LOAD 22 LOAD 23 LOAD
 17 LOAD 18 LOAD 27 LOAD 28 LOAD
 30 LOAD 32 LOAD 33 LOAD 34 LOAD
 35 LOAD 36 LOAD 37 LOAD 54 LOAD 39 LOAD
 57 LOAD 58 LOAD 59 LOAD 60 LOAD
 61 LOAD 62 LOAD 74 LOAD 75 LOAD 80 LOAD
 40 LOAD 41 LOAD 42 LOAD 43 LOAD 50 LOAD
 44 LOAD 45 LOAD 46 LOAD 47 LOAD 48 LOAD
 49 LOAD 53 LOAD 55 LOAD 56 LOAD
 65 LOAD 66 LOAD 67 LOAD 68 LOAD 69 LOAD
 72 LOAD 73 LOAD
 76 LOAD 77 LOAD 78 LOAD 79 LOAD
 82 LOAD 83 LOAD 84 LOAD
 86 LOAD 87 LOAD 88 LOAD 89 LOAD
 90 LOAD

SCR # 2

(LISTER) DECIMAL

1 90 INDEX

: L 1+ SWAP DO I LIST LOOP ;

1 2 L
 4 15 L 20 LIST 26 LIST
 16 LIST 70 71 L 24 LIST 51 52 L
 19 LIST 21 23 L 17 18 L 27 28 L
 30 LIST 32 37 L 54 LIST 39 LIST
 57 62 L 74 75 L 80 LIST
 40 43 L 50 LIST 44 49 L 53 LIST
 55 56 L 65 69 L 72 73 L 76 79 L
 82 84 L

```

SCR # 4
< UTILITY FUNCTIONS >
@ VARIABLE SCRATCH
: CTABLE <BUILDS @ DO C, LOOP DOES>
+ C@ ;

: STABLE <BUILDS 9 @ DO C, LOOP DOES>
  8 3 PICK - OVER + C@ ROT ROT + C@ ;

32 31 30 27 23 18 12 6 @ STABLE SIN

: SINCOS DUP DUP 17 < IF 9 < IF 1 1
ELSE 16 SWAP - -1 1 THEN ELSE
25 < IF 16 - -1 -1 ELSE
32 SWAP - 1 -1 THEN THEN ROT SIN
3 ROLL * SWAP 3 ROLL * ;

: COMPONENT SINCOS 3 PICK * SWAP ROT * ;
: COMP+ ROT + SWAP ROT + ;

: SRSS ABS SWAP ABS 2DUP < IF SWAP THEN
  DUP 3 PICK */ 2/ DUP DUP 4 PICK
  */ 9 25 */ - + ;
: -! SWAP OVER @ SWAP - DUP @< IF DROP
@ THEN SWAP ! ;

```

```

SCR # 5
< MORE UTILITY FUNCTIONS >
: HOME 19 EMIT ;
: CLS 147 EMIT ; < CLEAR SCREEN & HOME >
: @ CONSTANT ;
: @@ VARIABLE ;
: T 32 WORD HERE C@ 1+ ALLOT , ;
: F FIND DUP NOT IF HERE COUNT TYPE
  SPACE ." NONEXISTANT" CR THEN ;

: ARRAY <BUILDS @ DO @ , LOOP DOES> ;
: STATES <BUILDS @ @ DO , LOOP
  DOES> STATE @ 2* + @ EXECUTE ;
HEX
: STARTRANDOM F@ D418 C! 411 D40E !
  FF81 D412 ! ;
: EMIT D1 @ D3 C@ + SPACE C! ;
: RANDOM D41B C@ 2/ 2/ 1F AND ;
: RAN3 RANDOM RANDOM RANDOM + + 3 / ;
: RAN6 RAN3 RAN3 RAN3 + + 3 / ;
: LC D018 C@ 2 OR D018 C! ;
DECIMAL
: DELAY @ 3000 @ DO 1+ LOOP DROP CR CR ;

```



```
: LONGDELAY 6 0 DO DELAY LOOP ;
: ZAP CLS 12 0 DO CR LOOP ;
: WAITWAIT 0 30000 0 DO 1+ LOOP DROP ;
```

SCR # 6
(SAILING EQUATION TABLES)

```
22 27 31 32 32 31 27 22 16 10 4 0 0 0 0
0 0 17 CTABLE RELWIND
32 25 19 13 8 6 4 2 0 9 CTABLE WINDVEL
0 10 20 30 39 46 52 56 59 60 10 CTABLE
MILES/DEGREE
31 30 31 28 31 31 30 31 30 9 CTABLE
DAYS/MONTH
HERE SCRATCH !
0 T MAY 0 T APRIL 0 T MARCH 0 T FEB
0 T JAN 0 T DEC 0 T NOV 0 T OCT 0 T SEPT
SCRATCH @ CONSTANT MONTH-NAME
```

```
: FSTRING @ SWAP -DUP IF 0
DO DUP C@ 3 + + LOOP THEN COUNT ;
: PSTRING FSTRING TYPE SPACE ;
```

```
1 VARIABLE QFLAG
: SP? 30 0 SP@ - SWAP < DUP IF 0 QFLAG !
" " SORRY, SOMETHING IS MISSING"
THEN NOT ;
: SP1? 6 SP? ;
: SP2? 8 SP? ;
: !? SP2? IF ! ELSE SP! THEN ;
```

SCR # 7
(MAYFLOWER ARRAYS)

11 ARRAY NAME

```
0 VARIABLE 1/2FOOD
0 VARIABLE 3/4FOOD
0 VARIABLE 1/2WATER
0 VARIABLE 3/4WATER
0 VARIABLE 1/2DRINK
0 VARIABLE 3/4DRINK
0. 2VARIABLE TSCORE
0 VARIABLE DEST
0 VARIABLE DLENGTH
0 VARIABLE RATFLG
0 VARIABLE DFOOD
0 VARIABLE DWATER
0 VARIABLE DRUM
```

SCR # 8
(MAYFLOWER VARIABLES)

0 VARIABLE FOOD (DAYS * 4)
0 VARIABLE DRINK (DAYS * 4)
4 VARIABLE FRATION (FULL = 4)
4 VARIABLE DRATION (FULL = 4)
4 VARIABLE WRATION (FULL = 4)
0 VARIABLE SUPPLIES
0 VARIABLE CARGO
0 VARIABLE ANIMALS
0 VARIABLE WDIR (0 - 31)
0 VARIABLE WFORCE (0 -8 SHIP SPEED)
0 VARIABLE CDIR (-1 NONE 0-31)
0 VARIABLE HEADING (0-31)
0 VARIABLE LONGITUDE (MIN WEST)
0 VARIABLE LATITUDE (MIN NORTH)
0 VARIABLE CTRAVEL (NAUTICAL MILES)
0 VARIABLE TTRAVEL (SAME)
0 VARIABLE MILES-WEST (SAME)
0 VARIABLE MILES-NORTH (SAME)
5 VARIABLE DAY/DECISION (DAYS)
0 VARIABLE VOYAGE-DAY
0 VARIABLE DAYS
0 VARIABLE DIRECTIONS

SCR # 9

(VARIABLES CONT)

0 VARIABLE STORES
0 VARIABLE SAILS
0 VARIABLE PIG
0 VARIABLE GOAT
0 VARIABLE SHEEP
0 VARIABLE POULTRY
0 VARIABLE RABBIT

0. 2VARIABLE WATER
0. 2VARIABLE FRESH
0. 2VARIABLE SALT
0. 2VARIABLE PRESERVE
0. 2VARIABLE HAY
0. 2VARIABLE GRAIN
0. 2VARIABLE ROOTS
0. 2VARIABLE SPIRITS
0. 2VARIABLE FEED
0 VARIABLE TONTOTAL
0 VARIABLE TONMAX

0 VARIABLE VOCAB
0 VARIABLE FLAG
0 VARIABLE LEVEL

SCR # 10

(HARBOR STORAGE ROUTINES)

: LOADFOOD SP1? IF 4 * LEVEL @ 1 =
IF DUP DRINK ! THEN FOOD ! THEN ;
: LOADDINK SP1? IF 4 * DRINK ! THEN ;
: FULLRATION 4 FRATION ! 4 DRATION !
4 WRATION ! ;

: TON/LB SP2? IF SWAP 2240 M* ROT 2!
THEN ;

```

: LB/TON 2@ 2240 M/ SWAP DROP ;
: LOADFRESH FRESH TON/LB ;
: LOADSALT SALT TON/LB ;
: LOADPRESERVE PRESERVE TON/LB ;
: LOADHAY HAY TON/LB ;
: LOADGRAIN GRAIN TON/LB ;
: LOADROOTS ROOTS TON/LB ;
: LOADWATER WATER TON/LB ;
: LOADSPIRITS SPIRITS TON/LB ;

: LOADSTORES STORES !? ;
: LOADSAILS SAILS !? ;
: LOADCARGO CARGO !? ;
: LOADPIG SP1? IF 1+ 2/ 2* PIG ! THEN ;

```

```

SCR # 11
( STORAGE ROUTINES CON'T )

```

```

: LOADGOAT SP1? IF 1+ 2/ 2* GOAT !
  THEN ;
: LOADSHEEP SP1? IF 1+ 3 / 3 * SHEEP !
  THEN ;
: LOADRABBITS SP1? IF 16 + 33 / 33 *
  RABBIT ! THEN ;
: LOADPOULTRY SP1? IF 12 + 25 / 25 *
  POULTRY ! THEN ;
: LOADANIMALS SP1? IF 10 * ANIMALS !
  THEN ;
: LOADFEED FEED TON/LB ;
: INCS 1 STATE +! ;
: NOP INCS ;

```

```

SCR # 12
( USER COMMAND ROUTINES )

```

```

: MATCH? DUP 1 FLAG ! C@ -1 DO 2DUP C@
  SWAP C@ = IF 1+ SWAP 1+ ELSE 0 FLAG
  ! LEAVE THEN LOOP 2DROP FLAG @ ;
: NUMBER? 0 0 HERE CONVERT HERE DUP C@
  + 1+ = NOT IF CR
  ." SORRY, I DON'T UNDERSTAND "
  HERE COUNT TYPE CR DROP 0 @FLAG !
  THEN DROP 1 ;
: SEARCH HERE VOCAB @ BEGIN DUP C@
  IF 2DUP MATCH? IF SWAP DROP DUP C@
  1+ + @ ?DUP IF EXECUTE THEN 1
  ELSE DUP C@ 3 + + 0 THEN
  ELSE 2DROP NUMBER? THEN UNTIL ;
: CMD? 1 @FLAG ! CR QUERY BEGIN 32
  WORD HERE C@ WHILE @FLAG @ IF SEARCH

```



```

THEN REPEAT ;
: COMMAND? SP! ?TERMINAL IF QUIT THEN
  BEGIN CMD? QFLAG @ UNTIL ; HEX
: SPOT 13 D6 C! 0 D3 C! CR ;
: SPOTCURSOR SPOT CR CR CR SPOT ;
: CR? 17 D6 C! 0 D3 C! CR
." ( PRESS RETURN TO CONTINUE )"
  QUERY ;      DECIMAL

```

```

SCR # 13
( SAILING CONSUMPTION ROUTINES)

```

```

: ADDF 0 FRESH 2@ D+ FRESH 2! ;
: EATPIG SP1? IF 1+ 2/ 2* PIG -!
  50 * ADDF THEN ;
: EATGOAT SP1? IF 1+ 2/ 2* GOAT -!
  50 * ADDF THEN ;
: EATSHEEP SP1? IF 1+ 3 / 3 * SHEEP -!
  100 * ADDF THEN ;
: EATRABBIT SP1? IF 16 + 33 / 33 *
  RABBIT -! 3 * ADDF THEN ;
: EATPOULTRY SP1? IF 12 + 25 / 25 *
  POULTRY -! 4 * ADDF THEN ;
: DRAT? DAYS @ DUP DUP FRATION @ DUP 4 <
  IF 3 < IF 3/4FOOD ELSE 1/2FOOD THEN
  +! ELSE 2DROP THEN
  DRATION @ DUP 4 < IF 3 <
  IF 3/4DRINK ELSE 1/2DRINK THEN +!
  ELSE 2DROP THEN
  WRATION @ DUP 4 < IF 3 <
  IF 3/4WATER ELSE 1/2WATER THEN +!
  ELSE 2DROP THEN ;
: CONSUME1 FOOD @ FRATION @ DAYS @
  * - FOOD ! DRINK @ DRATION @ DAYS @
  * - DRINK ! DRAT? ;

```

```

SCR # 14
( LOW RATION WORDS)
: RAT? DUP 26 < IF DUP 16 <
  IF 2 ELSE 1 THEN
  RATFLG @ OR RATFLG ! THEN ;
  HEX
: RATF? 0 C00F C! RATFLG @ -DUP
  0> IF SPOTCURSOR CR CR
  ." LOW" CR ." RATIONS"
  1 > IF 1 C00F C! THEN THEN ;
  DECIMAL
: LOW? 0 RATFLG ! FOOD @ FRATION @ /
  RAT? DRINK @ DRATION @ / RAT? ;

```

SCR # 15

(SAILING EQUATIONS)

```
: MILES/PERIOD 24 DAYS @ * 1024
  */ ;
: TOTAL-MILES MILES-WEST @ MILES-NORTH @
  SRSS DUP 2000 > IF DROP 0 THEN DUP
  CTRAVEL ! TTRAVEL +! ;
: POSITION MILES-NORTH @ LATITUDE +!
  MILES-WEST @ 60 LATITUDE @ 600 /
  MILES/DEGREE */ LONGITUDE +! ;
: DAY+ DAYS @ VOYAGE-DAY +! ;

: WIND1 WDIR @ HEADING @ - ABS DUP 16 >
  IF 32 SWAP - THEN RELWIND WFORCE
  @ * ;
: WIND WIND1 HEADING @ COMPONENT ;
: CURRENT CDIR @ 0< IF 0 0 ELSE
  LEVEL @ 4 < IF 96 ELSE 160 THEN
  CDIR @ DUP 16 < IF 16 + ELSE 16
  - THEN COMPONENT THEN ;
: PSPEED WIND1 32 / SPACE ." HULL SPEED"
  2 .R SPACE ." KNOTS" ;
: TRAVEL WIND CURRENT COMP+ MILES/PERIOD
  MILES-NORTH ! MILES/PERIOD MILES-WEST
  ! POSITION TOTAL-MILES DAY+ ;
```

SCR # 20

```
( BANK SWITCHING ROUTINES ) HEX
: I/ODIR DD02 C0 3 OR DD02 C1 ; ( OUT )
: SWITCH DD00 C0 FC AND OR DD00 C1 288
  C1 ; ( SWITCH BANKS )
: 0SWITCH I/ODIR 4 3 SWITCH 14 D018 C1 ;
: 2SWITCH I/ODIR 80 1 SWITCH 2 D018 C1 ;

: MSCREEN DUP 10 * D018 C0 F AND OR
  D018 C1 4 * 288 C0 C0 AND OR C1 ; (
  MOVE SCREEN WITHIN BANK )
: MCHAR D018 C0 F0 AND OR D018 C1 ; (
  MOVE CHARACTER DEFINATION AREA )
: INTOFF DC0E C0 FE AND DC0E C1 ; (
  TURN OFF INTERRUPTS )
: INTON DC0E C0 1 OR DC0E C1 ; ( TURN
  INTERRUPTS ON )
: PRINTER 4 4 0 0 0 OPEN 4 CMD# ;
: NOPRINTER 4 CLOSE ;
: CUSCHAR 2 D018 C1 ;
: STDCHAR 4 D018 C1 ;
: STDSCREEN 14 D018 C1 84 288 C1 ;
DECIMAL
```

SCR # 26

(START MAP INTERRUPT) HEX

```
: MSHIP-ON ED CFF8 C1 ED FFF8 C1 ( SAIL )
  EC CFE8 C1 EC FFE8 C1 ( HULL )
```

```

3 D015 C! ( ON) 1 D027 !
3 D01B C! ( BACKGND) ;
: MSHIP-OFF 0 D015 C! ;

: STARTINT -1 C000 C! 36 C001 C! INTOFF
C010 314 ! INTON ( IRQ VEC)
7F DC0D C! ( TURN OFF INT)
0 D012 C! ( TOP OF SCREEN)
81 D01A C! ; ( ENABLE RASTER INT)

: STARTMAP 0 C000 C! ;
: STOPMAP 1 C000 C! ;
: CLEAR-SCREEN CC00 3E8 20 FILL ;

```

DECIMAL

```

SCR # 16
( DOCK 1-3 STATUS)
: PDASH CR ." -----
-----" ;
: PNAME CLS 3 SPACES ." HMS MAYFLOWER
CAPTAIN " NAME COUNT TYPE PDASH ;
: PEXAMPLE CR ." EXAMPLE FOR 80 DAYS FOOD
D ENTER 80 FOOD" CR ;

: SINK? LEVEL @ 1 < IF RANDOM 3 AND 2 +
MINUS SUPPLIES +! THEN ;

: SINK?! SUPPLIES @ 0<
IF 0 LEVEL ! 1 STATE ! CLS CR CR
." YOU DO NOT HAVE ENOUGH STORES
LEFT TO" CR ." REPAIR THE STORM DAMAGE.
" CR CR ." CAPTAIN " NAME COUNT TYPE
." GOES DOWN WITH THE SHIP." CR CR
." ALL PASSINGERS AND CREW ARE LOST"
CR? THEN ;

```

```

SCR # 70
( MUSIC SETUP) HEX
8000 VARIABLE BEAT
C003 CONSTANT V18 C006 CONSTANT 1TIMER
C004 CONSTANT V28 C009 CONSTANT 2TIMER
C005 CONSTANT V38 C00C CONSTANT 3TIMER
C008 CONSTANT 1NDX C00B CONSTANT 2NDX
C00E CONSTANT 3NDX
: MUSIC BEAT @ DC06 ! ( TIMER B)
11 DC0F C! 82 DC0D C! F D418 C!
0 1NDX C! 0 2NDX C! 0 3NDX C!
2 1TIMER C! 2 2TIMER C! 2 3TIMER C! ;
: PIANO 0 D404 C! 0 D40B C! 0 D412 C!

```

```

0 D400 ! 0 D407 ! 0 D40E !
7FF D402 ! 7FF D409 ! 7FF D410 !
9 D405 ! 9 D40C ! 9 D413 !
41 V18 C! 41 V28 C! 41 V38 C! ;
: MUSIC1 PIANO F D418 C! MUSIC ;
: MUSIC2 11 V18 C! C000 D405 ! 800
D409 ! 41 V28 C! 0 D40C ! 800 D410 !
41 V38 C! 1000 D413 ! F D418 C!
MUSIC ;
: NOISE1 8181 V18 ! F000 D405 ! F000
D40C ! 0 V38 C!
87 D418 C! MUSIC ;
DECIMAL

```

```

SCR # 71
( MUSIC SETUP PART 2) HEX
: V11 1111 V18 C 11 V38 C! ;
: V9 F009 D405 ! A009 D413 ! ;
: V41 4141 V18 ! 41 V38 C! 800 D402 !
800 D409 ! 800 D410 ! ;
: MUSIC5 11 V28 C! 0 D40C ! F D418 C!
100 D402 41 V18 C! 0 D405 !
21 V38 C! 0 D413 ! MUSIC ;

: MUSIC17 V11 0 V28 C! 9 D405 !
9 D413 ! F D418 C! MUSIC ;
DECIMAL

```

```

SCR # 24
( BIT MAP SCREEN) HEX
: BITON OVER C@ OR SWAP C! ;
: BITOFF NEGATE 1- OVER C@ AND SWAP C! ;
: MAPON D011 20 BITON ;
: MAPOFF D011 20 BITOFF ;
: 4COLORON D016 10 BITON ;
: 4COLOROFF D016 10 BITOFF ;
: NORMAL 4 288 C! STOPMAP 4COLOROFF
81 DC0E C! BSWITCH ;
: SHOWMAP CC 288 C! MAPON 4COLORON
DD00 3 BITOFF F8 D018 C! ;
: TEXT CC 288 C! STOPMAP 4COLOROFF
DD00 3 BITOFF 36 D018 C! CLS ;
: MAPCOLOR D800 320 5 FILL DB20 64
E FILL FC00 3E8 10 FILL ;
: CHARIN 1 C@ FB AND 1 C! ;
: CHAROUT 1 C@ 4 OR 1 C! ;
: CHARMOVE D800 9800 1D0 CMOVE ;
: CLEAR INTERR CHARIN CHARMOVE CHAROUT

```


INTON ;
: FORGET-POINT ;

DECIMAL

SCR # 51

(SHIP DISPLAY ROUTINES PART 1) HEX
: SHIP-ON TEXT 56 C001 C! STOPMAP ;
: SHIP-COLOR DUP 7 AND D800 400 ROT FILL
8 OR DUP D8D9 C! DUP D90F C!
DUP D978 C! DUP D978 C! DUP D97A C!
DUP D99C C! DUP D9A6 C! DUP D9A7 C!
DUP D9A8 C! DUP D9A1 C! DUP D9EC C!
DUP DA19 C! DUP DA1E C! DUP DA4B C!
DA99 C! ;
: SAIL-COLOR DUP D8D8 C! DUP D8DA C!
DUP D8DB C! D8FF 8 3 PICK FILL
D927 A 3 PICK FILL DUP D94A C!
D94E C 3 PICK FILL DUP D972 C!
DUP D973 C! DUP D976 C!
DUP D977 C! D97B 8 3 PICK FILL
D999 3 3 PICK FILL D99D 9 3 PICK
FILL DUP D9A9 C! D9C1 31 3 PICK
FILL D9ED D 3 PICK FILL DA16 3 3
PICK FILL DA1A 4 3 PICK FILL
DA1F 3 3 PICK FILL DUP DA49 C!
DUP DA4A C! DUP DA4C C! DUP DA4D C!
DA72 4 3 PICK FILL DA9A 4 3 ROLL
FILL ;
: SHIP-OFF 3601 C000 ! ; DECIMAL

SCR # 52

(SHIP PICTURE PART 2) HEX
: SHIP1 SHIP-ON 0 SHIP-COLOR
1 SAIL-COLOR 4COLORDN
1 D023 C! ;
: SHIP SHIP1 WAITWAIT SHIP-OFF ;
: WAIT1 0 C00 0 DO 1+ LOOP DROP ;
: STORM NOISE1 SHIP1 MSHIP-OFF WAIT1
0 SAIL-COLOR 0 D023 C!
0 D022 C! WAIT1
4 D021 C! WAIT1
0 D021 C! WAIT1
1 D021 C! WAIT1
2 D021 C! WAIT1
0 D021 C! WAIT1
4 D021 C! 4 SAIL-COLOR WAIT1
5 D021 C! 5 SAIL-COLOR WAIT1
6 D021 C! 6 SAIL-COLOR WAIT1
C007 C0 1- C008 C!
0E D021 C!
MSHIP-ON SHIP-OFF ;

DECIMAL

```

SCR # 19
( HELP DOCKSIDE LEVEL 4)
: HELPD4 CLS ." LOAD ANIMALS BY NUMBER
OF EACH SPECIES." CR ." ALL OTHER ITE
MS IN ENGLISH LONG TONS." CR CR
." FRESH" 10 SPACES ." FRESH FOOD (SHORT
LIFE)" CR
." SALT" 11 SPACES ." SALTED FOOD (UGH!)
" CR
." PRESERVE" 7 SPACES ." PICKLES, ETC"
CR
." WATER" 10 SPACES ." DRINK FOR PEOPLE,
ANIMALS"
." SPIRITS" 8 SPACES ." STRONG DRINK" CR
CR
." PIG" 12 SPACES ." MULTIPLES OF 2" CR
." GOAT" 17 SPACES ." " 2" CR
." SHEEP" 16 SPACES ." " 3" CR
." FOWL" 17 SPACES ." " 25" CR
." RABBIT" 15 SPACES ." " 33" CR
." HAY" 12 SPACES ." ANIMAL FEED" CR
." GRAIN" 16 SPACES ." "" CR
." ROOTS" 16 SPACES ." "" CR CR
." STORES" CR ." CARGO" CR
." HELP" CR ." STOP" CR ." SAIL" CR CR
." (PRESS RETURN TO CONTINUE)" QUERY ;

```

```

SCR # 21
( WORDS BEHIND USER COMMANDS)
: HEAD SP1? IF 31 AND HEADING ! 3 53269
C! THEN ;
: FLUID DRATION !? ;
: SOLID FRATION !? ;
: SETSPIRITS DRATION !? ;
: SETWATER WRATION !? ;
: STOP 1 STATE ! 0 LEVEL ! ;
: INITVOYAGE DUP DAY/DECISION ! DAYS
! 0 TTRAVEL ! 0 VOYAGE-DAY !
0 MILES-WEST ! 0 MILES-NORTH !
0 CTRAVEL ! 0 TTRAVEL !
0 1/2FOOD ! 0 3/4FOOD !
0 1/2WATER ! 0 3/4WATER !
0 1/2DRINK ! 0 3/4DRINK ! ;
: GOES1 -1 STATE +! ;
: STORM? VOYAGE-DAY @ 15 > IF
LATITUDE @ 600 / RANDOM + 31 >
IF RANDOM DUP WDIR ! 16 + 31 AND
LEVEL @
4 < IF 30 AND THEN HEADING ! RANDOM
3 AND 2 + WFORCE ! RANDOM 3 AND 1+
DUP DAYS ! STORM 2 53269 C! SINK?
ELSE DAY/DECISION @ DAYS !
MSHIP-ON THEN THEN ;

```

```

SCR # 22
( HELP SAILING 1)
: HELPS STOPMAP MSHIP-OFF CLS
7 SPACES ." HELP LIST" CR
." COMMAND" 10 SPACES ." MEANING" CR CR
." H SHIP DIRECTION EXAMPLE SW
H" CR

```

```

." LAND      ARRIVE IN NEW WORLD" CR
." FOOD      CHANGE RATION EX. HALF FOOD"
CR ." DRINK   CHANGE RATION EX. 3/4 DR
INK" CR
." FULL      FULL RATION" CR
." 3/4       THREE QUARTERS RATION" CR
." HALF      HALF RATION" CR
." STOP      END GAME" CR
." HELP      RETURN TO THIS LIST" CR
." STATUS    LOOK AT FULL STATUS" CR
." MAP       LOOK AT MAP" CR
CR 7 SPACES ." COMPASS POINTS" CR CR ;
: CONTINUE?
." ( PRESS RETURN TO CONTINUE )" QUERY
STARTMAP MSHIP-ON ;

```

SCR # 23

```

( HELP SAILING 4 ) : SP SPACES ;
: HELPS4 CLS ." SAILING COMMANDS" CR
." HALF WATER SET HALF RATION ON W
ATER" CR ." 25 FOWL EAT 25 FOWL"
CR 11 SP ." SETTING RATIONS" CR
." HALF      3/4      FULL " CR
." FOOD      WATER    SPIRITS" CR
CR 8 SP ." USE STOCK FOR FOOD" CR
." PIG       SHEEP    FOWL" CR
." GOAT      RABBITS" CR CR
." HEADING   HELP     MAP" CR
." GO        STATUS" CR CR
CR CR 10 SP ." 32 COMPASS POINTS" CR
." N  NBW  NNW  NWN  NW  NWBW  WNW  WBN
." CR
." W  WBS  WSW  SWBW  SW  SWBS  SSW  SBW
" CR
." S  SBE  SSE  SEBS  SE  SEBE  ESE  EBS
" CR
." E  EBN  ENE  NEBE  NE  NEBN  NNE  NBE
" CR CR? ;

```

SCR # 17

```

( REVISED DISK READ ) HEX
CC00 CONSTANT DEST
CC02 CONSTANT DLEN
CCF8 CONSTANT PARITY
CCFA CONSTANT CKSUM
CCFC CONSTANT CKPAR
: RPAR -1 7C 0 DO DEST I 2* + @ XOR
LOOP PARITY @ XOR ;
: RSUM 0 F8 0 DO DEST I + C@ + LOOP
CKSUM @ XOR ;
: RCKS PARITY @ CKSUM @ XOR CKPAR @
XOR ;
: CKBLK RPAR RSUM OR RCKS OR DUP
IF DEST @ U. ." DISK ERR " THEN ;

```

```
: BMOVE CC04 DEST @ DUP D000 > OVER
  E000 < AND IF INTOFF CHARIN
  DLEN @ CMOVE CHAROUT INTON
  ELSE DLEN @ CMOVE THEN ;
: READ-BLOCK 2 CBFF FE GET# CKBLK ;
```

DECIMAL

SCR # 18

(REVISED DISK READ)

```
: READ3 READ-BLOCK NOT IF BMOVE
  READ-BLOCK READ-BLOCK 2DROP
  ELSE READ-BLOCK NOT IF
  BMOVE READ-BLOCK DROP
  ELSE READ-BLOCK BMOVE
  DROP THEN THEN ;
: READ-DATA READ3 READ3
  BEGIN READ-BLOCK DROP DLEN @
  WHILE BMOVE REPEAT ;
: FILE-NAME ." '0:PICTURE,S,R'" ;
: OPEN-READ 2 8 2 ' FILE-NAME 2+ COUNT
  OPEN OPENCHN ;
: READ-DISK OPEN-READ READ-DATA 2 CLOSE
  CLOSCHN ;
```

SCR # 27

(HELP SAILING 1)

```
: 8COMPASS
."      N  NORTH    NE  NORTHEAST" CR
."      E  EAST     SE  SOUTHEAST" CR
."      S  SOUTH    SW  SOUTHWEST" CR
."      W  WEST     NW  NORTHWEST" CR CR
```

```
: 16COMPASS
."      N    NNE     NE     ENE" CR
."      E    ESE     SE     SSE" CR
."      S    SSW     SW     WSW" CR
."      W    WNW     NW     NNW" CR CR ;
```

```
: HELPS1 HELPS 8COMPASS CONTINUE? ;
: HELPS2 HELPS 16COMPASS CONTINUE? ;
```


SCR # 28

```
( 4 CONSUMPTION , OVERLOAD)
: LOAD? TONTOTAL @ TONMAX @ > IF CR CR
  ." CAN'T GO "
  ." REDUCE SHIP LOAD" COMMAND?
  ELSE INCS THEN ;
: USER DUP 2@ 4 ROLL 0 D- OVER 0<
  IF DROP ABS 0. 4 ROLL 2!
  ELSE ROT 2! 0 THEN ;
: CONSUMEFOOD FRATION @ 113 *
  VOYAGE-DAY @ 31 = DUP 0<
  IF 0. FRESH 2! THEN
  FRESH USER PRESERVE USER
  SALT USER
  0= NOT IF 1 DFOOD +! THEN ;
```

SCR # 30

```
( COMPASS DIRECTION DEFINATIONS)
0 0 N      8 0 W      16 0 S      24 0 E
1 0 NBW    9 0 WBS    17 0 SBE    25 0 EBN
2 0 NNW    10 0 WSW   18 0 SSE    26 0 ENE
3 0 NWN    11 0 SWBW   19 0 SEBS    27 0 NEBE
4 0 NW     12 0 SW     20 0 SE     28 0 NE
5 0 NWNW   13 0 SWBS    21 0 SEBE    29 0 NEBN
6 0 WNW    14 0 SSW    22 0 ESE    30 0 NNE
7 0 WBN    15 0 SBW    23 0 EBS    31 0 NBE
```

SCR # 32

```
( OCEAN MODEL WIND)
```

```

: WINDZONE1  LATITUDE @ 3000 >
  IF NW ELSE NE THEN 6 ;

: WINDZONE2  LATITUDE @ DUP 2220 >
  IF 2700 > IF W 8 ELSE W 5 THEN
  ELSE 1920 < IF NE 8 ELSE NE 5 THEN
  THEN ;

: WINDZONE3  LATITUDE @ DUP 2220 >
  IF DROP WSW 6
  ELSE 1800 < IF E 8 ELSE E 3 THEN
  THEN ;

: WINDZONE4  SW 6 ;

: WINDCALC LONGITUDE @ DUP 2700 <
  IF 1200 < IF WINDZONE1 ELSE WINDZONE2
  THEN ELSE 3900 < IF WINDZONE3 ELSE
  WINDZONE4 THEN THEN WFORCE ! WDIR ! ;

: RANDOMWIND RANG 16 - WDIR @ + 31 AND
  WDIR ! WFORCE @ 1+ RANDOM * 32 /
  WFORCE ! ;

```

SCR # 33
(OCEAN MODEL CURRENT)

```

: CURRENTCALC LONGITUDE @ DUP 1000 <
  IF DROP NNE ELSE 3600 > IF LEVEL @
  3 < IF -1 ELSE SW THEN
  ELSE LATITUDE @ DUP 1500 <
  IF DROP E ELSE 2700 > IF W ELSE -1
  THEN THEN THEN THEN CDIR ! ;

: RANDOMCURRENT CDIR @ DUP 0< IF DROP
  ELSE RANDOM 3 AND RANDOM 1 AND IF -
  1+ ELSE + THEN 31 AND CDIR ! THEN ;

: FORCES WINDCALC RANDOMWIND
  CURRENTCALC RANDOMCURRENT ;

: 16POINT WDIR @ 30 AND WDIR !
  CDIR @ 0< NOT IF
  CDIR @ 30 AND CDIR ! THEN ;

: 8POINT WDIR @ DUP 16 < IF 32 SWAP
  - THEN 28 AND WDIR !
  CDIR @ 0< NOT IF
  CDIR @ 28 AND CDIR ! THEN ;

```

SCR # 34
(SAILING COMMAND LIST LEVEL 1-3)

```

: PLISTS1
  " SAILING COMMANDS      COMPASS POINTS
  " CR                    "
H   LAND      STATUS      N      NE
HALF 3/4      FULL        E      SE
FOOD  DRINK   STOP        S      SW
MAP   GO      HELP        W      NW" CR

```

U" CR ;

```
: PLISTS2
." SAILING COMMANDS      COMPASS POINTS
" CR                      ."
H   LAND   STATUS      N   NNE   NE   ENE
HALF 3/4   FULL       E   ESE   SE   SSE
FOOD DRINK  STOP      S   SSW   SW   WSW
MAP  GO    HELP      W   WNW   NW   NMW"
CR CR ." TO STAY ON PRESENT COURSE T
YPE GO" CR ;
```

```
SCR # 35
( VARIABLE DISPLAY ROUTINES)
: DEG-MIN 60 /MOD 3 .R SPACE ." DEG" 3
.R SPACE ." MIN " ;
: PLOC ." LOCATION " LATITUDE @ DEG-MIN
." NORTH LATITUDE" CR ." STATUS "
LONGITUDE @ DEG-MIN ." WEST LONGITUDE"
CR CR ;
: PPDIR DUP DIRECTIONS FSTRING 4 OVER -
-DUP 0> IF SPACES THEN TYPE SPACE ;
: PDIR PPDIR 128 + EMIT SPACE ;
: PRDIR PPDIR 16 + 31 AND 128 + EMIT
SPACE ;
: PWIND 7 SPACES ." WIND FROM " WDIR
@ PRDIR SPACE ." AT" WFORCE @
WINDVEL 3 .R SPACE ." KNOTS" CR ;
: PCUR 4 SPACES ." CURRENT " CDIR @
0< IF ." NONE" ELSE ." FROM " CDIR
@ PRDIR SPACE ." AT" LEVEL @ 4 <
IF 3 ELSE 5 THEN 3 .R ." KNOTS"
THEN CR ;
: PHEAD 5 SPACES ." HEADING TO "
HEADING @ PDIR SPACE ." AT"
WIND1 16 + 32 / 3 .R SPACE
." KNOTS" CR ;
: PDAY ." DAY" VOYAGE-DAY @ 3 .R ;
```

```
SCR # 36
( VARIABLE DISPLAY 2)
: PMILE CR ." TOTAL MILES " TTRAVEL @ 5
.R DAYS @ 5 .R ." DAY MILEAGE "
CTRAVEL @ . ;
: DAY/DATE 20 + 9 0 DO I DAYS/MONTH 2DUP
> IF DROP I QUIT ELSE - THEN LOOP
DUP MONTH-NAME PSTRING SWAP 2 .R SPACE
4 > IF ." 1620" ELSE ." 1621" THEN ;
: PCHEAD 14 SPACES ." DAYS TONS" CR
0 TONTOTAL ! ;
: PDRINK 4 SPACES ." DRINK"
DRINK @ DUP 4 / 9 .R 240 2240 */
DUP 8 .R TONTOTAL +! CR ;
: PFOOD 4 SPACES ." FOOD " FOOD @ DUP
4 / 9 .R 113 2240 */ DUP 8 .R
TONTOTAL +! CR ;
```

```
: PTOTAL 24 SPACES ." --" CR 4 SPACES  
." TOTAL TONS" TONTOTAL @ 12 .R CR ;
```

SCR # 37

```
( MORE DOCK PRINT )  
: PCARGO CARGO @ DUP TONTOTAL +!  
 4 SPACES ." CARGO" 17 .R CR ;  
: PSTORES STORES @ DUP TONTOTAL +!  
 4 SPACES ." STORES" 16 .R CR ;  
: PANIMAL ANIMALS @ 10 / DUP TONTOTAL +!  
 4 SPACES ." LIVESTOCK" 13 .R CR ;  
: PFEED FEED LB/TON DUP TONTOTAL +!  
 4 SPACES ." FEED" 18 .R CR ;  
: PRAT @ SWAP @ OVER / SWAP  
  DUP 2 = IF ." HALF " DROP ELSE 3  
  = IF ." 3/4 " ELSE ." FULL " THEN  
  THEN ;  
: PDAYR 11 SPACES ." SUPPLY STATUS"  
  VOYAGE-DAY @ 11 .R CR  
  FOOD FRATION PRAT ." FOOD" 6 .R  
  SPACE ." DAYS SUPPLY      DAYS"  
  CR DRINK DRATION PRAT  
  ." DRINK" 5 .R SPACE  
  ." DAYS SUPPLY      AT SEA" PDASH ;  
: STATUSS1 STOPMAP CLS MSHIP-ON PNAME  
  PDAYR PLOC PCUR PWIND PHEAD  
  PMILE PDASH LEVEL @ 1 = IF PLISTS1  
  ELSE PLISTS2 THEN COMMAND? ;
```

SCR # 54

```
( MAP DISPLAY )  
: PDEG 60 / 3 .R 161 EMIT ;  
: PSWIND WFORCE @ -DUP 0= ." WIND "  
  IF 3 SPACES ." CALM " ELSE WINDVEL  
  3 .R WDIR @ PDIR THEN ;  
: PSCUR CDIR @ -DUP 0< ." CURRENT"  
  IF 3 SPACES ." NONE " ELSE LEVEL @ 4  
  < IF 3 ELSE 5 THEN 3 .R PDIR THEN ;  
: PSHEAD ." HEADING" WIND1 16 + 32 /  
  3 .R HEADING @ PDIR ;  
: PSDAY ." DAY" VOYAGE-DAY @ 3 .R ;  
: PDAY ." IN" DAYS @ 2 .R ." DAYS" ;  
: PMI CTRAVEL @ 5 .R ." MILES" ;  
: STAT1 MAPCOLOR SPOTCURSOR LOW?  
  3 SPACES ." LATITUDE"  
  LATITUDE @ PDEG ." N LONGITUDE"  
  LONGITUDE @ PDEG ." W" CR  
  8 SPACES PSCUR 6 SPACES PSDAY CR  
  8 SPACES PSWIND 3 SPACES PMI CR  
  8 SPACES PSHEAD 4 SPACES PDAY  
  RATE? COMMAND? ;  
: MAPS1 STARTMAP CLEAR-SCREEN STAT1 ;
```



```

SCR # 39
( DOCK 1-3 STATUS)
: STATUSD1 TEXT CLS PNAME LEVEL @ DUP
  1 = IF ." LOAD FOOD AND DRINK FOR 4
5 TO 113 DAYS." PEXAMPLE THEN
  CR PCHEAD PFOOD PDRINK DUP 1 > IF
  PCARGO PSTORES THEN DUP 3 = IF
  PANIMAL PFEED THEN PTOTAL CR
." THE SHIP HOLDS UP TO " TONMAX @ .
." TONS." PDASH
  CR DUP 1 = IF CR ." AFTER L
LOADING TYPE GO " CR CR ELSE
  DUP 3 = NOT IF
." COMMAND      MEANING      UNIT OF MEASURE
" CR CR
." FOOD         LOAD FOOD      DAYS" CR
." DRINK        LOAD DRINK     DAYS" CR
." CARGO        LOAD CARGO     TONS" CR
." STORES       SHIPS STORES   TONS" CR
  THEN 2 > IF
." STOCK        COLONY ANIMALS  TONS" CR
." FEED         LIVESTOCK FEED   TONS" CR
THEN ." GO      BEGIN VOYAGE" CR
." STOP        END VOYAGE" THEN ;

```

```

SCR # 57
( CONSUMPTION 4)

: HAYUSE PIG @ GOAT @ 7 2 */ +
  SHEEP @ 8 3 */ + RABBIT @ 33 / + ;
: GRAINUSE PIG @ 2* GOAT @ + RABBIT @
  2/ + POULTRY @ 55 500 */ + ;
: ROOTUSE PIG @ 5 2 */ GOAT @ +
  SHEEP @ + ;
: WATERUSE PIG @ 24 * GOAT @ 24 * +
  SHEEP @ 16 * + RABBIT @ 2* +
  POULTRY @ 2/ + WRATION @ 120 * + ;
: LOW4? 0 RATFLG ! WATER 2@ WATERUSE
  M/ SWAP DROP RAT?
  SPIRITS 2@ DRATION @ 120 *
  M/ SWAP DROP RAT?
  SALT 2@ FRESH 2@ D+ PRESERVE 2@ D+
  FRATION @ 113 * M/ SWAP DROP RAT? ;
: CONSUME4 HAY 2@ HAYUSE 0 D- HAY 2!
  GRAIN 2@ GRAINUSE 0 D- GRAIN 2!
  ROOTS 2@ ROOTUSE 0 D- ROOTS 2!
  WATERUSE WATER USER 0= NOT
  IF 1 DWATER +! THEN DRATION @ 120 *
  SPIRITS USER 0= NOT IF 1 DRUM +!
  THEN CONSUMEFOOD LOW4? ;

```

```

SCR # 58
( DOCK PRINT 4 )
: PLS @ DUP 10 .R 10 * SWAP / 10 /MOD
  2DUP 10 * + ANIMALS +!

```

```

: PPIG      ." PIGS      " 20 PIG PLS ;
: PGOAT     ." GOATS     " 20 GOAT PLS ;
: PSHEEP    ." SHEEP     " 15 SHEEP PLS ;
: PRABBIT   ." RABBITS   " 330 RABBIT PLS ;
: PFOWL     ." FOWL      " 250 POULTRY PLS ;
: PSTOCK4   ." LIVESTOCK NO TONS"
      CR 0 ANIMALS
      ! PPIG PGOAT PSHEEP PRABBIT PFOWL
      ANIMALS @ 5 + 10 / TONTOTAL +! ;
: PSTORES4  PSTORES PCARGO ;

```

SCR # 59

```

( PRINT DOCKSIDE 4 )
: PDF DUP 2@ 4 ROLL -DUP 0= IF DROP 0
      ELSE M/ THEN 9 .R DROP
      LB/TON DUP 9 .R CR TONTOTAL +! ;
: PPRESERVE ." PRESERVE" 450 PRESERVE
      PDF ;
: PFRESH    ." FRESH     " 450 FRESH PDF ;
: PSALT     ." SALT      " 450 SALT PDF ;
: PSPIRITS  ." SPIRITS   " 480 SPIRITS
      PDF ;
: PWATER    ." WATER     " WATERUSE
      WATER PDF ;
: PHAY      ." HAY       " HAYUSE HAY
      PDF ;
: PGRAIN    ." GRAIN     " GRAINUSE GRAIN
      PDF ;
: PROOTS    ." ROOTS     " ROOTUSE ROOTS
      PDF ;
: PFOOD4    PFRESH PSALT
      PPRESERVE ;
: PDRINK4   PWATER PSPIRITS
      ;
: PFEEED4   PHAY PGRAIN
      PROOTS ;

```

SCR # 60

(DOCK STATUS 4)

```

: STATUSD4  CLS PNAME ." LOAD UP TO "
      TONMAX @ . ." TONS" CR 0 TONTOTAL
      ! PCHEAD PFOOD4 PDRINK4
      PFEEED4 PSTORES4 PSTOCK4 PTOTAL
      ( PDOCK4 ) ;

```

SCR # 61

(SAILING PRINT 4)

: PFOODS4 5 SPACES FRATION PRAT ." FOOD"

12 SPACES DRATION PRAT 3 SPACES

WRATION PRAT CR

FRESH SALT PRESERVE SPIRITS WATER"

CR FRESH 2@ FRATION @ 113 * M/

4 .R DROP

SALT 2@ FRATION @ 113 * M/ 6 .R

DROP

PRESERVE 2@ FRATION @ 113 * M/

10 .R DROP

SPIRITS 2@ DRATION @ 120 * M/

11 .R DROP

WATER 2@ WATERUSE M/ 7 .R DROP

CR CR

GRAIN HAY ROOTS" 7 SPACES

VOYAGE-DAY @ 3 .R ." DAYS" CR

GRAIN 2@ GRAINUSE M/ 4 .R DROP

HAY 2@ HAYUSE M/ 6 .R DROP

ROOTS 2@ ROOTUSE M/ 10 .R DROP

." AT SEA" PDASH ;

SCR # 62

(SAILING PRINT 4)

: PSTOCKS4

GOATS PIGS SHEEP RABBITS FOWL"

CR GOAT @ 4 .R PIG @ 7 .R SHEEP @

8 .R RABBIT @ 10 .R POULTRY @

7 .R PDASH ;

: STATUS4 STOPMAP CLS MSHIP-ON

PNAME PFOODS4 PSTOCKS4

PLOC PCUR PWIND PHEAD PMILE

CR COMMAND? ;

SCR # 74

(VOCUBLARY LIST)

: VOC1

CR

MACE	FIRKIN	HOGSHEAD	GREENGINGER
PIPES	BALLAST	HABERDYNE	COOPERAGE
BILGE	HALYARD	WORMWOOD	CUIRASSES
LUFF	MIZZAN	BOATSWAIN	BANDOLIERS
PORT	FATHOM	STARBOARD	CARTOGRAPHY
KINE	LEEWARD	WINDWARD	LATITUDE

" ; : VOC2 CR

TACK	SCONCE	TRENCHER	LONGITUDE
GYBE	MATTOCK	BILLHOOK	HELMSMAN
SEINE	SCYTHE	MATCHLOCK	WHIPSTAFF
SAKER	SICKLE	FLINTLOCK	FOREMAST
SPAR	MUSKET	CORSELET	MAINMAST
SWAB	MINION	HORNBOOK	MIZZENMAST

" ; : VOC3 CR

PITCH	SHALLOP	BREECHES	SCUPPERS
OAKUM	JERKIN	VICTUALS	POLESTAR
CAULK	DOUBLET	SANDGLASS	SPRITSAIL
GALE	RUSSET	ASTROLABE	LANDFALL
KNOTS	SAFFRON	QUADRANT	TREENAIL
AFT	WEEVILS	DOLDRUMS	BOWSPRIT

" ;

SCR # 75

(MORE VOCUBLARY)

: VOC4 CR

ABEAM	MAGGOTS	RUTTERS	COMPASS ROSE
TILLER	BARQUE	CAPSTAN	PEASE PUDDING
BLOCKS	TOWLINE	BRAZIER	NEATS' TONGUE
VOYAL	FLOTSAM	RIGGING	TRAVERSE BOARD
SQUALL	GIMBAL	SHOAL	DEAD RECKONING
SKIFF	PILGRIM	LATEEN	FORETOPSAIL" ;

: BIB1 CR CR ." BIBLIOGRAPHY BOOKS"

CR CR

THE MAYFLOWER	KATE CAFFREY	1974
THE SECOND MAYFLOWER ADVENTURE	WARWICK CHARLTON	1957
WILD OCEAN	ALAN VILLIERS	1957
NEW SHIPS AND THE SEA	ALAN VILLIERS, ET AL	1962

" ; : BIB2

THE VISUAL ENCYCLOPEDIA OF NAUTICAL	
TERMS UNDER SAIL	BASIL BATHE ED. 1978
NAVIGATION DICTIONARY	
	U. S. OCEANOGRAPHIC OFFICE 1969

" ;

SCR # 80

(BIBLIOGRAPHY)
: BIB3 CR
" NATIONAL GEOGRAPHIC ARTICLES
" CR CR
WE'RE COMING OVER ON THE MAYFLOWER
VILLIERS , STEWART MAY 1957
HOW WE SAILED THE MAYFLOWER II TO
AMERICA ALAN VILLIERS NOV 1957
";
: VOC CLS ." VOCABULARY LIST" CR
VOC1 VOC2 VOC3 HOME CR CR CR CR?
CLS VOC4 BIB1 BIB3 HOME CR CR CR?
0 ;

SCR # 40
(DUMMY STATES)
: ENDS 1 STATE ! 0 LEVEL ! ;
: LANDING STOPMAP 1 STATE +! MSHIP-OFF
TEXT CLS ;

SCR # 41
(VOCABULARY START AND 1 DOCK)
: S81 0 STATE ! 10 LEVEL ! 1 ;
: S82 0 STATE ! 1 LEVEL ! 1 ;
: S83 0 STATE ! 2 LEVEL ! 1 ;
: S84 0 STATE ! 3 LEVEL ! 1 ;
: S85 0 STATE ! 4 LEVEL ! 1 ;
: QUIT NORMAL (COMPILE BASIC)

HERE VOCAB !
F SS1 T 1 F SS2 T 2 F SS3 T 3 F SS4 T 4
F SS5 T 5 F VOC T WORDS
F QUIT T QUIT Ø , VOCAB @ CONSTANT
STARTV

(VOCUBLARY 1-3A DOCK) HERE VOCAB !
F LOADFOOD T FOOD F LOADDRINK T DRINK
F LOADANIMALS T STOCK F LOADFEED
T FEED F LOADSTORES T STORES
F LOADCARGO T CARGO
F STOP T STOP F LOADANIMALS T LIVESTOCK
F LOAD? T GO
Ø , VOCAB @ CONSTANT DOCK1V

SCR # 42

(VOCUBLARY 4A DOCK) HERE VOCAB !
F LOADFRESH T FRESH F LOADSALT T SALT
F LOADPRESERVE T PRESERVE
F LOADSTORES T STORES F LOADCARGO
T CARGO
F LOADPIG T PIG F LOADPIG T PIGS
F LOADGOAT T GOAT F LOADGOAT T GOATS
F LOADSHEEP T SHEEP
F LOADPOULTRY T BIRDS F LOADPOULTRY
T POULTRY F LOADPOULTRY T FOWL
F LOADRABBITS T RABBITS
F LOADRABBITS T RABBIT

F LOADWATER T WATER
F LOADSPIRITS T SPIRITS

F LOADHAY T HAY F LOADGRAIN T GRAIN
F LOADROOTS T ROOTS

F HELPD4 T HELP F STOP T STOP
F LOAD? T GO

Ø , VOCAB @ CONSTANT DOCK4V

SCR # 43

(VOCUBLARY 1B-3B SAILING)

HERE VOCAB !

F N T N F NBW T NBW F NNW T NNW
F NWN T NWN F NW T NW F NWNW T NWNW
F WNW T WNW F WBN T WBN
F W T W F WBS T WBS F WSW T WSW
F SWBN T SWBN F SW T SW F SWBS T SWBS
F SSW T SSW F SBW T SBW
F S T S F SBE T SBE F SSE T SSE
F SEBS T SEBS F SE T SE F SEBE T SEBE
F ESE T ESE F EBS T EBS
F E T E F EBN T EBN F ENE T ENE
F NEBE T NEBE F NE T NE F NEBN T NEBN
F NNE T NNE F NBE T NBE

F FLUID T DRINK F SOLID T FOOD
F NW T FULL F 3 T 3/4 F 2 T 1/2
F 2 T HALF

F MAPS1 T MAP F STATUSS1 T STATUS
F HELPS1 T HELP F STOP T STOP
F LANDING T LAND F GOES1 T GO
Ø , VOCAB @ CONSTANT SAILING

SCR # 50

(VOCUBLARY 2B-3B SAILING)

HERE VOCAB !

F N T N F NBW T NBW F NNW T NNW
F NWN T NWN F NW T NW F NWBW T NWBW
F WNW T WNW F WBN T WBN
F W T W F WBS T WBS F WSW T WSW
F SWBW T SWBW F SW T SW F SWBS T SWBS
F SSW T SSW F SBW T SBW
F S T S F SBE T SBE F SSE T SSE
F SEBS T SEBS F SE T SE F SEBE T SEBE
F ESE T ESE F EBS T EBS
F E T E F EBN T EBN F ENE T ENE
F NEBE T NEBE F NE T NE F NEBN T NEBN
F NNE T NNE F NBE T NBE

F HEAD T H F HEAD T HEADING
F FLUID T DRINK F SOLID T FOOD
F NW T FULL F 3 T 3/4 F 2 T 1/2
F 2 T HALF

F MAPS1 T MAP F STATUSS1 T STATUS
F HELPS2 T HELP F STOP T STOP
F LANDING T LAND F GOES1 T GO
Ø , VOCAB @ CONSTANT SAILING2

SCR # 44

(VOCUBLARY 4B SAILING4)

HERE VOCAB ! HERE DIRECTIONS !

F N T N F NBW T NBW F NNW T NNW
F NWN T NWN F NW T NW F NWBW T NWBW
F WNW T WNW F WBN T WBN
F W T W F WBS T WBS F WSW T WSW
F SWBW T SWBW F SW T SW F SWBS T SWBS
F SSW T SSW F SBW T SBW
F S T S F SBE T SBE F SSE T SSE
F SEBS T SEBS F SE T SE F SEBE T SEBE
F ESE T ESE F EBS T EBS
F E T E F EBN T EBN F ENE T ENE
F NEBE T NEBE F NE T NE F NEBN T NEBN
F NNE T NNE F NBE T NBE

F HEAD T H F HEAD T HEADING
F SETSPIRITS T SPIRITS F SETWATER T WATE
R F SOLID T FOOD
F NW T FULL F 3 T 3/4 F 2 T 1/2
F 2 T HALF F GOES1 T GO
F LANDING T LAND
F MAPS1 T MAP F STATUSS4 T STATUS
F HELPS4 T HELP F STOP T STOP

SCR # 45
(SAILING4 CONT)

F EATPIG T PIG F EATPIG T PIGS
F EATGOAT T GOAT F EATGOAT T GOATS
F EATSHEEP T SHEEP
F EATPOULTRY T FOWL
F EATRABBIT T RABBITS
F EATRABBIT T RABBIT
F NOP T EAT

Ø , VOCAB @ CONSTANT SAILING4

SCR # 46
(SAIL1 STATE) : CLOSE? LONGITUDE
@ 3800 > IF LATITUDE @ 2100 >
IF DAY/DECISION @ 1+ 2/ -DUP NOT
IF 1 THEN DUP DAY/DECISION ! DAYS !
THEN THEN ;
: MOVESHIP 331 LONGITUDE @ 219 3600
*/ - DUP Ø< IF DROP ELSE DUP 350
> IF DROP ELSE DUP 255 >
IF 3 ELSE Ø THEN 53264 C!
DUP 53248 C! 53250 C! THEN THEN
308 LATITUDE @ 78 900 */ - DUP Ø<
IF DROP ELSE DUP 255 > IF DROP ELSE
DUP 53249 C! 53251 C! THEN THEN ;
: SAILØ STORM? TRAVEL CLOSE? MOVESHIP
FORCES CONSUME1 INCS SINK?! ;
: SAIL1 SAILØ 8POINT ;
: SAIL2 SAILØ 16POINT ;
: SINIT -1 CDIR ! SW HEADING ! E WDIR !
RANDOM 7 AND 1 OR WFORCE ! INCS
SAILING VOCAB ! FULLRATION SAILØ
Ø RATFLG ! ;
: SAIL1INIT SINIT HELPS1 8POINT
STATUSS1 ;
: SAIL2INIT SINIT SAILING2 VOCAB !
HELPS2 16POINT STATUSS1 ;

SCR # 47
(SAIL4 STATE)

: SAIL4INIT SINIT SAILING4 VOCAB !

HELPS4 STATUS\$4 ;

: SAIL4 STORM? TRAVEL MOVESHIP
FORCES CONSUME4 INCS SINK?! ;

SCR # 48

```
( SCORE KEEPING )
: PSC0 CR DUP 0< IF -1 ELSE 0 THEN
  TSCORE 20 D+ TSCORE 2! ;
: PSC1 .R DUP 9 .R PSC0 ;
: PSCORE SWAP 16 PSC1 ;
: PSC2 SWAP 14 PSC1 ;
: SCFOOD FOOD @ 4 / DUP 10 * DUP 0<
  IF 10 * ELSE 680 MIN THEN
  ." FOOD " PSCORE ;
: SCDRINK DRINK @ 4 / DUP 20 * DUP 0<
  IF 5 * ELSE 100 MIN THEN
  ." DRINK " PSCORE ;
: SCSTOCK ANIMALS @ DUP 60 * 900 -
  900 MIN
  ." LIVESTOCK" PSCORE ;
: SCCARGO CARGO @ DUP 21 < IF DUP DUP
  11 < IF 100 * 1000 -
  ELSE 50 * 500 - THEN
  ELSE DUP DUP 31 < IF 20 * 100 +
  ELSE 10 * 400 + 800 MIN THEN
  THEN ." CARGO " PSCORE ;
: SCWATER WATER 20 WATERUSE M/ SWAP
  DROP DUP DUP 0< IF 100 *
  ELSE 20 * 100 MIN THEN
  ." WATER " PSCORE ;
```

SCR # 49

```
( SCORING )
: SCSPIRITS SPIRITS 20 480 M/ SWAP
  DROP DUP DUP 0< IF 100 *
  ELSE 20 * 100 MIN THEN
  ." SPIRITS " PSCORE ;
: SCHAY HAY 20 HAYUSE M/ SWAP DROP DUP
  2* ." HAY " PSCORE ;
: SCROOTS ROOTS 20 ROOTUSE M/ SWAP DROP
  DUP 2*
  ." ROOTS " PSCORE ;
: SCGRAIN GRAIN 20 GRAINUSE M/ SWAP
```

```

DROP 2*
." GRAIN      " PSCORE ;
: SCFOOD4 SALT 2@ PRESERVE 2@ D+ 254
M/ SWAP DROP DUP 10 * 680 MIN
." FOOD      " PSCORE ;
: SCRAT1 @ DUP -10 * PSCORE ;
: SCRAT2 @ DUP -30 * PSCORE ;
: SC3F ." 3/4 FOOD " 3/4FOOD SCRAT1 ;
: SCHF ." 1/2 FOOD " 1/2FOOD SCRAT2 ;
: SC3W ." 3/4 WATER" 3/4WATER SCRAT1 ;
: SCHW ." 1/2 WATER" 3/4WATER SCRAT2 ;
: SC3D ." 3/4 DRINK" 3/4DRINK SCRAT1 ;
: SCHD ." 1/2 DRINK" 1/2DRINK SCRAT2 ;

```

```

SCR # 53
( SCORE KEEPING)

```

```

: SC3S ." 3/4 SPIRITS" 3/4DRINK @
DUP -60 * PSC2 ;
: SCHS ." 1/2 SPIRITS" 1/2DRINK @
DUP -20 * PSC2 ;
: SCLAND LATITUDE @ 2518 - ABS LONGITUDE
@ 4240 - ABS + 60 /
DUP 2 - -100 * ." PLYMOUTH MISSED
BY" SWAP 7 .R 161 EMIT DUP 8 .R PSC0 ;
: SCSTOCK4 -DUP 0= IF -300
ELSE 3 - 60 * THEN PSCORE ;
: SCPIG PIG @ DUP 2/ ." PIGS      "
SCSTOCK4 ;
: SCGOAT GOAT @ DUP 2/ ." GOATS   "
SCSTOCK4 ;
: SCSHEEP SHEEP @ DUP ." SHEEP   "
2* 3 / SCSTOCK4 ;
: SCRAB RABBIT @ DUP ." RABBITS  "
33 / SCSTOCK4 ;
: SCFOWL POULTRY @ ." FOWL      "
DUP 25 / SCSTOCK4 ;
: SCFEED FEED 2@ ANIMALS @ M/ 5 /
DUP 6 * ." FEED      " PSCORE ;

```

```

SCR # 55
( INTRODUCTION STATE)

```

```

: ENGLAND 3023 LATITUDE ! 250 LONGITUDE
MOVESHIP ! ;
: MASS 2518 LATITUDE ! 4240 LONGITUDE !
;
: MAP STARTMAP MAPCOLOR
ENGLAND MOVESHIP MSHIP-ON
WAITWAIT MSHIP-OFF STOPMAP ;

```

SCR # 56

(SCORE KEEPING)

: SCHEAD TEXT CLS

22 SPACES ." DAYS SCORE" CR ;

: 1SCORE SCFOOD SCDRINK SC3F SCHF

SC3D SCHD SCLAND ;

: 2SCORE 1SCORE SCCARGO ;

: 3SCORE 2SCORE SCSTOCK SCFEED ;

: 4SCORE SCFOOD4 SCWATER SC3SPIRITS

SC3F SCHF SC3W SCHW SC3S SCHS

SCCARGO SCHAY SCGRAIN SCROOTS

SCPIG SCGOAT SCSHEEP SCRAB

SCFOWL SCLAND ;

: SCORE 0. TSCORE 2! SCHEAD

LEVEL @ DUP 2 >

IF 4 = IF 4SCORE ELSE 3SCORE THEN

ELSE 2 = IF 2SCORE ELSE 1SCORE

THEN THEN CR ." TOTAL "

TSCORE 2@ 27 D.R ;

SCR # 65

(INTRODUCTION TO MAYFLOWER)

: IND1 CLS CR

THE VOYAGE OF THE MAYFLOWER" ."

PDASH CR ."

ON WEDNESDAY, SEPTEMBER 6, 1620, THE
MAYFLOWER SAILED INTO HISTORY. HER 103
PASSENGERS LEFT RELIGIOUS PERSECUTION IN
ENGLAND TO SAIL 3700 TREACHEROUS MILES
ACROSS THE NORTH ATLANTIC TO AN
UNCERTAIN FUTURE IN THE NEW WORLD."

CR CR ."

THE MAYFLOWER HAD TO CARRY ENOUGH
FOOD AND DRINK FOR PEOPLE AND LIVESTOCK
DURING THE VOYAGE. EXTRA SAILS, LINES
AND TIMBERS HAD TO BE ABOARD." CR CR ."
FINALLY, ALL THE TOOLS, EQUIPMENT AND
SUPPLIES TO ESTABLISH A NEW SETTLEMENT
HAD TO BE STOWED SECURELY IN THE HOLD."

CR CR CR CR CR CR

." (PRESS RETURN TO CONTINUE)" QUERY ;

SCR # 66
(INTRODUCTION PART 2)

: IND2 CLS CR ."

THE 66 DAY VOYAGE PROVED TO BE
HAZARDOUS. THE 30 MAN CREW AND THEIR
CAPTAIN, CHRISTOPHER JONES, HAD TO SAIL
THROUGH HEAVY STORMS AND FICKLE WINDS.

" CR ."

THEY FOUGHT THE ATLANTIC WITH LITTLE
KNOWLEDGE OF THE PREVAILING WINDS AND
THE GREAT OCEAN CURRENTS, SUCH AS THE
LABRADOR, THE NORTH EQUATORIAL AND THE
GULF STREAM." CR CR ."

THEIR NAVIGATION TOOLS WERE CRUDE AND
CHARTS OFTEN WRONG."

CR CR ."

AS YOU SAIL FROM PLYMOUTH, ENGLAND
TO PLYMOUTH, MASSACHUSETTS, REMEMBER THE
BRAVE SOULS WHO WENT BEFORE."

CR CR ."

GOOD LUCK AND GODSPEED."

CR CR CR CR CR CR? ;

SCR # 67
(HINTS AND TIPS 1)

: TIP1 CR ."

START AT LEVEL 1. WHEN YOU ARE GOOD AT
SAILING THE SHIP, GO ON TO LEVEL 2. "

CR ;

: TIP2 CR ."

LEAVE A SPACE BETWEEN COMMAND WORDS.
FOR EXAMPLE "

93 FOOD NOT 93FOOD

SW H NOT SWH" CR ;

: TIP3 CR ."

WIND DIRECTION TELLS YOU WHERE THE WIND
IS COMING FROM. A NORTH WIND IS BLOWING
FROM THE NORTH TO THE SOUTH." CR ;

: TIP2A CR ."

WATCH THE ARROWS FOR HEADING, WIND AND
CURRENT." CR ;

: TIP2B CR ."

NORTH IS THE TOP OF THE MAP, EAST IS TO
THE RIGHT." CR ;

: TIP4 CR ."

THE BACK OF THE PROGRAM BOX HAS A
COMPASS ROSE NAMING ALL THE COMPASS
POINTS." CR ;

SCR # 68
(HINTS AND TIPS 2)

: TIP5 CR ."

THE WIND AT THE TOP OF THE MAP (NORTH)
IS MOST OFTEN FROM THE WEST. THIS IS
CALLED A PREVAILING WESTERLY." CR ;

: TIP6 CR ."

SAILING SHIPS CANNOT SAIL DIRECTLY INTO THE WIND. THEY MUST ZIG-ZAG OR TACK WHEN SAILING TOWARD A PLACE FROM WHICH THE WIND IS COMING." CR ;

: TIP7 CR

BEFORE TYPING GO, TRY SEVERAL HEADINGS TO FIND THE FASTEST HULL SPEED FOR THE AVAILABLE WIND." CR ;

: TIP8 CR

LOOK AT THE CHART ON THE PROGRAM BOX FOR IDEAS ABOUT CURRENTS, PREVAILING WINDS, AND POSSIBLE ROUTES TO TAKE. THE BACK OF THE BOX HAS SOME HELPFUL FACTS." CR ;

: TIP9 CR

PLYMOUTH, MASSACHUSETTS IS AT 41 DEGREES 58 MINUTES NORTH LATITUDE AND 70 DEGREES 40 MINUTES WEST LONGITUDE." CR ;

SCR # 69

(HINTS AND TIPS 3)

: TIP10 CR

WHEN THE WIND IS CALM, YOU ARE STUCK. TYPE GO UNTIL THE WIND PICKS UP." CR ;

: TIP11 CR

THE NORTHERN PART OF THE NORTH ATLANTIC IS VERY STORMY AS WINTER APPROACHES." CR ;

: TIP12 CR

THE SARGASSO SEA HAS VERY LITTLE WIND. DO YOU KNOW WHERE IT IS ?" CR ;

: TIP13 CR

DO YOU KNOW WHERE THE GULF STREAM, THE LABRADOR CURRENT, THE NORTH EQUATORIAL CURRENT AND THE NORTH ATLANTIC CURRENTS ARE?" CR ;

: TIP14 CR

THE MAXIMUM HULL SPEED OF THE MAYFLOWER IS 8 KNOTS." CR ;

: TIP14A CR

THE EFFECT OF CURRENT IS NOT INCLUDED IN HULL SPEED." CR ;

: TIP15 CR

CHECK YOUR HEADING AND POSITION AFTER STORMS. ADJUST YOUR HEADING AND GO." CR ;

SCR # 72

(HINTS AND TIPS 4)

: TIP16 CR

YOU MUST BALANCE FOOD, STORES AND OTHER THINGS TO SUCCEED. REMEMBER THE NEEDS OF THE COLONY AFTER THE VOYAGE." CR ;

: TIP17 CR

TYPE MAP AFTER THE SAIL COMMAND TO SEE THE MAP." CR ;

: TIP18 CR

THE ORIGINAL MAYFLOWER TOOK 66 DAYS TO SAIL FROM ENGLAND TO AMERICA. THE MAYFLOWER II TOOK 57 DAYS. WHY?" CR ;

: TIP19 CR

PAY CAREFUL ATTENTION TO HOW MANY DAYS

FOOD AND DRINK YOU HAVE LEFT DURING THE VOYAGE. USE THE HALF AND 3/4 COMMANDS TO CUT YOUR RATIONS AND STRETCH YOUR SUPPLIES. FOR EXAMPLE "3/4 FOOD" CR ;
: TIP20 CR
"COMPARE YOUR NUMBER OF SAILING DAYS WITH THE ACTUAL VOYAGES." CR ;

SCR # 73

(HINTS AND TIPS 5)

: HINT1 CLS TIP2 TIP2B TIP3 TIP4 TIP10
TIP2A CR? ;
: HINT2 CLS TIP7 TIP19 TIP6 TIP8
CR? ;
: HINT3 CLS TIP16 TIP5 TIP9 TIP11
TIP14 CR? ;
: HINT4 CLS TIP12 TIP14A TIP13 TIP18 CR?
;

SCR # 76

(VOCABULARY FOR NEW LEVEL ONE)

: SH ." YOU FORGOT THE SPACE TRY AGAIN"
CR COMMAND? ;
: GOW LONGITUDE @ 200 + LONGITUDE ! ;
: GDE LONGITUDE @ 200 - LONGITUDE ! ;
: 2518? DUP 2518 - ABS 199 < IF DROP
2518 THEN LATITUDE ! ;
: GOS LATITUDE @ 200 - 2518? ;
: GON LATITUDE @ 200 + 2518? ;
: GO1 HEADING @ DUP W = IF GOW DROP
ELSE DUP E = IF GDE DROP
ELSE S = IF GOS ELSE GON
THEN THEN THEN ;
: MASS0 STOPMAP TEXT MUSIC17
MSHIP-OFF SHIP ENDS ;

HERE VOCAB !

F N T N F E T E F S T S F W T W
F HEAD T H F MASS0 T LAND F GO1 T GO
F SH T SH FSH T NH F SH T EH F SH T WH
F SH T HGO F SH T WHGO

```

SCR # 77
( NEW LEVEL 1 )
: SMSG0 CR ."
TYPE GO THEN PRESS RETURN" CR CR
  COMMAND? ;
: SMSG1S CR ."
TRY SAILING SOUTH FOR A WHILE BY TYPING
S H FOR SOUTH HEADING." CR COMMAND? ;
: SMSG1W CR ." HEADING WEST PUTS YOU RIG
HT ON COURSE" CR ." W H GO" CR COMMAND?
;
: SMSG3 CR ." THAT WAS A STORM. " CR
." RESET YOUR COURSE AND GO" CR
  COMMAND? ;
: SMSG5 CR ." YOU HAVE REACHED PLYMOUTH,
MASSACHUSETTS. NOW TYPE LAND" CR
CR  COMMAND? ;
: SMSG4 CR ." YOU ARE ON YOUR OWN TO SAI
L NORTH, WEST," CR ." SOUTH OR EAST. ( N
, W, S, OR E )" COMMAND? ;
: SMSG4N CR ." YOU ARE SOUTH OF COURSE"
CR ." SAILING NORTH WOULD BE HELPFUL"
CR  COMMAND? ;

```

```

SCR # 78
( NEW LEVEL 1 )
: SMSG4S CR ." YOU ARE NORTH OF COURSE"
CR ." SAILING SOUTH WOULD BE A GOOD IDE
A" CR ." S H GO" COMMAND? ;
: ONEOUT 3023 LATITUDE ! 610 LONGITUDE !
  W HEAD ;
: TURN? LONGITUDE @ 1800 < IF SMSG0
  ELSE INCS LATITUDE @ 2518 > IF
  SMSG1S ELSE SMSG0 INCS THEN THEN ;
: STA1 LATITUDE @ 2518 > IF SMSG0
  ELSE SMSG1W INCS THEN ;
: STA2 LONGITUDE @ 2700 < IF SMSG0
  ELSE LATITUDE @ 250 - LATITUDE !
  STORM STARTMAP MAPCOLOR MOVESHIP
  SPOTCURSOR SMSG3 INCS THEN ;
: STA3 LONGITUDE @ 3600 < IF SMSG4
  ELSE LATITUDE @ 2518 - DUP
  0= IF SMSG1W DROP INCS
  ELSE 0< IF SMSG4N ELSE SMSG4S
  THEN THEN THEN ;
: STA4 LONGITUDE @ 4200 < IF SMSG4
  ELSE SMSG5 THEN ;

```

```

SCR # 79
( NEW LEVEL 1 SIMPLE )

```

HEX

```
: SAILA CLS STARTMAP MAPCOLOR MSHIP-ON  
MOVESHIP SPOTCURSOR ;  
: SAILA0 ENGLAND SAILA ONEOUT SAILA  
SAILING0 VOCAB ! INCS SMS00  
0 C009 C! ;  
: SAILA1 SAILA TURN? ;  
: SAILA1A SAILA STA1 ;  
: SAILA2 SAILA STA2 ;  
: SAILA3 SAILA STA3 ;  
: SAILA4 SAILA STA4 ;
```

DECIMAL

SCR # 82
(END STATE)

```
: POOR CR ." YOUR VOYAGE IS OVER, THE C  
OLONY CANNOT SURVIVE WITH THE SUPPLIES O  
N HAND" CR ;  
: FAIR CR ." YOUR VOYAGE HAS ENDED. LIK  
E THE REAL PLYMOUTH COLONY, WITH COURA  
GE,  
LUCK, HALF DETERMINATION AND A LITTLE  
YOUR PILGRIMS MAY SURVIVE."  
CR ;  
: GOOD CR ." CONGRATULATIONS, YOUR VOYAG  
E HAS ENDED. YOUR FOOD AND SUPPLIES SHOU  
LD ENSURE THE SURVIVAL OF THE COLONY.  
" CR ." WELL DONE CAPTAIN " NAME COUNT  
TYPE CR ;  
: RATING TSCORE 2@ LEVEL @ DUP 3 < IF  
1 = IF 250 ELSE 450 THEN ELSE  
3 = IF 900 ELSE 1000 THEN THEN  
M/ SWAP CR CR  
DROP DUP 1 < IF DROP POOR ELSE  
1 = IF FAIR ELSE GOOD THEN THEN  
CR? ;  
: END1 CLS SCORE RATING ENDS ;  
: END3 CLS SCORE RATING ENDS VOC ;  
: END4 CLS SCORE CR? RATING ENDS VOC ;
```

SCR # 83
(RETURN1 STATE)

```
: RETURN1 ." RETURN1" LONGDELAY INCS ;
```


SCR # 84
(MASS1 STATE)

: MASS1 STOPMAP TEXT MUSIC17 SHIP INCS ;
: MASS2 STOPMAP TEXT MUSIC2 SHIP INCS ;
: MASS4 STOPMAP TEXT MUSIC2 SHIP INCS ;

SCR # 86
(START STATE)
: ENTERNAME CR ." PLEASE TYPE YOUR NAME"
." AND PRESS RETURN " CR CR
QUERY 96 WORD HERE C@ 11 > IF 11 ELSE
HERE C@ THEN DUP NAME C! HERE 1+ NAME 1+
ROT CMOVE CR ;
HEX
: START STARTV VOCAB ! @ C@OF C!
STOPMAP MSHIP-OFF TEXT CLS CR CR
." NOTE - SMALL LETTERS ARE USED FOR EAS
IERREADING" CR CR
." LEVELS OF DIFFICULTY " CR CR
." 1 SIMPLE" CR
." 2 EASY" CR
." 3 MEDIUM" CR
." 4 HARDER" CR
." 5 HARDEST" CR CR

```
." QUIT ENDS SIMULATION" CR
." WORDS VIEW VOCABULARY AND BIBLIOGRAPH
Y" CR CR CR
." TYPE A NUMBER BETWEEN 1 AND 5" CR
." THEN PRESS RETURN" CR CR
COMMAND? IF ENTERNAME THEN ;
    DECIMAL
```

SCR # 87

(DOCK1 STATE)

```
: INIT0 TONMAX ! INITVOYAGE ENGLAND ;
: INIT1 0 LOADFOOD 0 LOADDRINK
    0 LOADFEED FULLRATION 0 LOADANIMALS
    0 LOADCARGO 0 LOADSTORES
    DOCK1V VOCAB ! INCS MOVESHIP ;
: INIT4 0 LOADWATER 0 LOADSPIRITS
    0 LOADFRESH 0 LOADPRESERVE
    0 LOADSALT 0 LOADHAY 0 LOADROOTS
    0 LOADGRAIN
    0 LOADSTORES 0 LOADSAILS 0 LOADCARGO
    0 LOADPIG 0 LOADGOAT 0 LOADSHEEP
    0 LOADPOULTRY 0 LOADRABBITS
    0 DFOOD ! 0 DWATER ! 0 DRUM !
    DOCK4V VOCAB ! INCS MOVESHIP ;
: DOCK1 5 70 INIT0 INIT1 HINT1 ;
: DOCK2 3 85 INIT0 INIT1 HINT2 ;
: DOCK3 2 100 INIT0 INIT1 HINT3 ;
: DOCK4 1 120 INIT0 INIT4 HINT4 HELPD4 ;

: LOAD1 STATUSD1 COMMAND? ;
: LOAD4 STATUSD4 COMMAND? ;
```

SCR # 88

(INTRODUCTION STATE 0)

```
: CREDITS SPOTCURSOR 2 SPACES
NORMAL OPEN-READ READ3 2 CLOSE CLOSCHN
." FIRST OF THE DISCOVER AMERICA SERIES"
    DELAY DELAY CR CR
17 SPACES ." VOYAGE" DELAY
17 SPACES ." OF THE" DELAY
16 SPACES ." MAYFLOWER" DELAY DELAY CR
    CR
." COPYRIGHT 1984, CADMEAN CORP."
    CR
." DUPLICATION UNLAWFUL" CR CR
    CR
." 45 SECOND WAIT FOR DISK LOADING" ;

: INITIAL CLS CREDITS READ-DISK DELAY
LC-TEXT-STARTINT DELAY
    14 53280 C! 14 53281 C! 6 646 C!
MUSIC1 IND1 IND2 SHIP MAP
1 STATE ! ;
```

SCR # 89
(STATE TABLE)

F NOP F NOP F NOP F NOP
F NOP F NOP F START F INITIAL
STATES GAME0
F ENDS F MASS0 F NOP F SAILA4
F SAILA3 F SAILA2 F SAILA1 F SAILA0
STATES GAME1N

F NOP F END1 F MASS1 F MAPS1
F SAIL1 F SAIL1INIT F LOAD1 F DOCK1
STATES GAME1

F NOP F END1 F MASS2 F MAPS1
F SAIL2 F SAIL2INIT F LOAD1 F DOCK2
STATES GAME2

F NOP F END3 F MASS2 F MAPS1
F SAIL2 F SAIL2INIT F LOAD1 F DOCK3
STATES GAME3

F NOP F END4 F MASS4 F MAPS1
F SAIL4 F SAIL4INIT F LOAD4 F DOCK4
STATES GAME4
: GAME6 ;

SCR # 90
(MAYFLOWER TOP LEVEL)

: ?STATE LEVEL 0
DUP 4 <
IF DUP 2 <
IF DUP 1 <
IF GAME0 ELSE GAME1 THEN
ELSE DUP 3 <
IF GAME2 ELSE GAME3 THEN
THEN
ELSE DUP 8 < IF DUP 5 <
IF GAME4 (ELSE GAME5) THEN
ELSE 10 = IF GAME1N ELSE GAME6 THEN
THEN THEN ;
8 BORDER ! 7 BKGRND ! 0 CHRCLR !

HEX 1406 DUP 3191 ! 31B3 !
13F9 DUP 2DUP 3193 ! 3195 !
31B5 ! 31B7 ! DECIMAL

: RUN (MUST BE ABSOLUTE TOP WORD)
0 LEVEL ! 0 STATE !
BEGIN ?STATE 0 UNTIL ;

OK

goes in
History
Section



Turned back twice because Speedwell was leaky?
and are now making ^{last minute} preparations for solo voyage.

~~Instructions~~
INSTRUCTIONS

Welcome aboard the Mayflower, Captain. Please type your name for the log. Thank you Captain -----. The voyage we are about to take is a long and difficult one. We need you to decide what supplies of food and drink to bring with us and to estimate how ~~many~~ ^{many} days our journey will take. This is a large responsibility. If you do not take enough food and drink we will all starve or die of thirst. If you take too much we will not have room for other supplies, ~~and~~ our colony will fail and we will all perish.

Here are the lists of supplies... Please type the number of tons or gallons for each item. Then estimate how many days the voyage will take by entering a number from 30 to 120. Thank you Captain ----.

We are ready to sail for the New World Captain ----. Please enter the direction we are to ~~go~~ ^{start} in by pushing one of the following letters N S E W. N means North, S means South, East means East and W means West. You may change course every (5, 3, 21) days if you wish. You can see where you are by watching the ship on the chart.

The chart has other information you need to be aware of. The direction you are sailing is found by looking at the compass rose at the top left hand side of the chart. Your wind speed indicator is next to it at the right. At the bottom left of the chart is the number of days you have been at sea and to the right how much food and drink you have left.

The Atlantic is a treacherous ocean, storms arise suddenly you may be becalmed or ~~immersed~~ ^{lost} in fog. There are major ocean currents which will affect your hull speed. If you are at sea too long or you haven't brought enough food and drink ~~along~~ you will have to ration ~~to~~ what you have left.

312 words

Draw 2000

24
14
10
52
20
31
2

~~LEVEL 1~~ INSTRUCTIONS

BASIC INSTRUCTIONS

In this voyage you will be asked to make many decisions. Some of them have to do with supplies and some with sailing your ship. These are four levels of difficulty, the highest number, number 4, is the ~~most~~ most difficult. We recommend starting at level 1 and going on from there. At ~~the~~ the beginning of each level are instructions for that level and additional information to help you get started. Each level has 2 parts; ^{loading} Dockside and ^{at Sea} ~~Sailing~~ Sailing.

You will have to decide how much food, drink and other things to take along while you are at Dockside. Once you are ~~at~~ sailing you will have to set a course and decide how much food and drink ~~each member of~~ the crew and passengers are allowed to have. The higher the level ~~of~~ you are using, the more

decisions you must make ~~and you must~~ and the more often you must make them

~~more often~~. The more you know about the actual voyages of

the Mayflower and the Mayflower II the better you will

be able ^{to} sail through these simulated seas.) There is a

list of books to read included in this program that will

help you learn more about sailing, the Pilgrims, navigation

and the voyages of the Mayflower and the Mayflower II. Just

for fun we also included a list of words that you might

want to know more about. Words like Firkins, ~~and~~ Hogheads,

~~and~~ Hekerdyne, and foretopmast. Type a number from 1-4

to

(about 230 words)

THE ATLANTIC IS A TREACHEROUS OCEAN, STORMS ARISE

SUDDENLY OR YOU MAY BE BECALMED OR ~~LOST IN A~~ FOG.

THERE ARE MAJOR OCEAN CURRENTS TO BE AWARE OF WHICH

WILL AFFECT HOW FAST YOU SAIL. IF YOU ARE AT SEA TOO

LONG OR HAVEN'T BROUGHT ALONG ENOUGH FOOD OR DRINK YOU

MAY HAVE TO RATION WHAT IS LEFT.

All Level I INSTRUCTIONS

Welcome aboard the Mayflower, Captain. Please type your

name for the log. ^{Thank you Captain} -----
which level do you wish to enter? Type 1-4. Remember the higher the #
the harder the voyage.

LEVEL I INSTRUCTIONS
The voyage we are about to take is a long and difficult one.

You must decide how much food and drink to take aboard

and how many days you think it will take us to get to the

new world. If we do not have enough food and drink we

will starve or die of thirst. If we take too much we will not

have room for other cargo, and our colony will fail and we

will all perish. Food and drink are measured in tons.

Here are the commands you will need, what they mean and how to use them

~~Here are the commands you will need Food Drink,~~

~~HELP STOP, SAIL, DAYS, QUIT~~

~~FOOD - TYPE A NUMBER (0-1000?) LEAVE A SPACE, TYPE FOOD~~

~~AND PRESS RETURN - IT SHOULD LOOK LIKE THIS 32 FOOD~~

~~DRINK - DO THE SAME AS FOOD BUT TYPE DRINK~~

~~HELP - YOU CAN TYPE HELP ANY TIME AND COME BACK ~~HERE~~ TO
CHECK THE OTHER COMMANDS IN THE POCKET WORD VOCABULARY.~~

VOCABULARY LIST

- | | | | |
|----------------------|---------------------------|-------------------|-----------------------------|
| ✓ HOGSHEAD | ✓ TRENCHER | ✓ SPAR | ✓ ABSEAM |
| ✓ PEASE PUDDING | ✓ SCONES | ✓ WORMS | ✓ HELMSMAN |
| ✓ FIRKIN | ✓ MATTOCK | ✓ MAGGOTS | ✓ WHIPSTAFF |
| SPANISH RUSK | ✓ BILLHOOK | ✓ SWAB | ✓ TILLER |
| ✓ HABERDYNE | ✓ SCYTHE | ✓ RICH | ✓ SHARP BOOSPRIT |
| ✓ WORMWOOD | ✓ SICKIE | ✓ BAKUM | ✓ CAPSTAN |
| ✓ GREENGINGER | ✓ COOPERAGE | ✓ CAULK | ✓ BLOCKS |
| ✓ MACE | ✓ SEINE | ✓ SAND GLASS | ✓ VOYS! |
| ✓ CLOVE-gilliflowERS | ✓ MATCH LOCK | ✓ ASTROLABE | ✓ RUTTERS |
| ✓ PIPES | ✓ FLINTLOCK | ✓ COMPASS | ✓ SCUPPERS |
| ✓ BILGE | ✓ MUSKET | ✓ COMPASS ROSE | ✓ GALE |
| ✓ BALLAST | ✓ CORSCUT | ✓ QUADRANT | ✓ SQUALL |
| ✓ BOATSWAIN | ✓ CUIRASSES | ✓ TRAVERSER BOARD | ✓ BRAZIER |
| ✓ HALYARD | ✓ BANDIERS | ✓ GALE | ✓ RIGGING |
| ✓ <u>FORETOPSAIL</u> | ✓ SAKER | ✓ DOLDRUMS | ✓ SPRITSAIL |
| ✓ MIZZEN | ✓ MINION | ✓ CARTOGRAPHY | ✓ LANDFALL |
| ✓ FATHOM | ✓ BEES SHALLOP | ✓ PENN RECKONING | ✓ SHOAL |
| ✓ LUFF | ✓ HORN BOOK. | ✓ TOWLING | ✓ TRONAIL |
| ✓ LEE WARD | ✓ BRECHES | ✓ KNOTS | ✓ LATITUDE |
| ✓ WIND WARD | ✓ JERKIN | ✓ PIOSAM | ✓ SKIFF |
| ✓ PORT | ✓ DOUBLET | ✓ GIMBAL | ✓ FOREMAST |
| ✓ STAR BOARD | ✓ RUSET | ✓ POLISTAR | ✓ MAINMAST |
| ✓ KINE | ✓ SAPPHON | ✓ LATITUDE | ✓ MIZZENMAST |
| ✓ TACK | ✓ VIRTUALS | ✓ LONGITUDE | ✓ PILGRIM |
| ✓ GYBE | ✓ KNOTS' TONGUES | ✓ APT | ✓ BARQUE |

HMS MAYFLOWER

CAPTAIN KENNETH

Supply RATION

Full Food 45 DAYS supply

Full DRINK 45 DAYS supply

LOCATION 45 DEG 62MIN NORTH

19 DEG 46MIN WEST

WIND FROM SE AT 19 KNOTS

CURRENT FROM NE AT 5 KNOTS

MILES 356 IN 5 DAYS TOTAL MILES 3456

SW HEADING Hull speed 5 KNOTS

COMMAND

MEANING

HEADING OR H

DIRECTION SHIP IS going

NW H SET course FOR SOUTH WEST

FOOD

CHANGE RATION EG: 3/4 FOOD

DRINK

CHANGE RATION EG: FULL DRINK

Full

FULL RATION

3/4

THREE QUARTERS RATION

HALF

HALF RATION

HELP

RETURN TO THIS LIST

GO

RESUME sailing

LAND

ARRIVE IN MASSACHUSETTS

ADD: COMPASS

HELP WITH COMPASS

STATUS

VIEW FULL STATUS (LOOK AT ^{Full} STATUS)

MAP

VIEWMAP (LOOK AT MAP)

8 COMPASS POINTS

SCREEN WONT BLANK ^{over little block} PURING OPENING + PURING GAMES
(Call by itself)



~~1460~~ 1460
41° 58' N Lat.
70° 40' W.

Hints and Tips

- ✓ 1. Leave a space between command words. For instance 93 FOOD or SW H. 93FOOD or SWH will not work.
- ✓ 2. Watch the wind, ~~and~~ current and heading arrows. They make things much easier to understand.
- ✓ 3. Wind direction describes where the wind is blowing from. This can be confusing at first. A North wind is coming from the North and moving to the South.
- ✓ 4. ~~Except in level 1 most of the wind comes from the western direction~~ ~~Ship heading and ocean currents are shown~~
- ✓ 4. The wind most often comes out of the west except in level 1, which has no westerly winds to help you learn to sail.
- ✓ 5. To succeed you must find the right balance of supplies, stores, food and drink for both the voyage and starting the colony after you land.
- ✓ 6. After entering your heading for example NW H check your speed before typing Go. Try several headings to get the fastest hull speed for the direction you wish to sail.
- ✓ 7. Ships cannot sail directly into the wind so they must zig zag or tack when trying to go to a place where the wind comes from.
- ✓ 8. There are 32 compass points. level one uses 8, levels 2 and 3 use 16 and level 4 uses all 32.
- ✓ 9. Check the chart on the cover of the program package for some ideas about currents, winds and routes and the book for helpful facts.
- ✓ 10. The exact latitudes and longitude of Plymouth Mass. is 41° 58' N / 70° 40' W.
- ✓ 11. When the wind is calm you are stuck. Type go until the wind shifts but be aware that time is passing and you are using supplies.
- ✓ 12. There are lots of storms in the North Atlantic.
- ✓ 13. There is not much wind in the Sargasso Sea. Do you know where it is?
- ✓ 14. Do you know where the Gulf Stream is? The Labrador Current? The North Atlantic current?
- ✓ 15. The original Mayflower took ~~66~~ days to make the voyage. The Mayflower ~~it~~ took 57 days.
- ✓ 16. TYPE MAP AFTER SAIL COMMANDS TO GET TO THE MAP

GAR DICKERSON
ALBION
1.26 plus
Pleasuring
1. (517) 629-6635
WINDS
MAPS
PRICE OF MAP

WHAT THE COMMANDS MEAN

DOCKSIDE
LEVEL I

FOOD - THIS COMMAND LETS YOU DECIDE HOW MUCH FOOD TO TAKE ALONG (~~0-10000~~) — POSSIBLE TONS

DRINK - THIS COMMAND LETS YOU DECIDE HOW MUCH DRINK TO TAKE ALONG. — POSSIBLE TONS

DAYS - THIS COMMAND LETS YOU DECIDE HOW MANY DAYS YOU THINK THE VOYAGE WILL LAST — POSSIBLE DAYS

~~SMIT → LEVEL - THIS COMMAND LETS YOU DECIDE WHAT LEVEL YOU WISH TO PLAY~~

HELP - THIS COMMAND RETURNS YOU TO THE COMMAND INSTRUCTION LIST

STOP - THIS COMMAND RETURNS YOU TO DOCKSIDE SO YOU CAN MAKE CHANGES. USE STOP IF YOU MAKE A MISTAKE THAT WILL DOOM THE VOYAGE.

QUIT - THIS COMMAND ENDS THE VOYAGE

SAIL - THIS STARTS THE VOYAGE

THE DELETE KEY LETS YOU GRAB ONE CHARACTER AT A TIME SO YOU CAN CORRECT MISTAKES.

~~PLEASE READ FOOD~~

★ YOU CAN ENTER MORE THAN ONE COMMAND BEFORE PRESSING RETURN TO SAVE TIME I.E. — FOOD — DRINK — DAYS SAIL RETURN

How to use THE COMMANDS Level I Docksider

FOOD - TYPE A NUMBER FROM TO PRESS THE SPACE BAR ONCE. TYPE FOOD AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 4 FOOD THIS MEANS YOU ARE LOADING 4 TONS OF FOOD ON THE SHIP.

DRINK - TYPE A NUMBER FROM TO PRESS SPACE BAR ONCE TYPE DRINK AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 12 DRINK. THIS MEANS YOU ARE LOADING 12 TONS OF DRINK ON THE SHIP.

DAYS - TYPE A NUMBER FROM TO PRESS SPACE BAR ONCE. TYPE DAYS AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 12 DAYS. THIS MEANS YOU THINK THE VOYAGE WILL LAST 12 DAYS. REMEMBER TO TAKE ENOUGH FOOD AND DRINK TO LAST AT LEAST AS LONG AS THE VOYAGE.

omit

~~LEVEL - TYPE A NUMBER FROM $1/4$ TO $1/4$. PRESS SPACE BAR ONCE TYPE LEVEL AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 3 LEVEL~~

HELP - TYPE HELP ~~AND PRESS~~ PRESS RETURN. USE ANYTIME TO RETURN TO THIS LIST.

STOP - TYPE STOP PRESS RETURN.

SAIL - TYPE SAIL PRESS RETURN. USE AFTER DECIDING FOOD, DRINK AND DAYS.

How TO USE THE COMMANDS LEVEL I SAILING

HEADING - TYPE HEADING PRESS SPACE BAR ONCE. TYPE ONE OF THE FOLLOWING N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, YOUR COMMAND SHOULD LOOK LIKE THIS ENE HEADING. THIS MEANS YOU ARE*

FOOD - TYPE ONE OF THE FOLLOWING Full, 3/4, 1/2 PRESS SPACE BAR ONCE. TYPE FOOD PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 3/4 FOOD. THIS MEANS THE PEOPLE ON YOUR SHIP WILL GET THREE FOURTHS OF THE NORMAL DAILY AMOUNT. YOUR FOOD WILL LAST LONGER BUT PEOPLE COULD GET WEAK.

TO TYPE 3/4 OR 1/2 PRESS 1 PRESS / PRESS 2

DRINK - TYPE ONE OF THE FOLLOWING Full 3/4 1/2 PRESS SPACE BAR ONCE. TYPE DRINK. PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS Full DRINK. THIS MEANS YOUR PEOPLE WILL HAVE ENOUGH DRINK TO AVOID THIRST AND USE IT UP AT THE NORMAL RATE.

BEWARE USING UP ALL YOUR DRINK BEFORE THE END OF THE VOYAGE.

* going TO SAIL EAST NORTH EAST FOR AWHILE.

STATUS - ~~TYPE~~ STATUS ^{PRESS RETURN} WHEN YOU WANT TO GO FROM MAP PAGE TO STATUS PAGE. THIS LETS YOU SEE HOW YOU ARE DOING AND THINK ABOUT CHANGES YOU WISH TO MAKE.

TYPE MAP PRESS RETURN

MAP - LETS YOU RETURN TO THE SHIP FROM STATUS PAGE

WHAT THE COMMANDS MEAN LEVEL I - SAILING

HEADING - THIS COMMAND LETS YOU DECIDE^N WHICH DIRECTION YOU WISH TO SAIL. 16 POSSIBLE CHOICES

FOOD - THIS COMMAND LETS YOU RATION FOOD. HOW MUCH FOOD EACH PERSON CAN HAVE EACH DAY. ~~FULL~~⁽¹⁾, $3/4$, $1/2$ RATIONS.

DRINK - LETS YOU DECIDE HOW MUCH DRINK EACH PERSON MAY HAVE EACH DAY ~~FULL~~⁽¹⁾, $3/4$, $1/2$ RATION.

MAP - LOCATOR ON THE STATUS PAGE - RETURNS YOU TO THE CHART WITH THE SHIP

STATUS - TAKES YOU TO THE STATUS PAGE WHERE YOU CAN SEE HOW YOU ARE DOING

HELP - EXPLAINS SAILING VOCABULARY

STOP - RETURN TO DECISION POINT

QUIT - ENDS THE PROGRAM.

WHEN LEFT OUT STUFF APPEARS ON THE SCREEN IT MEANS THAT YOU FORGOT TO ENTER A NUMBER OR COMMAND. GO BACK TO DECISION POINT BY TYPING STOP. PRESS RETURN AND MAKE CORRECTIONS

HELP - TYPE HELP PRESS RETURN. USE ANYTIME TO RETURN TO THE EXPLANATION PAGE OF SAILING COMMANDS.

STOP - TYPE STOP PRESS RETURN. LETS YOU GO BACK TO DECISION POINT TO MAKE CHANGES. ~~THE~~ USEFUL WHEN YOU THINK THE VOYAGE ~~IS~~ DOOMED.

QUIT - TYPE QUIT PRESS RETURN. THIS LETS YOU END THE PROGRAM AT ANYTIME SO YOU CAN GO EAT DINNER OR RUN AROUND THE BLOCK.

LEVEL III INSTRUCTIONS

WELCOME TO LEVEL III. THIS LEVEL HAS THE SAME COMMANDS AS LEVEL II BUT IS AGAIN HARDER. GOOD LUCK!

LEVEL IV GENERAL INSTRUCTIONS

LEVEL IV IS A MIND BENDER. YOU NEED TO KNOW A LOT MORE ABOUT THE MAPFLOWER, ABOUT RATIOS FOR BOTH PEOPLE AND ANIMALS ABOUT SAILING AND NAVIGATION.

TO DO COMMANDS & INSTRUCTIONS LEVELS II & III

COMPASS INSTRUCTION

HISTORY ACTUAL AND WHAT WE DID FOR ACCURACY.
WRITE ABOUT WEATHER.

ARRIVAL VOCABULARY

END NARRATIVE

DESCRIBE FOOD, DRINK, ANIMALS, FEEDS, STORES & CARGO.

LEVEL II & III DOCKSIDE COMMANDS

WELCOME TO LEVEL II (II) THIS LEVEL INCLUDES ALL THE OTHER COMMANDS THAT YOU ARE FAMILIAR WITH AND ADDS SOME NEW ONES. THEY ARE ANIMALS, FEEDS, STORES, CARGO. THE AMOUNTS USED ARE IN TONS. THIS LEVEL IS A LOT HARDER THAN LEVEL I. FOR ONE THING THE WEATHER IS MUCH SEVERE. SO BEWARE OF STORMS AND CALMS AND FOGS AND SUCH. ALL THE NEW COMMANDS ARE USED AT DOCKSIDE BUT ~~ONLY~~ ANIMALS AND FEEDS ARE USED UNDER SAIL. ^{INSERT PAGE 2 HERE} HERE ARE THE NEW COMMANDS, WHAT THEY MEAN AND HOW TO USE THEM.

~~WHAT THE COMMANDERS MUST HAVE (THE?)~~

The Pilgrims aboard the Mayflower carried livestock along with them so they would have pigs, and goats and sheep and poultry to breed and multiply in their new home. These animals would help to feed them. They had to bring food for the animals with them on the ship just as they did for people. They also brought along extra equipment for the ship like sails, and rope as well as farm equipment and other tools to help them in the New World. You have to decide how many animals, how much feed and what supplies and equipment to bring along. While you are sailing you have to decide ^{how much} ~~what~~ to feed the animals and if you have to use some of the ship's space. You might also have to dump cargo overboard. Remember that animals need sleep to drink too.

WHAT THE COMMANDS MEAN LEVEL II DOCKSIDE

ANIMALS - THIS COMMAND LETS YOU DECIDE HOW MANY ANIMALS (IN TONS) YOU WANT TO TAKE ALONG

FEED THIS COMMAND LETS YOU DECIDE HOW MUCH FOOD THE ANIMALS ARE GOING TO NEED TO SURVIVE THE VOYAGE. REMEMBER THAT ANIMALS DRINK LOTS OF WATER SO ADD THAT TO YOUR DRINK COMMAND.

STORES - THIS COMMAND LETS YOU DECIDE HOW MUCH EXTRA EQUIPMENT FOR THE SHIP TO BRING ALONG. THINGS LIKE SAILS, AND ROPE AND WOOD IN CASE A STORM DESTROYS SOMETHING.

CARGO - THIS COMMAND LETS YOU DECIDE HOW MUCH FARM EQUIPMENT, CARPENTERSTOOLS, KITCHEN UTENSILS, LOOMS AND OTHER THINGS TO BRING SO THAT THE PILGRIMS WILL HAVE ENOUGH TOOLS TO SURVIVE AND THRIVE.

REMEMBER EVERYTHING IS RELATED TO EVERYTHING ELSE AND YOU ONLY HAVE SO MUCH SPACE FOR EVERYTHING. ~~IF YOU SURVIVE THE VOYAGE THE COLONY~~

How TO USE THE COMMANDS LEVEL II (II): DOCKSIDE

ANIMALS - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE ANIMALS AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 43 ANIMALS. THIS MEANS YOU ARE TAKING 43 TONS OF ANIMALS ALONG. NOW YOU HAVE TO FEED THEM.

FEED - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE FEED AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 88 FEED. THIS MEANS YOU ARE TAKING 88 TONS OF FEED FOR YOUR 43 TONS OF ANIMALS. DID YOU REMEMBER DRINK

STORES - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE STORES AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 12 STORES. THIS MEANS YOU ARE TAKING 12 TONS OF SPARE PARTS ALONG.

CARGO - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE CARGO AND PRESS RETURN. YOUR COMMAND SHOULD LOOK LIKE THIS 37 CARGO. THIS MEANS YOU ARE TAKING ALONG 37 TONS OF STUFF TO HELP THE PILGRIMS SURVIVE IN THEIR NEW HOME.

WHAT THE COMMANDS MEAN LEVEL II SAIL

ANIMALS - CHANGING THE NUMBER OF TONS OF ANIMALS MEANS YOU DIDN'T BRING ENOUGH FOOD FOR PEOPLE AND HAVE TO EAT SOME OF YOUR LIVESTOCK. POOR PLANNING FOR THE FUTURE

FEED - THIS COMMAND LETS YOU RATION FOOD FOR THE ANIMALS. ~~BE THE~~ HOW MUCH THEY CAN HAVE EACH DAY.

STORES - THIS COMMAND LETS YOU REPAIR DAMAGE TO THE SHIP BY USING UP SUPPLIES

~~CARGO~~ CARGO - THIS COMMAND LETS YOU THROW STUFF OVERBOARD TO PREVENT SINKING OR TO INCREASE SPEED TO AVOID STARVATION OR DEATH BY THIRST

HOW TO USE COMMANDS LEVEL II SAIL

ANIMALS - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE ANIMALS PRESS RETURN. THIS MEANS YOU ATE SOME ANIMALS. YOU CAN'T ADD ANIMALS WHILE YOU ARE AT SEA.

FEED - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR ONCE. TYPE FEED PRESS RETURN. THIS MEANS YOU DIDN'T BRING ENOUGH FOOD FOR THE ANIMALS AND HAVE TO FEED THEM LESS. THEY WILL GET WEAKER.

STORES - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE BAR
ONCE. TYPE STORES PRESS RETURN. THIS LETS YOU USE
UP EXTRA PARTS TO FIX THE SHIP.

CARGO - TYPE A NUMBER FROM ___ TO ___ PRESS SPACE
BAR ONCE. TYPE ~~STORES~~ CARGO PRESS RETURN. THIS
MEANS YOU DUMPED VALUABLE EQUIPMENT INTO
THE OCEAN AND ARE RISKING THE FUTURE OF THE COLONY

18. THE MAYFLOWER I TOOK 66 DAYS TO SAIL FROM ENGLAND TO AMERICA.
THE MAYFLOWER II TOOK 57 DAYS. WHY?
19. PAY CAREFUL ATTENTION TO HOW MANY DAYS OF FOOD AND DRINK YOU HAVE.
USE THE HALF AND $\frac{3}{4}$ COMMANDS TO STRETCH YOUR SUPPLIES. EXAMPLE $\frac{3}{4}$ FOR
20. WATCH HOW MANY DAYS YOU HAVE BEEN SAILING AND COMPARE THEM TO THE
LENGTH OF THE ACTUAL VOYAGES.

Things to know about the program

- Always leave a space between compound words. 80 Food or SW H never 80FOOD or SWH.
- Pay careful attention at all times to how much food and drink you have. If ~~it~~^{they} gets low ^{use} remember the HALF and 3/4 commands ~~let you stretch your supplies by reducing the food and drink~~ each passenger is allowed to have.
- WATCH How many days you have been at sea and compare your progress to the voyages of the real ships, The Mayflower and the Mayflower II

There are lots of storms in the North Atlantic

The Sargasso Sea is in the South Atlantic and hasn't much wind

580
WATCH the arrows for wind, current and heading.

Remember the H or H heading arrow shows which way the ship is going

" the current arrow shows which way the current is

the Wind arrow shows where the wind is coming From
all other arrows, H or current show direction to not from. The wind arrow is the only different one.

General Instructions

Wind direction - comes from

Compass - Compass rose has up to 32 points

be aware of currents

prevailing winds from West in all lat level I

leave space between words - 80 Food not 80FOOD

~~give~~ balance supplies, stores and food & drink

give exact latitude & longitude of both Ptzmonets'

after entering heading NW - H check hull speed by to get
fastest hull speed going in the right direction before trying to go
when wind is calm you're stuck - type go until the
wind shifts - you use up supplies so ~~be~~ beware
calm - o ~~was~~ beware Sargasso sea
sailing backward - strong current to the north



~~General Information~~ Introduction

In this voyage you will be asked to make many decisions. Some of them have to do with supplies and some with sailing your ship. We recommend starting at level 1 and going on from there. At the beginning of each level are instructions for that level and more information to help you.

The weather you run into is very much like the weather over the ~~North~~ Atlantic ocean in the fall and early winter. The ocean currents are much like the real ones and the ship sails only as close to the wind as the Mayflower did. ~~It will help you at the highest to know as much as possible about all these things and more~~ ^{The more you know about sailing and weather and history the more interesting your voyage will be} so we have included a list of books you may want to read. To see the list type Book.

~~Like all new things this program may be a bit confusing at first. We've tried to make everything clear for you but it is new so hang in there, it's worth it. One thing that non-sailors need to know is that wind direction means the direction that the wind comes from. The ship's heading and the currents tell you which direction they are going to~~

1. When entering commands always leave a space between words
← 80 F00D OR SSW H ~~mean~~ 80F00D or SSWH will not work.
2. Wind is named for the direction it comes from so a North West wind is ~~coming~~^{Blowing} from the North West to the South East. The arrows will help you see this.
3. Headings and current readings tell you the direction the ship or current is moving toward. A South heading means the ship is ~~has~~ moving toward the South.
- 4.

HELP LIST

COMMAND	MEANING
H OR HEADING	DIRECTION SHIP IS GOING
FOOD	CHANGE RATION EG: 3/4 FOOD
DRINK	CHANGE RATION EG: FULL DRINK
FULL	FULL RATION
3/4	THREE QUARTERS RATION
HALF	HALF RATION
GO	RESUME SAILING
LAND	ARRIVE IN MASSACHUSETTS
COMPASS	HELP WITH COMPASS
STATUS	LOOK AT THE FULL STATUS
MAP	LOOK AT MAP
HELP	RETURN TO THIS LIST

COMPASS POINTS

17	N	NORTH	N ^S	NORTH ^{SEVEN} WEST
18	NE		SW	
19	E		W	
20	SE		NW	

21
22
23

1 OPEN 3
 2 PRINT 3,4
 LIST →
 1 OPEN 3,4
 2 CMD 3
 3 CLOSE 3

might have well less than 1 month's supply
pg 99

2/3 of voyage
through storms and
difficult conditions pg 105
pg 107

On Wednesday, Sept 6, 1492 the Mayflower sailed into history. She left behind the Speedwell, England and persecution. Her 103 passengers and ^{about} 30 crew were to sail for nine and a half weeks over 3700 miles of treacherous north Atlantic ocean. Her Captain, ~~John~~ Christopher Jones, had to sail through storm and calm, ~~navigate~~ ^{slip} through the still mysterious ocean with its ^{slipping} changing winds and three major currents; the Gulf Stream ^{and} the North Atlantic ~~and~~ and the Labrador Current. The food and drink had to be carefully calculated for both people and animals. Only about 70 tons of ~~food~~ ^{supplies} could be carried. ~~It~~ ^{It} was very important to ~~not only~~ ^{also} take along enough food for the voyage, but to leave enough room for ^{oxygen} ship stores, equipment for the colony and enough extra food to allow the pilgrims to survive ^{ashore} until they were able to find or grow enough food to feed themselves. ^{until} were also needed.

THE REAL VOYAGE

A ~~SHORT~~ HISTORY

On Wednesday, September 6, 1620 the Mayflower sailed into history. She left behind another ship, the Speedwell, England and persecution. Her 103 passengers and about 30 crew were to sail for nine and a half weeks over 3700 miles of treacherous North Atlantic ocean. Her Captain, Christopher Jones, had to sail through storm and calm and shifting winds. He had to keep track of the North Atlantic Current, the Gulf Stream and the Labrador Current while navigating ~~with~~ ^{with} tools and charts that were crude and sometimes wrong.

Only about ^{88², 100²} 70 tons of supplies could be carried aboard. There had to be enough food and drink for people and livestock ^{for} the voyage. Extra supplies for the ship itself, sails, and ^{and} ^{the colony} ~~the colony~~ and timber, had to be stowed. Tools and equipment for ~~settling~~ ^{the colony} and enough extra food and drink to insure survival once they had landed also were needed.

Supplies Sea
the colony

Bill Ames

forget the
endured
inform
gues

... of more than 350 years it's easy to
doubt and hardships that the first Pilgrims
crossing the treacherous Atlantic. With little
vision, crude navigation tools and charts that were only
uses they put their lives in the hands of Christopher
~~as~~ ^{and God} ship's master and sailed into the unknown. Without
in steady courage the America of today would be a far
different place. That they survived the voyage at all was
remarkable. That they not only survived but thrived in the New
World against all odds is a testament to the strength and
stubbornness of their faith and their character.

Leaving Leyden and England for ^{the New World} Virginia, ~~as they thought~~, was
the chance to live lives that contained in every moment their
worship of their God. It not only didn't matter that Massachusetts
became their home, ^{not by name as they thought!} but was ~~as~~ a positive blessing for them. Their
freedom was greater there than it could have been elsewhere.

~~and the hard climate, rich environment and on both land and sea~~
When Alan Villiers on the Mayflower II made the same voyage
in 1957 he was able to write with authority about how magnificent
was the original journey. He sailed in Spring when wind and
weather were kind, they ^{trav} in winter when storm and disaster
loomed over every mile of the journey.

As you enjoy an ~~actual~~ voyage of the Mayflower remember
that once real people, simple God-fearing people, sailed aboard a tiny
~~ship~~ ^{ship} ~~only about 80 feet long across 3700 miles of the Atlantic~~
~~and gave a ~~tribute~~ to place their stamp on America for all time~~
and made their mark on history.

Welcome aboard Captain may you do as well as they did.
Press down to continue

25
25-25
25

INTRODUCTION TO LEVEL 1

Level 1 is the easiest level of this game. It is ~~supposed~~ ^{will} help you learn the basic skills ~~to go on to~~ ^{needed for the} other levels of play. There are no winds that come from the West at this level. This lets you practice ~~the basic~~ sailing. Remember the help command. It will return you to the help list.

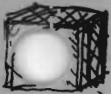
Each turn covers a 5 day period until you get close to Massachusetts then 3, 2 and 1 day periods begin. This lets you cross the ocean faster and then sail carefully into Plymouth -

Like all new things this game is a little confusing at first. Just try to set your heading and sail the ship at first. ~~Then~~ You can learn to use the other information later. Once you can make the ship point in the direction you want it to everything becomes much easier.

Level 1 is the place to learn the basics of this game. The first time you play just load the ship with ~~stuff~~ food and drink, don't worry about how much for now and sail away. Try to get ~~to~~ across the ocean as best you can. Look at the arrows and try to learn how they help set direction, ~~and let you know how to go on~~. Once you can sail the ship in the direction you want you can begin to ~~learn~~ ^{use} the other information. Everything is easier to understand once you can sail the ship.

~~There are no winds from the West at this level so you can concentrate on which makes it easier to learn to sail.~~

~~Historical stuff~~ →



Jones
Campbell
916 MINOR

THE MAYFLOW
KATE CARRERY

PART I
CHAPTERS 13-14

INCLUDE COMPLETE INVENTORY IN PROGRAM AS ADDENDUM?

FURNISHINGS FOR 19 COTTAGES

- FURNITURE, LINENS, SPINNING WHEELS & HAND LOOMS ETC.
- HOUSEHOLD UTENSILS
- TOOLS & IMPLEMENTS
- WEAPONS INCLUDING CANONS
- TRADING GOODS
- BOOKS
- CLOTHING
- NETS

FOOD

SALT, CHEESE, "STRONG WATERS" SMOKED HERRING, DRIED OX TONGUES (SHEEP'S TONGUES)
SACKS OF: TURNIPS, PARSNIPS, ONIONS & BEANS, CABBAGE, BARRIS & SPICED & SALT BEEF, SALT
 PORK, PEASE PUDDING & PEAS, HOGSHEDS OF OATMEAL & RYE MEAL, WHEAT FLOUR &
 SPANISH RUSK (?) TUBS OF PICKLED EGGS, FIRKINS & BUTTER (SLOBS). DRIED SALT COD
 ("HABERDYNE") SMOKED BEEF & PORK. LEMON JUICE (LIME JUICE UNKNOWN RE SCURVY) AS
 A SPECIFIC, SPICES; GINGER, PEPPER, CINNAMON, MACE, NUTMEG, WORMWOOD, GREEN GINGER
 CONSERVES OF ROSES AND CLOVE-GILLIFLOWERS, SUGAR, RAISINS, CURRANTS (CURRANTS?)
 PROVES FOR STEWING, BURNED WINGS (SPICES WERE USED FOR SEASONING) PIES OF HOLLAND GIN,
 FRENCH BRANDY, CASKS OF BEER AND WINE. WATER WAS CARRIED BUT ATLANTIC CROSSING
 WERE NOT A PROBLEM DUE TO LOTS OF RAIN.

LEFT PLYMOUTH
SEPT 6, 1620

LIVESTOCK: PIGS, GOATS AND POULTRY NO BOMBS OF BURDEN OR CATTLE
 SHEEP, RABBITS (SOME POULTRY FOR USE DURING VOYAGE) CATS & CAGE BIRDS 1 SPANISH
 1 BULL DOG MASTIFF SHIPS CAT

LANDED NEW WORLD

DEC. 11, 1620

BALLAST (PROBABLY GRAVEL OR SAND) 2 SQUARE WOODEN BILGE PUMPS

**96 DAYS
AT SEA**

²⁰⁻³⁰
CREW OF ~~30~~ PLUS CAPTAIN (?) PP LANDATA
 STEWARD, PILOT, CARPENTER, GUNNER, BOSUN, COOK, 4 QUARTER MASTERS, 1ST MATE,
 SHIPS MERCHANT (PURSER) 1 BARBER-SURGEON, SHIPS MASTER

CAPT. JONES
RET. TO ENGLAND

IN 31 DAYS (1/2) VOYAGE PAID FOR IN LUMP SUM COST UNKNOWN

103 PASSENGERS 30 CHILDREN (1 BORN AT SEA, 10 ON ARRIVAL) 51 MEN 22 WOMEN
 3 MEAT DAYS AND FOUR FISH DAYS A WEEK
 $\frac{2}{3}$ OF A COD FISH A DAY FOR 4 MEN, 2 3LB PIECES OF SALT
 BEEF OR PORK FOR MAN FOR WEEK, 1 LB. BISQUIT, 1 GINNON DRINK, $\frac{1}{4}$ LB BUTTER,
 AND $\frac{1}{2}$ LB. CHEESE FOR DAY FOR PERSON, 3 PINTS OF PEAS FOR 6 LIGHT PEOPLE FOR DAY

M 109
THE MAYFLOW
CARRERY

USE
IN
MAYFLOW

Movie 7:00

HMS MAY FLOWER

CAPTAIN KENNETH

LOAD FOOD AND DRINK FOR A 45 TO 120 VOYAGE. THE SHIP HOLDS UP TO 70 TONS.

	TONS	DAYS
FOOD	0	0
DRINK	0	0
<hr/>		
TOTAL TONS	0	

DAYS
AT
SEA

Why is this here?

EXAMPLE: FOR 80 DAYS FOOD ENTER: 80 FOOD

SHIP LOADING COMMANDS

COMMAND	MEANING	UNIT OF MEASURE
FOOD	LOAD FOOD	TONS DAYS
DRINK	LOAD DRINK	DAYS
SAI/	BEGIN VOYAGE	
STOP	END VOYAGE	

ADD - ~~COMPASS~~
~~STATUS~~
~~MAP~~

~~HELP WITH COMPASS~~
~~VIEW FULL STATUS~~
VIEW MAP

ADD: ~~COMPASS~~ POINTS

CADMGAN CORPORATION
^{SP}
ANN ARBOR, MICHIGAN
^{SP}
PRESENTS
28th Dec

VOYAGE OF
OF THE
MAYFLOWER

REST
OF THE
D A
S

Copy 183



MAP

4 LINES

N	WIND	CURRENT	DAY	MILE	DAYS
46°	13 e ←	5 ne ↙	5	369	IN 5
W	Heading	FOOD	DRINK	TOTAL	
9°	5 SW ↘	18	40	369	

~~4 P.M. THURSDAY~~

LATITUDE	WIND	CURRENT	DAY	5
46 N	13 e ←	5 ne ↙	Miles / 9 DAYS	
SP. LONGITUDE	Heading	FOOD 18	1234	
9 W	5 SW ↘	DRINK 43	TOTAL 12345	

~~LATITUDE
FOOD
DRINK
DAY
LONGITUDE
9 W~~

FOOD 36	WIND 13 e ←	Heading SW ↘
DRINK 35	CURRENT 5 ne ↙	SHIP SPEED 8
DAY 98	miles/days 1234	TOTAL Mi. 12345
LATITUDE 46 N	LONGITUDE 9 W ↘	

LATITUDE 46 N	LONGITUDE 9 W	
FOOD 3630	WIND 13 e ←	Heading SW ↘
DRINK 350	CURRENT 5 ne ↙	SHIP SPEED 8
DAY 120	miles/days 1234	TOTAL Miles 12345

go AAE children's education

~~go IBM~~

go CBN - Commodore newsletter

COMPUTER AIDED LEARNING

go PCS-121

go CAI

What is ship with no souls for? unclear

~~SHIP STOPPED - LEVEL 2~~

~~TO~~ TO EASY NOT TO MAKE FOOD + DRINK etc. UNTIL
WATER IN game? CHANGE?

NEXT SOMETHING EITHER CLOSE TO FOOD RUNNING OUT OR
JUST ARTOR.

~~THE~~ SAILING BACKWARDS?

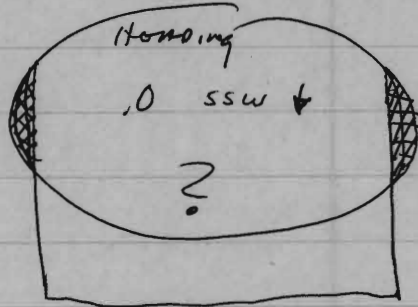
NAME HAS LESS THAN 20 LETTERS NOW

SHIP SCROLL UP LEVEL 2 FULL STATUS PAGE ✓

CAN'T SEE COMMONS WORDS LEVELS 2+3

LEVEL 3 ~~STATUS~~ ^{HELP} - NO CHANGE

SOMETIMES REMOS W 2 ND CURRENT S-NBW



GENERAL INSTRUCTIONS INCLUDE DESCRIPTION OF LATITUDE & LONGITUDE

~~XXXXXXXXXX~~

TIM LEVEL I

TEST VERSION III

WHAT DOES HALF RATION MEAN?

WHAT DOES ~~ONE~~ STAND FOR?

SHOULD NOT PRINT THIS AT LEVEL J

1ST TRY

HOLD NOT WORKING

GARAGE AFTER PUSHING S H.

BLUE ^{AREA} LINE APPEARS AT BOTTOM OF AFRICA

TEST VERSION I

2ND TRY

40° N

70° W

62 DAYS AT SEA

3 STORMS

FOOD 24 DRINK 14

(185)
START
FOOD

(75)
START

~~AREA WE SAILED PAST AT SEA~~



STATUS PAGE

46° 34' N

70° 52' W

LOCKED UP GOING FROM STATUS TO MAP

TOOK SOUTHERLY ROUTE

WILLIAM LEVEL I

TEST VERSION III

TRY I

TROUBLE GOING FROM FOOD DECISION TO GOING (SAIL IS OBSCURE)

THIS VERSION HAS NO MAP COMMAND.

TOOK DIRECT ROUTE

CLOSE TO MASS.

LOCKED UP AFTER S H.

TRY II

LOCKED UP AT MAP AFTER FIRST COMMAND TEST VERSION II

~~AT~~

GO

TOOK DIRECT ROUTE

VERSION III

TRY III

LOCKED UP AFTER GO COMMAND.

CLOSE TO MASS.

TIM LEVEL I

TRY IV

LOCKED UP

Mrs. Willis 668-8567
~~668-8587~~

RELIANCE PLASTICS AND PACKAGING

1-(201)-748-2222

N.J. ?

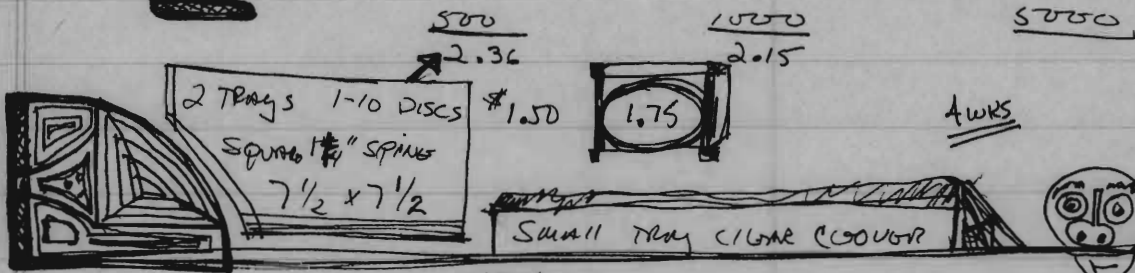
HALG SMITH

6x9

DELIVERY TIME

SENT SAMPLES

COST



VINYL ~~WELD~~

MURRAY POLSKI DIRECTOR HAS C-64 6x9x1

SINGLE DISC

6³ 7x9 7/8 x 1"

PRICE BREAK 500 1000

GVI

DISNEY

\$2.00

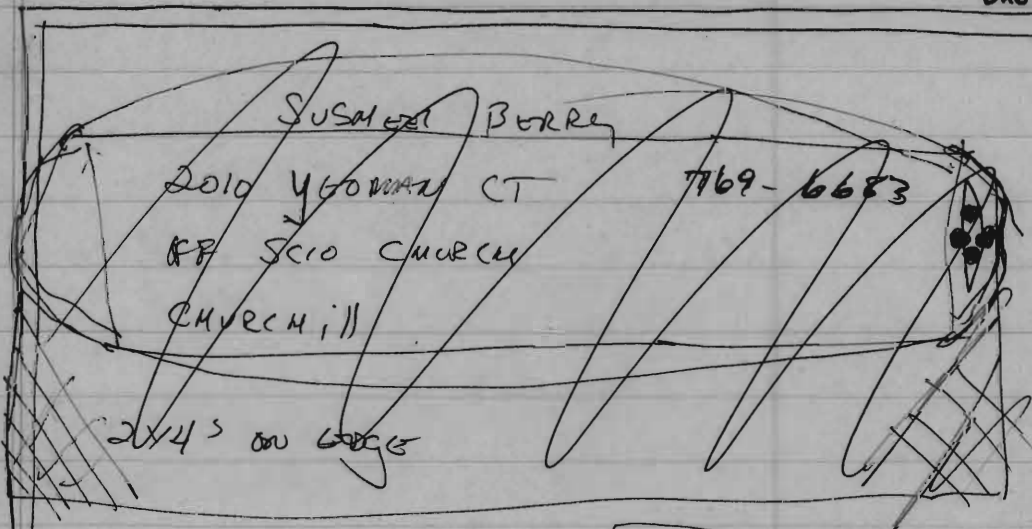
5000
\$1.50

4-5 WKS. DELIVERY

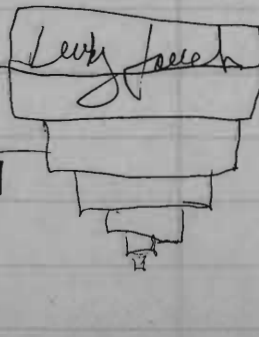
MILLIKEN

\$1.25

6x8



THURSDAY



MODERN PACKAGES - MONROE
MIDWEST Paper Products
500 1000

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~~CLIP~~

6" x 9" x 1"

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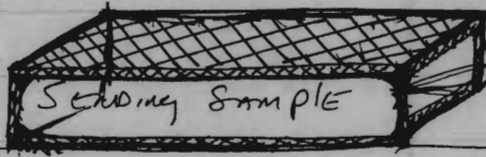
DELIVERY TIMES

500

1000

6 x 9 x 1

PAPER BOARD



EASTERN Paper Box

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LABEL APPLIED

1000

1500 + PLATES \$120

\$1.62

~~10x6x1 \$40~~

TAPE BOX

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DELIVERY TIMES 4-5 BOX

PAPER .0013

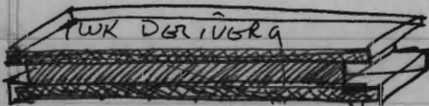
\$.30

SENDING SAMPLES



UNION PAPER CO. 1-800-552-1102

MARGARET



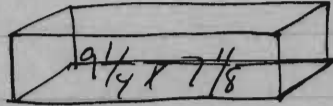
REFERENCE

SENT SAMPLES - Aale Smith

~~QUICK PLASTICS~~ ~~TINA~~ ~~DON'T MAKE PACKAGES~~

~~MID-WEST PAPER PRODUCTS~~ ~~MARVIN~~ ~~DON'T MAKE~~

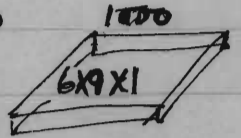
BROS.
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T S & C INDUSTRIES 5577 Coltingwood

(616) 381-6022

~~XXXXXXXXXXXXXXXXXXXX~~
JOHN MOYER



2 color 1.69

+ PLATES

2 color Hinges

4-5 WRS

will send samples

.75 ea 2 color
~~2.50 - 3.00~~

6" W
9" L
1" H

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NO

TOLEDO PAPER BOX

JOHN



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TOUJ SOB SIK

6x9x1

2x4

PLASTI GAGE

JACKSON

MR. SCOTT

SUE - EOL CR.

~~BILL INCE~~

MICH. TOM COOPER

763-9757

Kim
764-33
Bob
Vincent

PLASTIGAGE
3 P.M.

MR. SCOTT
RETAIL SALES

I-94 AIRPORT RD EXIT (EXIT RST 1427)

Left on Airport rd (South)

2nd traffic light - Wildwood ave (2 mi.)

Rt on Wildwood ~~to~~ ~~drive~~ left (SF DRIVE)

TALK TO ANNE

ABOUT

STICKER FOR
PACKAGE

DISK

TAPE OR

DISKETTES
CASSETTES

TESTING

Learning Center — MR. BECKER'S CLASS

A² NEWS - BUSINESS OR EDUCATION REPORTER

VIDEO TAPE 1 HOUR

SEND TAPE & ARTICLE TO COMMUNIC - K-MINIST?

NEED OVER LOAD PRESENTATION
ON "LOADING FOOD ETC."
SAYS THIS SHIP CANNOT HOLD THAT MUCH!!

LEVEL I

Tim & William Together

MAP DISAPPEARED - SHIP REMAINED AFTER TYPING SE H
RUN MADE IT WORK AGAIN
MAP WENT TO MAP GOES MORE LINE
STATUS DID NOTHING

MAP DISAPPEARED AGAIN - WENT TO STATUS, WENT BACK
TO MAP NOTHING HAPPENED

LEVEL II Tim and William

Do you Load days of Cargo? or TONS?
NO MAP AT ALL.

SWD 33° N 4447 miles
64° W FOOD -20
PRIME - -25

Level 3 William

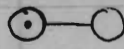
SW ~~is~~ heading?
Half command
FROZE AFTER TYPING SW H

LEVEL 3 TIM

				DAY
1 SW HEADING?		MI 1349		66
CURRENT	WIND	FOOD	DRINK	TOTAL
NONE	13 WNW	108	108	1349

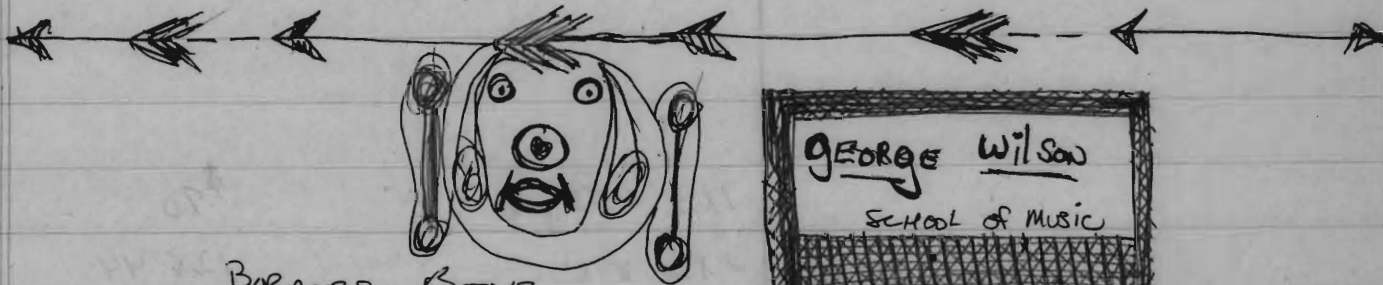
THURSDAY AFTERNOON

Complex Sounds



Wind & Sounds

NOT Gurgling Sounds - TOO HARD



Borders Books

APPLETON

ELECTRONIC MUSIC + COMPUTER MUSIC

MUSIC SCHOOL LIBRARY

JOURNALS

WHAT IS AVAILABLE

LIST of SOUNDS + TYPES

How many sounds
simultaneously

FILTERS

SOUND SOURCES

STW TOOTH

+

PULSES

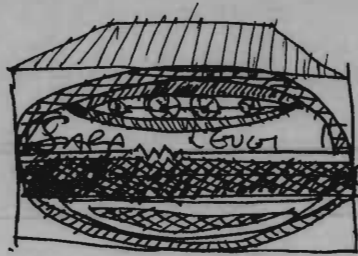
MANIPULATIONS

GEORGE CACIOPPO

971-7534

WHITE NOISE

CLONKS



EXPLAIN DURATION INTERVAL. TELL MAXIMUM SHIP SPEED - 8 KNOTS

AND CHECK HEADING AND POSITION AFTER STORMS - ADJUST HEADING AND CONTINUE

66 DAYS -

LEVEL II SARA LIN

NAME OF CAPTAIN

CONFUSION BETWEEN DAYS & TONS FOR CARGO & STORES

TYPEW NW AND SHIP WENT SW - COULD HAVE BEEN CARRIED + WIND IN OPPOSITION
 N heading just slowed up for turtle south - off Cuba in July Shear

LATITUDE 41° N

LONGITUDE 68° W

SARA Level III

used 3/4 + Half
 R + Drink Potatoes

DAYS 155

POOD 0

DRINK 0

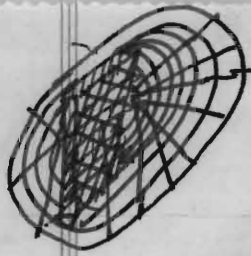
miles 8047

Level III - INFO SCREEN - MENTION NEED TO PAY ATTN
TO CURRENTS AND PREVAILING WIND.

er

Basic instructions

In this voyage you will be asked to make many decisions. Some of them have to do with supplies and some with sailing the ship. ~~There~~ We recommend starting at level one, which is the easiest and working your way to level 4 which is ~~very, very~~ hard.



KAY SIMON
 TUES, 994-6863
~~XXXXXXXXXX~~ 994-6833

PLYMOUTH PLANTATION

- NUMBER OF PASSENGERS & CREW
- RATIONS & SUPPLIES - QUANTITY & CONSUMPTION
- CHART OF ROUTE FROM DLYMOUTH TO PLYMOUTH
- DIMENSIONS & DRAWINGS OF SHIP
- BIBLIOGRAPHY OF SOURCES
- NAVIGATIONAL TOOLS WHAT KIND

~~XXXXXXXXXX~~ GIVE CREDIT IN GAME.
 MENTION STAGE II - COLONY
 START AND REMAINDER of VOYAGE



CAROL TRAVERS

MONDAY JUNE 6 STEERING

TO DO:

KEN

- CALL PLYMOUTH PLANTATION ✓
- EXPLORE VENTURES CAPITAL SOURCES (AVIS)
- TRACE SHIP ON GRID, ~~SUPPLIES CONTINGENTS, COMPASS ROSE, STAR~~
- FIND MARKED COMPASS ROSE 16 POINTS
- ~~IDENTIFY STANDARD RATIONS FOOD & DRINK~~
- THINK ABOUT VARIABLES FOR NEXT LEVELS
- WEEK OF JUNE 6.

~~SOURCES & RATIONS~~ 3 3/4 LBS FOOD per day per PERSON
 1 gal of DRINK

LARRY

- # OF Commodore COMPUTERS
- CALL STOCKBROKER GET INDUSTRY DATA & COMPANY DATA.
- THINK ABOUT EQUITY FINANCING
- REFINE FORMAT FOR INFORMATION
- START PROGRAM
- GET Commodore MAG FOR KEN
- RUN "WESTWARD '66"

VARIABLES - LEVEL I S.T.U = 5 DAYS

PHASE I - PREPARATION

1. FOOD - AMOUNT STANDARD RATION # OF DAYS SUPPLY
2. ~~XXXXXXXXXX~~ DRINK X DAYS
- 3.

PHASE II - VOYAGE

1. FOOD RATION & DRINK RATION
2. NAVIGATION: COMPASS STANDARD TIME UNIT 5 DAYS
- 3.

3500
 60 to wind
 67 days
 7 1/2
 4.
 good light out
 John start

Original 83

761-2005
CHRIS VANEGH
2 P.M.
SHIRAZ
663-6874

STEERING COMMITTEE TO VISIT
BOONAS MTC. HOVENAY



INTRODUCTION

Welcome to the world of simulations. Most people learn best by doing, ~~since not everyone can do everything~~ and simulations are the next best thing. ^{We} ~~try~~ creating small worlds that pretend to be real and asking ^{you} people to explore ~~that world~~ ^{it} them. ~~help~~ ~~they~~ ~~lets~~ ~~them~~ ~~get~~ By exploring these little worlds you can get a feeling for other times, other places, ^{and} other ways of seeing the world around ~~the~~ ^{you}. We hope that by joining in you will become curious about what you are experiencing and want to learn more. If you do we have included a list of books in ~~the~~ ^{your} program that will tell you more about the subject.* We think that participating in simulations is ^{one of} the ~~best~~ ~~ways~~ best ways to begin learning new things ~~but~~ ~~you~~ ~~need~~ to but remember it's only a beginning. The more you learn outside the simulation the more ^{interesting} ~~for~~ the simulation becomes.

* NOTE: Bibliography to include sailing, history, navigation etc.

because you know so much more about it.

We want you to enjoy our products and more than that we want you to get excited about the subjects and go out and learn more on your own.

(about 170 words)

Job Title)
Cadmean 4.

24 pt.
Garamond Bold

~~Book for back of package~~

Head: The Voyage of the Mayflower

Copy: On Wednesday, September 6, 1620, the Mayflower sailed into history. Her 103 passengers left religious persecution in England to sail 3700 treacherous miles through the North Atlantic to an uncertain future in the New World.

120 In addition to passengers, the Mayflower was able to carry ~~ONLY~~ ^{lower case "only"} about 180 tons of supplies. There had to be enough food and water for people and livestock during the voyage. Supplies for the ship itself -- extra sail, lines, and timber -- had to be stowed. All the tools, equipment, and supplies to establish a new settlement were also taken along.

^{6 DAY} The voyage itself was hazardous. The 30-man crew and their commander, Captain Christopher Jones, had to sail through heavy storms and capricious winds. They had to find their way across the North Atlantic and Labrador Currents and the Gulf Stream with crude navigational tools and charts that were always wrong.

This realistic simulation of the original voyage of the Mayflower allows you to accept all the challenges of preparing for the escape from England and successfully sailing the North Atlantic to found the Plymouth Colony.

Good Luck And Goodspens
Press Return to CONTINUE

878 = 22 40 CHAR LINES

~~27 LINES~~ 27.3 LINES
1092 CHARACTERS

20 | Garamond
Book
22 | 50 picas
Flush left - ragged right
11 characters
50 picas

Karen @ Quorum

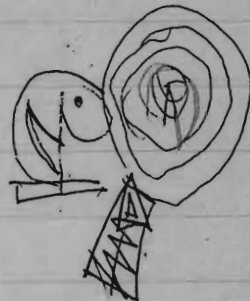
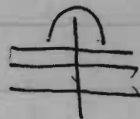
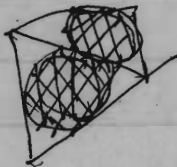
Due: Monday Oct 24
Early AM

Copyright 1983 Cadmean Corporation/
309 Koch / Ann Arbor, Michigan 48103

Set one line
16pt. Garamond Book

level IV instruction

Pay careful attention to water status when loading ship.



NOTES LEVEL IV

Don't go from MAP TO HAND - NO LAND COMMAND.

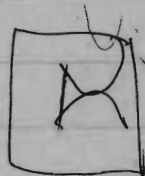
GRAIN STATUS - SCRAMBLED UP

CHECK SPIRITS AND WATER STATUS - DID NOT USE ANY WATER START (TONS) END (TONS)

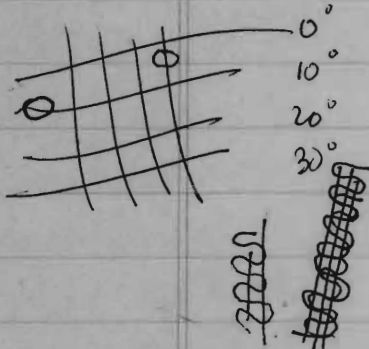
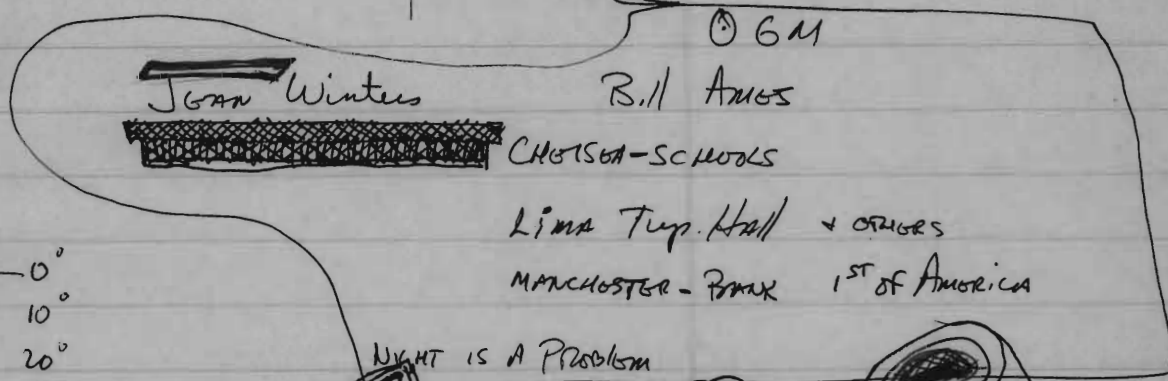
STOR - GOT MOST OF



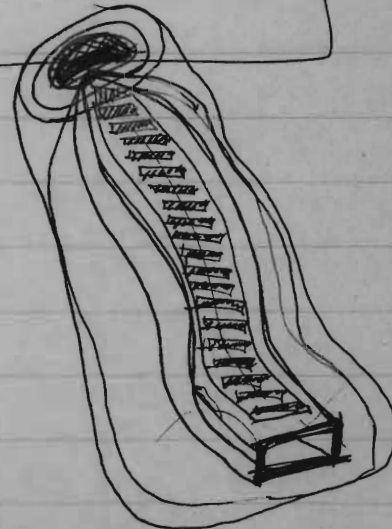
LOAD UP TONS TONS - MOVE SPACES



~~1 TON SPIRITS~~ 1 TON SPIRITS = 9 DAYS supply



Paster



END GAMES

~~SHOW STATUS~~ ~~MAP~~ ~~FOOD~~ ~~FOOD~~

SHOW Remaining Food stores etc.

FISHGR Test #6
Pick level 1, 2, 3, 4
Wood F and D for a voyage of 45 to 120 days

typed ~~HELP~~ AT MAP PROGRAM CRASHED

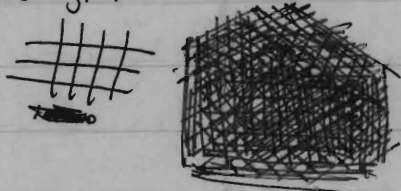
CAN WE CHANGE THE COLOR OF PLYMOUTH ENG. AND MASS.



Found out it is possible to type SW H go all at once

WE NEED LATITUDE: Longitude GRIP WITH NUMBERS

DOTS FOR PLY. ENG
+ PLY. MASS.



MUSIC

#0 - TINNY

X 10 - OK - ^{NO TOO NOISY} SORT OF HARPICWORD LIKE

20 - STOPS TOO HARSH

✓ 1 - OK

~~11~~ 11 - OK - LIKE PENNY WHISTLE

21 - TOO MUCH NOISE

✓ 2 - OK SOUNDS LIKE SPEEDS OR CHECK TAPPING

X 12 - OK CARNIVAL ATMOSPHERE CALLIOPE

✓ 22 - OK

3 - PITCH KIND OF HIGH

13 - TOO MUCH NOISE

23 - OK INTERESTING - LIKE CALLIOPE

✓ 4 - OK SOUNDS LIKE CLAPPING

14 - FOUGH SOUNDING

24 - ANNOYING PITCH

5 - OK - LIKE THE TACTILE QUALITY

X 15 - OK EXCITING GUNSHOT SOUNDS PROBABLY INAPPROPRIATE

25 - TOO MUCH LIKE STEAM

6 - OK FAIR

16 - OK BUT WILL BECOME VERY ANNOYING WITH REPETITION

26 - TOO MUCH CLASSING AND BASHING

7 - DON'T LIKE THE "BREATHING INTO THE MIKE" SOUND

17 - EH. NOT EXCITING MUSIC BOX

27 - GUNSHOTS AGAIN

8 - TOO MUCH NOISE

18 - PITCH WILL DRIVE MOUNTAIN CRAZY

28 - TOO FUZZY

9 - " "

#19 TOO MUCH FUZZ

29 - ^{OK} BEST OF GUNSHOT ONES

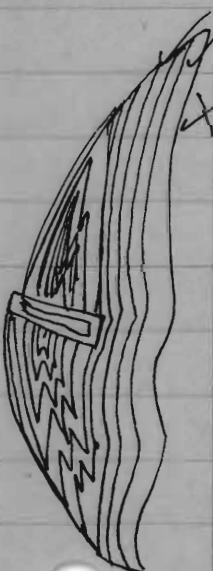
NICE ECHO QUALITY

STORM

1, 2, 5, 17

WINGS

1, 17, 2, 5



NOTES - MAYFLOWER LEARNING ENVIRONMENT

SHIP DIMENSIONS TO BE TAKEN FROM MAYFLOWER II AS MOST ACCURATE
INTERNAL TEXT IS TO INCLUDE BIBLIOGRAPHY, SKETCH OF SHIP, LONGITUDINAL SECTION,
CHART OF VOYAGE, VOCABULARY LIST, SAIL & RIGGING DRAWING (FROM MAYFLOWER II BOOK)
(?) BRIEF OUTLINE OF VOYAGE (# DAYS, STARTING POINT, ENDING POINT, # OF PASSENGERS & CREW ETC.
SUPPLIES TO BE BROKEN INTO PERSON DAY EQUIVALENTS, COMPAS ROSE (CAN WE MAKE
IT RESPOND TO PLAYERS CONTROL, ALWAYS VISIBLE ON SCREEN? CAN WE TRACK VOYAGE OF
PLAYER BY MOVING LINE OR DOTS ON CHART?)

INTERNAL: PLAYERS TO TYPE IN NAMES TO BE CAPTAIN, CAN WE RECORD MILES
TRAVELED, DAYS PASSED, STORES USED, PEOPLE DIED, 5% DEATH RATE DOOMS VOYAGE
SOME RATIO BETWEEN FOOD RATION & CREW & PASSENGER HEALTH OR COOPERATION NEEDED
PLIMOTH PLANTATION 1-617-746-1622
PLYMOUTH, MASS.

BIBLIOGRAPHY:

THE MAYFLOWER KATE CAPPREY STEIN & DAY 1974
THE SECOND MAYFLOWER ADVENTURE WARWICK CHARLTON LITTLE, BROWN 1957
THE PLYMOUTH ADVENTURE ERNEST GEBIGER DOUBLEDAY & CO. 1958
YOUNGER SAILS THE MAYFLOWER HONOR'S MORROW WM. MORROW & CO 1934

SQTH
995 1281



Game Definition

Selection of subject

Define audience

Define educational Goals

Define User rewards

Define Preliminary sound & graphics concepts

Voyage of THE MAYFLOW

Levels of play

1 -	Voyage to Plymouth	- 4-6 VARIABLES
2 -	" " " & RETURN	6-8 VARIABLES
3 -	" " " "	10-12

~~Accurate~~ HISTORICAL Voyage & RETURN 10-12 V

FIND SOURCE BOOK TO RECOMMEND - ALL SUPPLIES TO AGE - 90% OR +150%

VARIABLES - PRE-Voyage

DECISION POINTS - Every OTHER DAY

FOOD, WATER, RIGGING, NAVIGATION AIDS, TOOLS, MEDICAL SUPPLIES

CLOTHING, REPAIR MATERIALS, CREW SELECTION BY FUNCTION, PASSENGER

SELECTION NOUSSE AGE & SEX, LIVESTOCK, FEED

VARIABLES - VOYAGE

COMPASS HANDING, SUPPLY ALLOCATION, DISASTER DECISIONS (LACK OF FOOD, WATER, LOST, SHIP DAMAGE, MUTINOUS CREW, STORM LOSSES & DAMAGE, SICKNESS AND CHILD BIRTH)

NEED RUNNING INVENTORIES & CRITICAL WARNINGS

RANDOM VARIABLES ACTION: STORMS, CURRENTS, WIND CHANGES, FOG, CLOUDS, BIRDS

SOUNDS: WIND, WATER, STORMS, BIRDS, RIGGING SLAPPING, BOSUN WHISTLE, LAND SOUNDS + SURE

GRAPHICS: EXTERIOR SIDE VIEW WITH LABELS, INTERIOR VIEW WITH LABELS

GRAPHICS CONT. BIRDS, LAND, WATER, SURF, STORM, FOG, CLOUDS
SINKING SHIP, FLOATING SHIP, CHART (ACTUAL VOYAGES) PLAYER PROGRAM
AND JXTAPOSE ACTUAL X PLAYER)

INTRODUCTION

GREEN POSTCARD INSERT

History - events leading up to voyage - setting 300 words or less

MUSIC

copyright notes Blue on blue
Codman Presents + title - can change color here
credits

INTRO TO SIMULATIONS

HELP!

INSTRUCTIONS: EACH LEVEL
COMPASS READING INSTRUCTIONS
22 hours
END NARRATIVE

VOCABULARY

LEVEL I - FOOD, DRINK, HELP, STOP, SAIL - STARTS VOYAGE

↓
↓
PROCEEDED BY NUMBER (DAYS SUPPLY)

SPACES
BLANKS USED AS SEPARATORS MUST HAVE!
JUST LIKE ENGLISH

PRESS RETURN AFTER every RESPONSE (COMMAND/WORD/#)

REMEMBER DELETE KEY lets you ERASE what you PRINT

RESPONSES CAN BE MORE THAN ONE COMMAND

LEVEL II & III ANIMALS, FOOD, STORES, ~~FRIGHT~~ FREIGHT (CARGO)

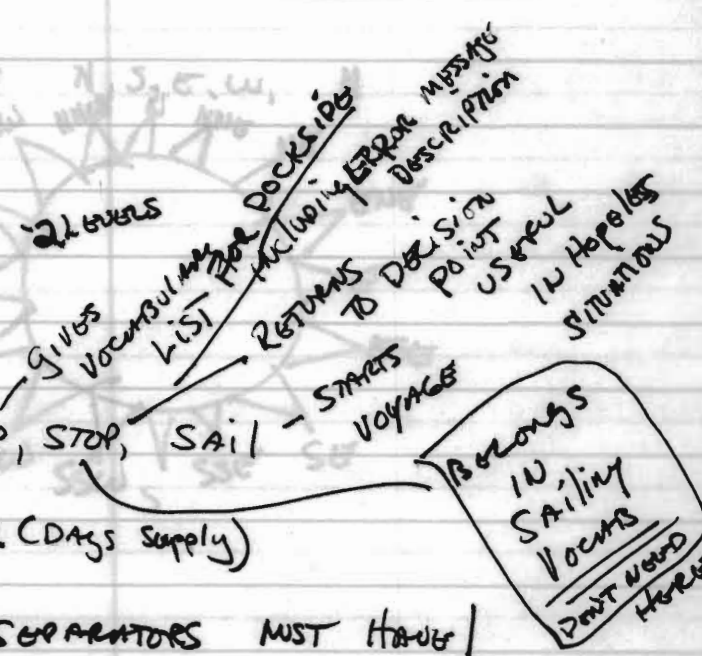
UNITS. ~~OF~~ TONS
ARE

Run

1 LOAD
PRINTER
NO PRINTER

Run

POCKETS VOCABULARY



LARRY TODO: RESUME
TOOL DESCRIPTION

RISK ANALYSIS

MAYFLOWER - LEVEL 1

PASSENGERS 103

PREPARING TO SAIL

CREW 27

1. AMOUNT OF FOOD - 3.75 LBS PER DAY PER ADULT $\frac{2}{3}$ CHILDREN
 2. AMOUNT OF DRINK - 1 GALLON DRINK PER DAY PER ADULT $\frac{2}{3}$ CHILDREN
- 30-100 DAYS FOOD AND DRINK

120 ADULT EQUIV. PER

CONSEQUENCES → CAUTION: TOO LITTLE FOOD - STARVATION

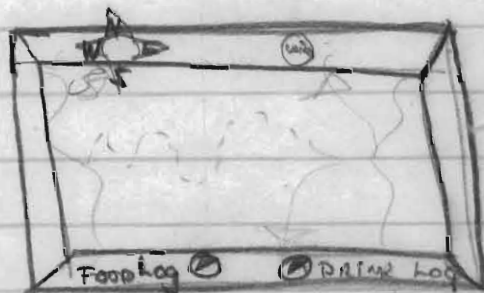
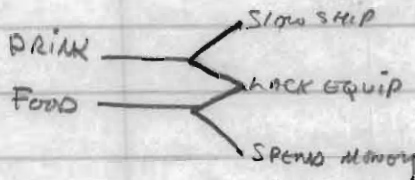
TRADE OFFS

MONEY TRY

EQUIPMENT

SLOW SHIP DOWN

OVERSUPPLY FOOD - UNDERSUPPLY EQUIP.



VOYAGE

COMPASS HEADING - 8 POINTS LEVEL 1

WIND DIRECTION - BUILD AWARENESS

FOOD AND DRINK RATION - $\frac{\text{DISTANCE}}{\text{TIME}}$

LEVEL 1 - WARNING AT ONE HALF SUPPLY
35° LATITUDE

STORM

LOSE TIME/DISTANCE

SINK

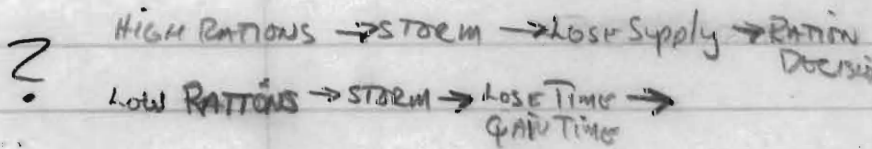
OFF COURSE

GAIN TIME/DISTANCE

SHIP DAMAGE

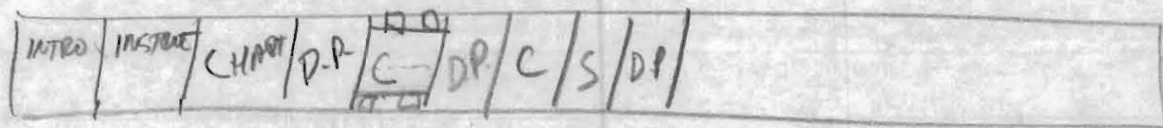
STORES DAMAGE

PASSENGER/CREW LOSS - DEATH OR INJURED



CALM

LONGITUDE & LATITUDES
PLYMOUTH & PLYMOUTH

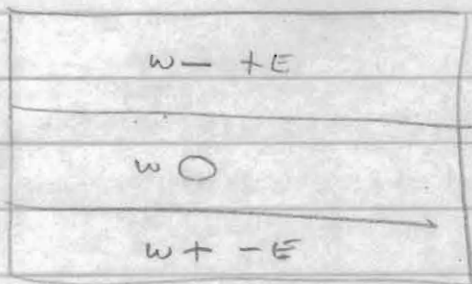


NAVIGATION

SPEED OF TRAVEL: WIND, CURRENTS, DIRECTION OF WIND

WIND: WIND SPEED WIND DIRECTION

CURRENT: DIRECTION, SPEED



NEED TO KNOW

3000mi DISTANCE PLYMOUTH TO PLYMOUTH
 5400 MAGNITUDE, SPEEDS, + DIRECTION
 SOUTHERLY AZORES/CANARIES

NATIONAL GEOGRAPHIC

1957 MAY & NOV MAYFLOWER II

1953 JUNE 3rd I

MAPS - 1968 JUNE

1955 DEC.

2 pgs - INTRODUCTION

NARRATIVE include NUMBERS of PASS. & CREW

NORTH + SOUTH PAS. MENTION MPE DEVIATION FROM ACTUAL

DAYS OF PASSAGES

OPERATING INFORMATION

DURING VOYAGE

POSITION - LAT & LONG

DAYS FROM

HEADING

WIND SPEED & DIR

DAYS OF VOYAGE

HULL SPEED

sailing

LEVEL II OUTBOUND

STEP I

FOOD & DRINK

EQUIPMENT - SALES & RIGGING

SETTLERS TOOLS & IMPLEMENTS

} STORAGE IMPACT

MIN 8 TONS
MAX 16 TONS

83.5 TONS FOOD, DRINK

AND POOL
12.0 TONS - SAILCLOTHS

95.5

6 TONS FOR RIGGING

1.25 TONS SALES

.75 TONS MISC.

103.5 TONS MIN

STEP II

CANT SAIL INTO WIND - NO CLOSER THAN 45° JAY PLATT

16 POINTS ON COMPASS

3 DAY DECISION PTS

RATIONS

CHECK - HOW CLOSE MAYRLOWD COULD SAIL TO WIND

HOW TO CALCULATE HEADWAY BASED ON WIND VELOCITY AND HEADING
RELATIVE TO THE WIND AND SAIL AREA

LEVEL III OUTBOUND

STEP 1

LIVESTOCK - INTONS

FEED / DRINK

EQUIP, SALES + RIGGING

TOOLS AND IMPLEMENTS

LIVESTOCK FEED & WATER

FEEDBACK BY SPECIES

1.5

1.5

SPACE / WATER

3 gals

1/4 gal

1/4 gal

6.5 gals DAY WATER

6 LBS
PIGS - 100 LBS.

SHOOTS 100 LBS

GOATS - 100 LBS

POULTRY - 8 LBS.

RABBITS 6 LBS.

STEP 2

2 DAY POSITION POINTS

LEADS ON COMPASS

FOOD / DRINK RATIONS - PEOPLE

EAT ANIMALS - EFFECT SUEVIABILITY AT END.

CANT SAIL INTO WIND

INCREASE WEATHER EFFECTS

TOW SHIP WITH LONG BOAT - CHOOSE DIRECTION TOWARD WIND 1 KNOT

SAIL CHANGES - CORRELATED WITH STORMS - FURL

LEVEL IV

STEP 1 OUTBOUND

LIVESTOCK BY SPECIES AND NUMBER

FEED - HAY, GRAIN, ROOT CROPS (NO POTATOES)

FOOD/DRINK - FRESH, SALT, PRESERVED VARIETIES OF DRINK WATER, BEER, WINE, GIN, BRANDY

SAILS & RIGGING - TONS OF RIGGING - YARDS OF CANVAS 2500 YARDS = 1 SET SAILS

TOOLS & IMPLEMENTS - ASSIGN BY WEIGHT LIST BY CATEGORY

STEP 2

DAILY DECISION POINTS

32 COMPASS POINTS

MORE WEATHER

CHANGE SAILS ACCORDING TO WIND BY PERCENT

CANT SAIL INTO WIND

TOW SHIP - CHOOSE DIRECTION

EAT ANIMALS

VARY WIND VELOCITY AND DIRECTION

MORE FOOD SPOILAGE

DISEASE - DIBILITATING

NOTES FOR HARRY

7 1/2 KNOTS MAX Mayflower II Very good in light AIR - 4 KNOTS
67 DAYS - Plymouth to Plymouth - 96 days includes turnip back to vic
ship has a-hull (no sails or jib) in severe winds

3500 NAUTICAL MILES

50°-60° CLOSEST TO WIND

John Stool - programmer composer - Miles Video - music for MF?

Have "Acquire" - Kider's sells strategy games

Origins '83 Photo Hall July 14, 15, 16, 17 very expensive

Chris Crawford - ATARI Origins of Eastern Front

PHONE BOOKS

SAILING WORDS

SW HEADING SET COURSE FOR SOUTH WESTHALF DRINK SET HALF RATION ON DRINK

16 COMPASS POINTS ARE :

N	NNW	NW	WNW
W	WSW	SW	SSW
S	SSE	SE	ESE
E	ENE	NE	NNE

HEADING SET SHIPS COURSE
 HALF USED IN SETTING RATIONS
 3/4 //
 FULL //
 FOOD SET FOOD RATION
 DRINK SET DRINK RATION

HELP VIEW THIS LIST
 COMPASS HELP WITH COMPASS
 STATUS VIEW FULL STATUS
 MAP VIEW MAP
 GO CONTINUE VOYAGE

LAND TEMPORARY LANDING WORD
(RETURN TO EXIT HELP) OK

SAILING WORDS

SW HEADING SET COURSE FOR SOUTH WESTHALF WATER SET HALF RATION ON WATER
25 BIRDS EAT 25 BIRDS

32 COMPASS POINTS

N	NBW	NNW	NWBN	NW	NWBN	NNW	NBN.
W	WBS	WSW	SWBN	SW	SWBS	SSW	SWB
S	SBE	SSE	SEBS	SE	SEBE	ESE	EBS
E	EBN	ENE	NEBE	NE	NEBN	NNE	NBE

SETTING RATIONS

HALF	3/4	FULL
FOOD	WATER	SPIRITS

USE STOCK FOR FOOD

PIG	SHEEP	BIRDS
GOAT	RABBITS	

HEADING	HELP	COMPASS
GO	STATUS	MAP

(RETURN TO EXIT HELP) OK

OK
HMS MAYFLOWER KEN CAP'N DAY 5
SAILING COMMANDS
HEADING
FULL 3/4 HALF
FOOD DRINK
HELP GO LAND

HMS MAYFLOWER KEN CAP'N DAY 5
48 DEG 57 MIN N 6 DEG 2 MIN W
SW HEADING HULL SPEED 5 KNOTS
WIND FROM E 13 CURRENT FROM N 5 KNOT
FOOD 85 DAYS AT FULL RATION

DRINK 115 DAYS AT FULL RATION

MILES 122 IN 5 DAYS TOTAL 122

SORRY, I DON'T UNDERSTAND NOPRINTER
OK

Level III

Add livestock & feed & water

For's

Feed by species

Species	Weight	Food	Water
Goats Hogs pigs	100 lb	6 lb/day	1 1/2
Goats	100	15 lb/day	3 gal
Sheep	140	8 lb/day	1 1/2
poultry	8 lbs	1/2 lb	1/4
rabbits	6 lbs	1/2 lb	1/4

10-12



Hay, Grain, Root Crops

BALANCE your amount SPENT

2 days

Species	Feed	Water
GOATS	2.5-3% of Body weight HAY * 3 LBS GRAIN * 1/2 LB - 1 LB ROOTS * .75 LB - 1 LB	3 gals
SHEEP	* 2-3 LBS GRAIN * ROOTS * 1 LB. IF USED	2 gals
POULTRY	* GRAIN * ROOTS * VITAMINS	1.5 gals per 25
RABBITS (Doe & Litter = 1 gal/day)	* GRAIN * ROOTS * VITAMINS	.25 gals day
rain growing pigs	* VITAMINS LITTLE BIT	3 gals

eat animals

increase storm probability

option to tow ship & direction 1 knot

fuel sales during sales

shift wind

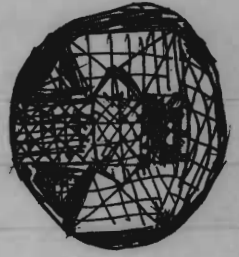
SHEEP & GOATS - 2.5 - 3% of Body weight per day pig - 3-4 LBS MEAN.

PIGS - 1-100 LBS 2.2 LBS per day 100-200 LBS 6.1 LBS. day 50% ROOTS 70% Hay 40% Grain

RABBIT - 2% weight day MATTER (3-6oz. pig POLYTS day - MATURE) 1/4 - 1/2 RATION IS. GRAIN

POULTRY - Laying BIRDS 100GRAMS per day per BIRD

New Product Announcement



RESEARCH

Highlights:

PLIMOTH COLONY
MSO EXT. AGENT FEED FORMULAS

U of M ^{Dept.} School of NAVAL ARCHITECTURE SAILING EQUATION

CONSULTED WITH

BIBLIOGRAPHY

VOcabulary list

HI-ROs GRAMICS

17th CENTURY MUSIC

OCEAN CURRENTS

PREVAILING WINDS

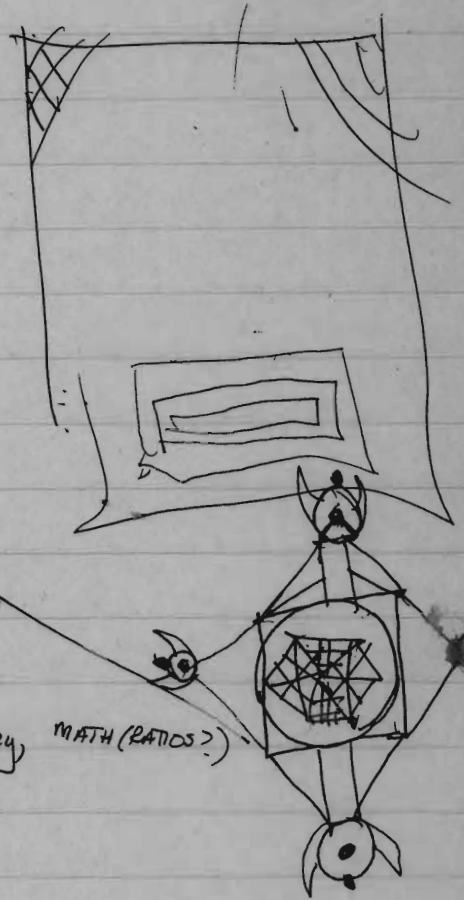
32 COURSES ROUTES

STORM PATTERNS

4 LEVELS OF DIFFICULTY

EASY TO LEARN HARD TO WIN

LEARN: NAVIGATION, SAILING STRATEGY, HISTORY, MATH (RATIOS?)



The Voyage of the Mayflower

On Wednesday, September 6, 1620, the Mayflower sailed into history. Her 103 passengers left religious persecution in England to sail 3700 treacherous miles through the ~~North~~ Atlantic ^{ocean} to an uncertain future in the New World.

In addition to passengers, the Mayflower was able to carry 120 TONS of supplies. There had to be enough food and water for people and livestock during the voyage. Supplies for the ship itself... extra sail, lines and timber... had to be stowed aboard. Finally all the tools, equipment and supplies to establish a new settlement were loaded.

The 66 day voyage proved to be hazardous. The 30 man crew and their Captain, Christopher Jones, had to sail through heavy storms and fickle winds. They had to fight their way across the ~~North~~ Atlantic, ^{EQUATORIAL} the great ocean currents; the Labrador, the North ~~Atlantic~~ and the Gulf Stream using only crude navigation tools and charts that were usually wrong.

As you sail ^{from Plymouth England to Plymouth Massachusetts.} ~~your voyage~~ remember those brave souls who went before. Good luck and God Speed.

Press return to continue

ADD NOTE NORTH IS TO TOP OF SCREEN

WEST IS TO THE ~~LEFT~~

WE NEED ACCESS TO THE BIBLIOGRAPHY - BOOK AND TO THE
VOCABULARY LIST - WORD

Message to reviewers

It's up to you now. We've tried to produce a product ~~that gives~~ ^{of} lasting value, ~~in exchange for someone's hard earned money~~ ^{and}. We think we have succeeded. If you agree, Cadmean's "The Voyage of the Mayflower" should do just fine in the marketplace.

Laurence Bayol and I have ~~put in a lot of work~~ ^{worked very hard to produce} in this program for the Commodore 64. We believe that people can learn just about anything once they become curious and interested. We also believe that the best way to learn about real experiences, is to mimic or simulate ^{actual events} ~~experiences~~. ~~(We also believe~~ ^{in putting our work where our beliefs are and that's why we create simulation games like "The Voyage of the Mayflower".)}

"The Voyage of the Mayflower" is a pretty interesting game about a very interesting subject. People who play it seem to like it. Curiously, somewhere along the way, while they're battling the ocean trying to reach the New World without starving and with enough supplies to found a colony they become quite good at geography, navigation and sailing. They get used to juggling variables, up to a dozen at level 4 of the game, and dealing with the uncertainties of the weather. Wait til you hit one of our storms! Their use of strategy and tactics increases too. Some of them even get curious about the history of the actual voyage. ~~It is~~ ^{Of course} it's not a surprise to us. It seems quite ~~a~~ natural way to learn.

In the interest of accuracy we have included the major ocean currents, the normal wind patterns for different parts of the Atlantic and the doldrums of the Sargasso Sea. We made the ship able to sail ~~in~~ ^{toward} any of 32 ~~directions~~ ^{the} points of the compass ^{and, just like real vessels of her kind,} ~~she~~ ^{it} cannot sail closer than 50° to the wind. ~~just like real vessels of her kind.~~

The amount of food for humans and feed for animals is calculated ^{for} on Jacobean appetites and 17th century animal types.

We have had some help with all this to bolster our own research. The Plimoth Plantation, the University of Michigan Department of Naval Architecture and Marine Engineering, Kate Coffey and Alan Villiers' wonderful books and Bill Ames of Michigan State University's Extension Service all contributed to our efforts.

We hope that "The Voyage of the Mayflower" and future programs in the "Reverend America" series will stimulate a renewed interest and curiosity in the settlement of this country while helping people learn to make decisions and live with the consequences. We've included a short historical narrative, a bibliography and a vocabulary list to help people learn more. (Actually I couldn't resist including words like *fikin* and *foretymick*.) The music is an early 17th century tune called "A-fovin." All this ^{and a poster} for \$29 seems reasonable to us. We think you will agree. Enjoy.

maybe a little
too cute.

Ken Ludwig
president
Admean Corporation

309 ~~50~~ 50th
New Arbor Mi 48103

New Product Announcement

accompanied by photo of
actual screen.

~~Codman Corporation~~

"The Voyage of the Mayflower" simulates the experience of the Pilgrims historic sea voyage. Codman Corporation's first program in the "Discover America" series reawakens interest in the settling of ~~the~~ this ^{continent} ~~country~~. Using graphics, 17th century music, ~~realistic~~ ^{realistic} ocean, weather and sailing characteristics, it provides challenges for ~~the movie and advanced simulation buffs~~ ^{all levels of play.} The ~~use of~~ ^{use of} Pq providing a bibliography, vocabulary list and short historical narrative, participants are encouraged to consult other, non-computer sources for additional information. For the Commodore 64 computer with disc drive, the program retails for \$29.95 ^{and includes an 11x14 poster}. Dealer inquiries are invited. Contact: Codman Corporation 309 Koch & Ann Arbor, MI.

48103

NEW

64

SAIL TO AMERICA ~~IN YOUR 64~~ A TOTALLY NEW COMPUTER EXPERIENCE

- PARENTS TELL ~~THE~~ ^{YOUR} KIDS CADMSTAN'S "THE VOYAGE OF THE MAYFLOWER" HAS ALL THE COLOR, SOUND AND EXCITEMENT THEY LOVE. CHALLENGE THE ~~POWERFUL~~ ^{MIGHTY} ATLANTIC, DEFY ITS ROARING STORMS AND BRING YOUR PASSENGERS SAFELY TO HARBOR IN THE NEW WORLD. THERE'S NEVER BEEN AN EXPERIENCE LIKE IT. ANYWHERE.
- KIDS TELL YOUR PARENTS "THE VOYAGE OF THE MAYFLOWER" IS A REAL LEARNING ADVENTURE. IT RECREATES THE HAZARDS AND DRAMA OF THE ACTUAL PILGRIM VOYAGE. YOU'LL LEARN ABOUT SAILING, WEATHER, NAVIGATION HISTORY AND STRATEGY. THE MORE YOU KNOW THE MORE FUN IT IS. EVERY LEVEL IS A UNIQUE EXPERIENCE. ~~AND THERE ARE FIVE LEVELS.~~ UNFORGETTABLE.
- FAMILIES ~~PUT~~ ^{PIT} YOUR IMAGINATION AGAINST THE WORLD AS OUR FOREFATHERS KNEW IT. SHARE THE EXCITEMENT OF ~~THE JOURNALS~~ ^{JOURNALS} TO A NEW LIFE IN A NEW LAND. RISK THE DANGER AND SHARE THE JOY. LEARN TOGETHER HOW THE THE MAYFLOWER SAILED INTO HISTORY ON THE COURAGE OF THOSE FEW WHO DARED.

ALL THIS AND A FREE POSTER FOR ONLY \$29. DISK ONLY. ORDER NOW

- ~~ALL THIS AND A FREE POSTER FOR ONLY \$29. DISK ONLY. ORDER NOW~~
FOR ~~MASTERCARD~~ ^{OR} VISA ~~AND~~ ^{OR} WE'LL PAY THE SHIPPING ^{ORDERS.} (313) 994-0845 M-F
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~~DEALER INQUIRIES WELCOMED~~

~~SCHOOL AND DEALER INQUIRIES WELCOMED~~

(313) 994-0845 24 HRS M-F

WE PAY SHIPPING ON MASTERCARD AND VISA PHONE ORDERS!

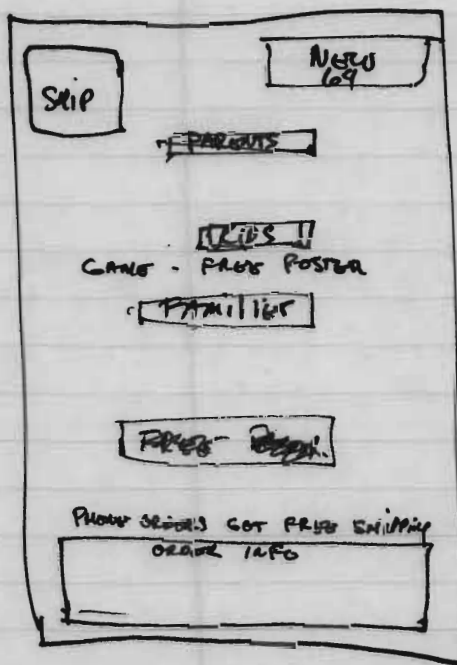
NEW

C-64

SAIL TO AMERICA
A TOTALLY NEW COMPUTER EXPERIENCE

- PARENTS TELL YOUR PARENTS

BASED ON REAL THING
SIMULATION
RECREATES REAL HAZARDS OF ACTUAL VOYAGE
HISTORICALLY ACCURATE
ACCOMPLISH SAME THING AS PILGRIMS



NEW FOR 64

NEW 64 ~~Adventure~~

PLAY AND LEARN TOGETHER WITH NEW 64 EXPERIENCES

~~NEW 64 Adventure~~

PARENTS

Tell the kids Cadmean's "The Voyage of the Mayflower" is an exciting ^{ADVENTURE} story game with ^{hundreds of the actual voyage of the Pilgrims} action, color and sound. ^{EXPERIENCE IT TOGETHER} They've never seen a game like it. Anywhere. ^{that recreates the real}



Kids

Tell the folks Cadmean's "The Voyage of the Mayflower" is a real learning tool. It helps you learn about sailing, and weather, and history and navigation and thinking. They've never ^{had} an ^{adventurous} ~~game~~ like it. Anywhere. ^{sea} ~~you~~ do you dare to challenge the ~~game~~?

Families

Enjoy playing and learning together with Cadmean's "The Voyage of the Mayflower" You ~~can~~ won't believe how much fun it is to ^{stimulate} open minds and learn together with the first of the "Discover America Series"

Sail into history with us for \$29 - Exclusively for the Commodore 64 ^{GEORGE NOW} ~~PHONE ORDERS~~ (313) 994-0815 M-F 24HRS. MASTERCARD & VISA ACCEPTED ^{OR SEND} ~~check or money order~~ ^{to} CADMEAN CORP. 309 KOCK ANN ARBOR MI 48103 ^{we pay shipping on phone orders!} C.O.D. + MAIL ORDERS ADD 3.00 SHIPPING + HANDLING FREE POSTER

LIVE THE MAYFLOWER EXPERIENCES ON YOUR ~~NEW~~ 64 NEW.

SAIL TO AMERICA ON YOUR 64 EXPERIENCE THE MAYFLOWER VOYAGE NEW

SAIL TO AMERICA WITH THE PILGRIMS ON YOUR 64

SAIL TO AMERICA ^{IN} ~~YOUR~~ YOUR 64
A TOTALLY NEW COMPUTER EXPERIENCE

• PARENTS

TELL THE KIDS CADMORGAN'S "THE VOYAGE OF THE MAYFLOWER" HAS THE COLOR
SOUND AND EXCITEMENT ^{THEY LOVE} OF ~~REAL~~ HISTORY. CHALLENGE THE SEA, DEFEAT THE
STORMS AND BRING YOUR PASSENGERS TO SAFE HARBOR IN THE NEW WORLD
THEY'VE NEVER ~~HAD~~ ^{HAD} AN EXPERIENCE LIKE IT. ANYWHERE.

• KIDS

TELL YOUR ^{PARENTS} ~~TELL~~ "THE VOYAGE OF THE MAYFLOWER" IS A REAL LEARNING
ADVENTURE. IT RECREATES THE HAZARDS AND DRAMA OF THE PILGRIM ~~ACROSS~~
~~THE~~ VOYAGE. YOU'LL LEARN ABOUT SAILING, WEATHER, NAVIGATION, HISTORY
AND MORE. THEY'VE NEVER HAD AN EXPERIENCE LIKE IT. ANYWHERE.

• FAMILIES

YOU WON'T BELIEVE HOW MUCH FUN IT IS TO PUT YOUR IMAGINATION AGAINST
THE WORLD AS OUR FATHERS KNEW IT. SHARE THE EXCITEMENT OF
JOURNEYING TO A NEW LIFE IN A NEW LAND. ~~SHARE~~ ^{RISK} THE DANGER AND
SHARE THE JOY. LEARN TOGETHER HOW THE MAYFLOWER SAILED INTO HISTORY
ON THE COURAGE OF THOSE FEW WHO DARED.

ALL THIS AND A FREE POSTER FOR ONLY \$29. ^{ORDER} ~~MAIL~~ NOW WITH MASTERCARD OR
VISA AND WE'LL PAY THE SHIPPING. ^{ORDERS ONLY} PHONE (313) 994-0845 M-F 24 HRS. DISK ONLY
~~C.O.D., CHECKS AND MAIL ORDER ADD \$3.00 SHIPPING AND HANDLING~~ ^{FOR C.O.D. AND MAIL ORDER}
~~SEND TO 309 KOCH~~

SEND CHECK OR MONEY ORDER TO CADMORGAN CORP. 309 KOCH ANN ARBOR, MI 48103

DEALER INQUIRIES INVITED

~~FOR C~~ TM ~~DISK~~

CALL TALK MONDAY A.M. CHECK ANSWERING HOURS (M-S?)
24 HRS?

PLYMOUTH COLONY (1620 - 1646)

STAGE ONE: SURVIVAL BALANCE WORK WITH PEOPLE.

1620-1623

HALF COLONY IS DEAD - TOO MUCH WORK FOR REMAINING - TOUCH AND GO ON FOOD AGGRAVATED BY ARRIVAL OF NEW, UNSUPPLIED COLONISTS. VERY RISKY, FRAGILE SYSTEM - ~~NOT THE FOOD BUT THE~~ SURVIVAL EQUATION TO INCLUDE HOW SOON COLONISTS GET NATIVE FOOD - BURDEN OF WORK FOR MERCHANTS VS WORK FOR THEMSELVES: GENERAL SICKNESS 1620-1621, DROUGHT IN 1623
 6 WEEKS: GIFTS TO INDIANS DEBILITATE STORES ESTABLISH MINIMUM TRADE

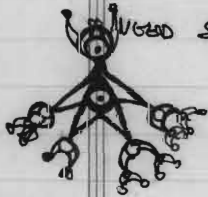
TOY STICK
 TO BUILD
 AND
 PLANT

1623-1627

STAGE TWO: CHANGING FROM COMMUNAL TO ENTREPRENEURIAL ORGANISATION
 ACCELERATED TRADE, INCREASED IMMIGRATION, GENERAL EXPANSION, SHIPPING, SAILINGS, TRADE REQUESTS NEGOTIATION TOWARD AGREEMENT WITH SOCIETY OF ADVENTURERS

1627-1646

NEW SETTLEMENTS, POPULATION EXPANSION, MAXIMIZE GROWTH & DEBT PAYMENT
 POLITICAL & SOCIAL CHANGES, FINAL PAYMENT OF LAST DEBTS (1646) LOSS OF COMMERCIAL RISK POST, SEVERALS OF SHIRLEY & ALLSTON 1639 HOUSEHOLDS TO SOW ONE SQUARE PLO OF HEMP & FLAX (DOES THIS MAKE SENSE OR TOGETHER?)



USED SOMETHING ABOUT CHURCH ATTENDANCE: PUNISHMENT FOR MISSING CHURCH SERVICES

WAGE PEACE

LEVELS	I	SURVIVAL	FARMING BUILDING FISHING	
	II	ECONOMIC SELF DETERMINATION FOREIGN POLICY INCLUDES TRADE	}	SETTING UP TRADE NETWORK (INDIANS, NEW HOLLAND) DEFENSE RESOURCES INDIAN RELATIONS INCLUDING WAR CATS, HORSES(?)
	III	ECONOMIC CONSOLIDATION - PAY OFF DEBTS & GRAND - COMPLEX TRADING MODEL (TRADE WITH BOSTON)		

SKILL BANK FARMERS MOST PROMINENT AT START

WORST CASES

BEST CASES

DEATH

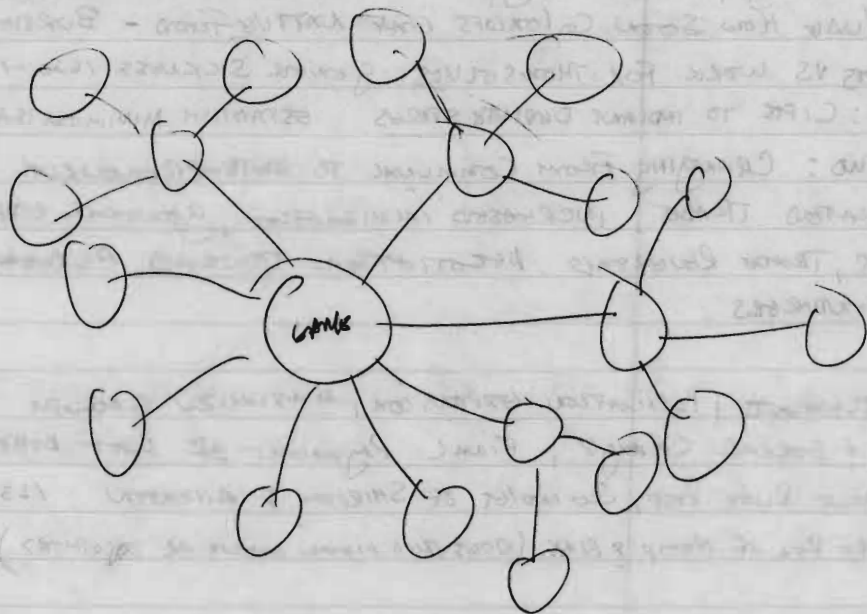
SURVIVAL

INDIANS - DESTRUCTION, WEAKENING, EXCESS RESOURCES TO DEFENSE SLOWING GROWTH

Plymouth Colony (1620-1621)

STAGE ONE: SURVIVAL Balance work with people

Have colony as a whole - too much water for Plymouth - 1620 and
 do not have separate by virtue of how, organizing colony
 very busy, fragile system -



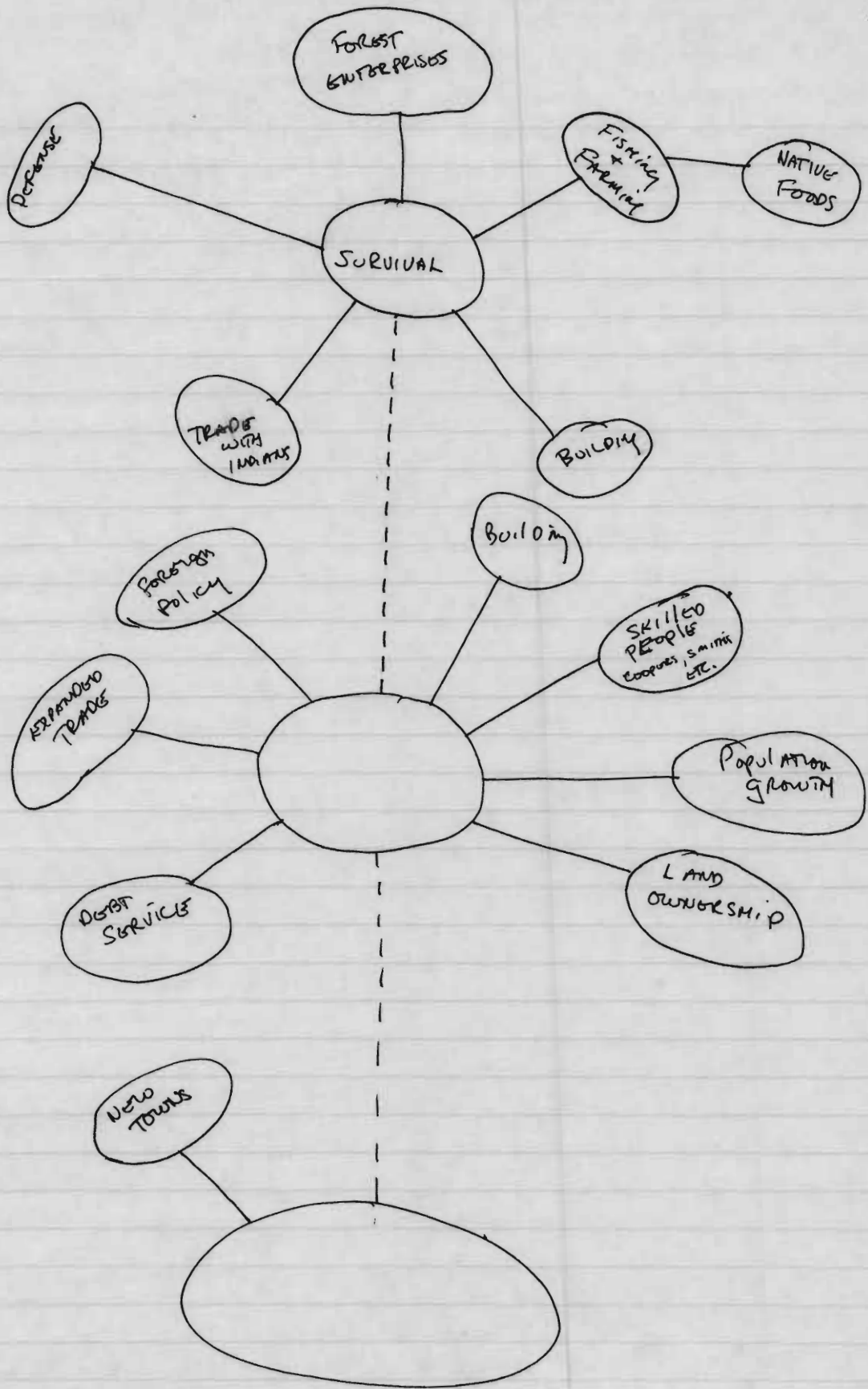
1620-1621
 1621-1622
 1622-1623

Wages Price



00

Level	I	II	III
Level 1	Fishing, Building, Farming	Economic self determination	Economic (self-determination) - 1st 400 people & 1st 400 people
Level 2		Foreign plus local trade	Trade with 1st 400
Level 3		Local production, local trade	
Level 4		Local production, local trade	
Level 5		Local production, local trade	
Level 6		Local production, local trade	
Level 7		Local production, local trade	
Level 8		Local production, local trade	
Level 9		Local production, local trade	
Level 10		Local production, local trade	





FISHING
 FARMING
 HUNTING/GATHERING
 BUILDING
 WOOD GOODS
 DEFENSE
 INDIAN TRADE
 FOREIGN POLICY
 OCEAN TRADE
 BEST SERVICES
 LAND OWNERSHIP
 POPULATION GROWTH
 SKILLED PEOPLE

SURVIVAL Building

EXPANSION TRADING

CONSOLIDATION

4 PLAYERS

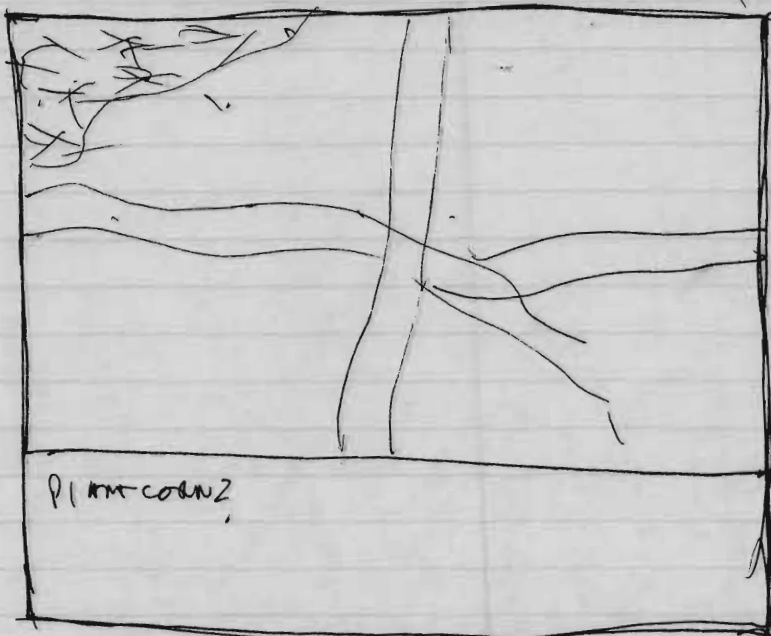
~~50~~ PEOPLE TO START IN SPRING

$$X \text{ PEOPLE} + Y \text{ FOOD} = Z \text{ HOUSING}$$



PLANT CORN, PEAS, WHEAT
 CATCH SILWIVES (3 PER PLANT)
 BUILD FISH TRAP
 FENCE

INDIAN RELATIONS



STATUS REPORT

NUMBER OF PEOPLE By sex and AGE

NUMBER AND KIND OF BUILDINGS

ACRES OF ARABLE LAND

QUANTITY OF GOODS AND SOBE SURPLUS OR DEFICIT

QUANTITY OF FOOD

QUANTITY AND KIND OF TRADE GOODS OTHER THAN FOOD

" OF MONEY, DEBT, LIVESTOCK, TOOLS, TRINKETS

ELAPSED TIME BY YEAR

SCORING PLYMOUTH COLONY

NET WORTH OF COLONY

HEALTH INDEX OF COLONY $\frac{\text{RATIONS}}{\text{NUMBERS OF PEOPLE}}$

STRENGTH INDEX OF COLONY = NET WORTH X HEALTH INDEX

SCORING OTHER PLAYERS

NET WORTH BASED ON TRADING

NEGOTIATING

DEBT WITH COUNTRY - AS COLONY STRENGTHENS DEBT SERVICE BECOMES MORE HONEST

THRESHOLD

MANPOWER WEIGHTED NEGATIVELY BEFORE THRESHOLD POSITIVE AFTER

ASSIGNMENT OF INDIVIDUAL LAND

FINAL SCORE END OF GAME

GAME ENDS WHEN DEBTS ARE PAID

FINAL SCORE ← NET WORTH
HEALTH INDEX
STRENGTH INDEX

Small PLYMOUTH PLANTATION - Village Map
 Family Computer STORE
 Birmingham + Berkeley

12 pence = 1 shilling
 20 shillings = 1 Pound
 240 pence = 1 Pound
 21 shillings = 1 Guinea

PLYMOUTH Colony

INTRODUCTION - HISTORY OF FIRST WINTER

STARTING INVENTORY

FOOD, TOOLS, SEEDS, TRADE GOODS, BOATS, STOCK, PEOPLE, BUILDINGS, MONEY

ROLE ASSIGNMENT FOR PLAYERS - MANPOWER CATEGORIES
 TRADING NATIONALITY

ALLOCATION OF INVENTORY - MANPOWER DISTRIBUTION - SUMMER

LAND CLEARING, FIRE, FOREST WORK, COOKING, DEFENSE, PLANTING, LIVESTOCK CARE, FISHING, BUILDING, TRADING, MAKING TRADE GOODS, HUNTING, GATHERING, STORAGE, HOUSING, LIVESTOCK

PEAS, WHEAT, PUMPKINS, CORN, GARDENS (HORSES) FIBER

LOCATING OF FIELDS AND BUILDINGS, ROADS, ETC. WEIGHTED FOR SUSTAINING

EXPANSION

STATUS POINT

WINTER MANPOWER DISTRIBUTION

TRADING, HUNTING, GATHERING, FISHING, FOREST WORK,

FOOD RATIONS -

STATUS POINT - INCLUDES TRADING INVENTORY AVAILABLE

TRADING SEQUENCE INCLUDES SCORING

RETURN TO FOOD RATION

REPEAT CYCLE

RANDOM EVENTS

TO OCCUR ANYWHERE

ALLOCATIONS CHANGE

ONLY AT START OF

SUMMER AND WINTER SEASONS

THRESHOLD POINT

POSSIBLE NO SCORE THAN 2 COMPLETE

CYCLES NO LATER THAN 5

EXCEED = CONTINUE

FALL SHORT = END GAME

TRADING SEQUENCE

ITEMS TO BE TRADED: FURS, SEEDS, FOOD, TIMBER PRODUCTS, FISH, TRINKETS, TOOLS, MANUFACTURED GOODS (ENGLISH) BEANS, WAMPUM (CATTLE, FARM PRODUCTS)

<u>ENGLAND</u>	<u>INDIANS</u>	<u>PILGRIMS</u>	<u>DUTCH</u>
TOOLS	FURS	SEEDS	SEEDS
M'FACTURED GOODS	CORN	FOOD	FOOD
TRINKETS	GAME	TIMBER	TIMBER
FOOD	WBS: BEANS	FURS	FURS
CATTLE	FISH: SHALFISH	FISH	FISH
	BASKETS/TREEN	CATTLE	CATTLE?
	WAMPUM	PRODUCE	TRINKETS
		TRINKETS WAMPUM	CATTLE WAMPUM

TRADING PRE THRESHOLD ONLY BETWEEN INDIANS AND PILGRIMS
DUTCH AND ENGLISH UNDER PICTURE OVER THRESHOLD.

BEGINNING INVENTORIES OF EVERYONE BUT PILGRIMS ASSIGNED BY PROGRAM
PILGRIM INVENTORY CAN BE ENHANCED OR DEPLETED DURING ANNUAL CYCLES
IN FOOD, SEED, TIMBER LIST BEGINNING AND PRESENT INVENTORIES

VALUE OF INDIVIDUAL COMMODITIES ?

BOSTON ?

FIRST TRADER ASSIGNED RANDOMLY

END OF TRADING SEQUENCE TALLY SCORES OF PLAYERS

DO YOU WANT TO TRADE?

WHAT DO YOU WANT TO TRADE?

HOW MUCH DO YOU WANT TO TRADE?

WITH WHOM DO YOU WANT TO TRADE?

ENGLISH CAN TRADE WITH PILGRIMS

PILGRIMS CAN TRADE WITH EVERYBODY

DUTCH CAN TRADE WITH INDIANS AND PILGRIMS

INDIANS CAN TRADE WITH PILGRIMS AND DUTCH

TRADING WITH FISHING VESSEL - RANDOM APPEARANCE MINOR ROLE - PILGRIMS ONLY
PICTURES OR QUESTIONS ?

~~of the compass.~~ The program includes sound effects, 17th-century music, a bibliography, a vocabulary, and high-resolution graphics.

Every effort has been made to produce a simulation that is easy to learn and hard to win. Our intention is to produce software that, ~~for the first time~~, makes computers learning tools by providing the primary ingredient for learning: motivation. "The Voyage of the Mayflower" asks the participant to ~~make~~ ^{make} decisions and experience their consequences.

It is based on extensive research. ~~The~~ Information on the actual voyage was ^{gathered from sources including the} ~~developed at the~~ ^{plantation} Plymouth Colony in Massachusetts. Resources ~~gathered~~ ^{gathered} were employed with experts ^{and} at Michigan State University. ~~Navigation research was~~ conducted at ^{the} University of Michigan Department of Naval Architecture and Marine Engineering.

For C-64 Disc. #29

New product announcement: (accompanied by photo of the ships from the package design).

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Cadmean Corporation simulates the experience of the Pilgrims in "The Voyage of the Mayflower", the first ~~in~~ ⁱⁿ its program in its Discover America Series. According to Cadmean, this is the first product in the next generation of computer-based learning. It is easy to learn, hard to win, and encourages

How about using back of pack for some of this?

Message to reviewers:

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~~It is this simulation of the reality of~~

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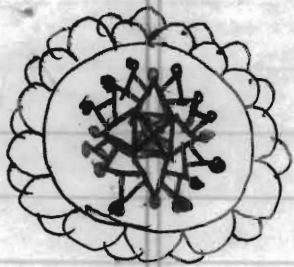
The simulation provides four levels of difficulty. Each level includes ~~the~~ the full range of human and environmental factors: ocean currents, prevailing winds, ^{shipboard} supplies, ^{and} storms, ~~the~~ 32 points

participants to consult other, non-computer sources for additional information. It even provides a bibliography and a vocabulary list. ~~Full graphics and~~

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MR. SHIRATO



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1st CENTURY - KYUSHU - ROMAN FOUNDING CITY

GEUKO - NO - FUKI → MONGOLIAN INVASION - STEM SOME BOATS
MONGOL SPECIFIC FORERUNNER OF KAMIKAZI

538 AD. 6th CENTURY - BUDDHIST PRIESTS - KOREA TO JAPAN

BROUGHT SCRIPTS - DON'T KNOW HOW MANY CAME

607 A.D. JAPANESE MISSIONS BEGAN TO CHINESE COURTS
MOSTLY BUDDHIST PRIESTS & SENATORS
KEN ZI SHI

670 AD. ~~THE~~ MISSIONS TO NEW DYNASTY IN CHINA

13th CENTURY (1222) JAPANESE PIRATES EAST OF JAPAN
ATTACKING CHINA, KOREA, AND PHILIPPINE
VESSELS - DUTCH SOURCES
WARO - MANGYU PIRATES

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WARLORD

DATE MASAMUNE - ENVOYS TO ROM & SPAIN FOR TRADE

Age of
envoy 1571-1622

AGREEMENT, ~~RECEIVED AFTER 1600~~
UNSUCCESSFUL

1582 ANOTHER ENVOY - UNSUCCESSFUL

WARLORD

JAPANESE INVASION OF KOREA BY ~~THE~~ HIDE YOSHI

1592 - 1598 LENGTH OF INVASION ALSO TELEVISION WITH ANIME
SERIAL

DUTCH EAST INDIA COMPANY 1602

MOST ACTIVE

1609 - 1641

NAME OF CARTOGRAPHER

1745-1818 SURVEY OF JAPAN BY BOAT ~~AT~~ INO, TADATAKA
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PROGRAM WILL TEST GRAMMAR OF JAPANESE SENTENCES.

putationally, a couple of minor errors occurred in the ANOVA and multiple linear-regression options.

On the plus side, the program handles both free-field and fixed-format data as well as alpha data. Because the program is written in BASIC, you can make changes as you see the need. The package handles just about any type of data collection or analysis file you might come up with. However, this versatility probably contributes to the slowness of the programs. Also, the program sends output only to a printer, so don't expect to see any screen displays of your final analysis results.

Maxistat is a slow statistical package. It does, however, contain a large repertoire of analysis techniques and handles almost any type of file you might need.

7. Moore-Barnes

Moore-Barnes currently offers two packages for statistical analysis: MBC Test Construction and MBC Correlation.

The Test Construction package is intended for those who are basically interested in analyzing test answers. These tests can use either a Likert-scale or multiple-choice format, with true-false considered a type of multiple choice. The user builds a data file consisting of the answers to the tests and then performs a series of statistical analysis on the resulting data.

The Correlation package consists of a series of different correlation programs that let you analyze data collected and entered as a series of data files. You can also perform the normal descriptive statistics on your data, including a frequency distribution plot.

Both programs contain a data-entry module and a module corresponding to each of the analyses you want to perform. In the Test Construction package, you can remove questions and answers and perform your analysis to see how the results vary. For example, an instructor can look at students' responses to questions and then

throw out those that a substantial number of students have missed. After all, there are occasions when a "bad" question is asked on a test.

The Correlation program is easy enough to use, but you must tell it quite a bit about what you did and what you want to know.

Both programs are menu driven. In several cases, however, you can do only one activity, such as data entry, at a time because you cannot complete the activity and then go to another without rebooting the program disk. When I was trying to enter several specific, limited data sets to test the computational capabilities of the programs, I often found it disconcerting to restart from scratch after finishing

one activity. Because the programs are unlocked and written in BASIC, it should be relatively simple to add your own routine to return to the main menu. You might expect the programs to be on the slow side because they are written in BASIC. However, I found the time they took to perform computations acceptable and the results accurate.

The two offerings from Moore-Barnes, particularly the Test Construction package, are targeted to the sophisticated user. However, once you work with them for a while, they do become easier to use. I particularly liked the descriptive statistics section of the Correlation package.

EDUCATION

Probing the Search Series

Classroom simulations that help children challenge each other

by Peter Owens

Over in the corner a cluster of fifth graders argued vehemently.

"That's dumb," said one girl. "It is not," snorted one of her male partners. "We need to do forestry research because we need more wood."

"No, no, no," countered another, "the logger's fund—that's where we should put our money."

Suddenly their corporate name, Sungo, flashed across the computer screen. Sungo's corporate rivals, members of Enerco, called out "Sungo's turn," twirled away from the computer, and bolted to their own corner of the room. The Sungo team quickly gathered up its corporate papers—charts, graphs, computations—and rushed over to the Apple II that Enerco's four directors had just vacated.

Almost as if it had overheard the very substance of Sungo's argu-

ment in the corner, the computer fired off a series of pointed questions, flashing bits of pertinent data, reading out progress reports spewing out so much data that Sungo's directors each had to take responsibility for only a portion of the information on the screen. Their division of labor already established, all four directors took notes as the computer presented them for decisions. Shall it be the logger's fund or forestry research the computer asked. Its cursor flashed back and forth between questions as if to say, "Make up your mind; think hard and fast. Your corporate destiny is on the line."

In controlled whispers, a consensus formed: "Logger's fund for forestry research. Logger's. Yeah, logger's. No, research for logger's. Yeah, logger's. Okay, logger's." Out flashed a finger press the space bar: enter logger's fund. The computer swallowed

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generates an ongoing file for each team, keeping track of each change and assigning a profit or loss report for each turn at the computer.

Computerized Field Trips

Snyder, who began working on the idea four years ago, equates the simulations with educational field trips, but unlike many such excursions where students are passive observers, here students participate in running a corporation (energy), sailing and navigating the oceans in a Columbus-like voyage to the New World (geography), searching and drilling for oil (geology), constructing a new social order after forced migration from an ancient society (community), and generating theories about the origins of an ancient people through excavation of a historic site (archeology).

The series does what simulations do well: it provides interactive hands-on experience in situations that are either too dangerous, expensive, complex, or inaccessible for students in a learning environment. It does what no teacher can do by keeping track of the increasingly complex consequences of student choices. And it does what no textbook can do by reacting flexibly to new information and generating new possibilities.

Equally important, however, is the series's attempt to address the realities of computer-aided instruction in today's schools. The programs require only one computer for groups of up to 25 or 30 students. The series demands no computer training for either teachers or students and hinges on classroom organizational methods that most teachers know quite well, notably small-group activity using workbooks, pencils, and paper. The programs require that students take notes, fill in graphs, and record their decisions and the results of those decisions in order to make progress.

Each simulation offers a demonstration that quickly establishes the routines of the game and shows

teachers and students what happens on the screen. Armed with clear and easily digested documentation and workbooks, a teacher can catch the drift of the game in only 10 or 15 minutes of fiddling at the keyboard. A teacher need not fully master the game before asking students to begin. The best way to learn, in fact, is to watch four or five teams embark. Within minutes each takes off in a different direction and gradually develops a unique set of strategies, even a game philosophy. There are no right or wrong answers; each team follows its own logically consistent course and will act either wisely or unwisely within the terms of its own evolving strategy.

Thus when students turn to Snyder to ask, "What can we do now?" his answers are necessarily tentative: "Why don't you try going back to water power, and maybe you can recoup your losses from oil?" or "Maybe you should invest in energy research; that will give you more options and help everyone." Teaching the series is really very easy; for many teachers the greatest challenge may be keeping quiet and letting students think their own way through.

The Price of Progress

Although primarily a game of logic and decision making, Energy Search is strongly influenced by the personalities and thinking styles of its players and is therefore fascinating to watch. A team that is spirited and prone to speculation quickly ends up wrestling with high-risk, cash-intensive decisions that arise from the players' impulsive style. On the other hand, a more cautious, conservative team quickly finds itself grappling with economic strangulation. Its safe, low-profit operations stagnate while the high-rolling team rocks from the busts and booms of big-bucks speculation. Nicely accommodated by the program, these human dimensions are just as instructive as the logic and calculations. After students take

only three or four turns at the computer, these dynamics take shape and force students to adjust to the weaknesses of their thinking styles while at the same time letting them think within their own terms.

For a sense of how this process happens during the game, let's look back at Sungo's initial dilemma—whether to invest in research or in the more immediate concerns connected with logging operations. Sungo started its operations using oxen power whose associated problems involved grain production, shelter, and disease. Having moved on to direct a factory fueled by wood and powered by steam, Sungo has many immediate needs. If Sungo does not keep its supply of wood coming along good roads, the factory will shut down for an entire turn, and the company will lose money. Yet by investing in research, Sungo might eventually secure more modern technology such as water power, coal, oil, or nuclear power.

Impressed by new technology, Sungo opts for research, not yet knowing that the price of progress may be higher costs as well as higher profits. Water power, for instance, offers bigger money but also bigger complications—a company must wrestle with turbine technology and dam projects, and corporate life grows trickier. Later reliance on nonrenewable fuels will lead to even higher costs for raw materials, machinery, skilled labor, and pollution violations. In the distant future, solar power beckons.

Enerco, the shrewdest of the eight teams, masterminded a tough, fiscally stingy strategy. They watched other teams charge headlong into new technologies. When Enerco's most outspoken leader was pressed by his team to opt for new technologies, he observed, "It takes a lot of bucks to stay in coal. People are making a lot of money in water. Let's stay with water, and you'll see."

His company stayed with water power and distributed its cash frugally, maintaining a tight

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POPULAR REVIEWS: SOFTWARE

balance among all the funds and expenses the water power required. Soon the company was turning steady profits. Its leader grinned with miserly delight, "We've got cash galore!" But the balanced tight-fisted spending policy also threatened account shortfalls three or four turns into the future. Several equipment funds were growing dangerously low, and if just one account in equipment or operations shrinks to nothing, a company must shut down and can pay back each delinquent account only one turn at a time. Thus the game forces teams to plan ahead and invest enough in each account to keep it solvent for several turns at the keyboard.

While Enerco's was a smart strategy on several grounds, it was risky on others, and when the class period was over, Enerco's brain trust knew that its tight fiscal policy needed radical revision if the

company was to avert financial disaster the following day.

Meanwhile, another team's impulsive plunges into each new technology that came along were quickly exhausting its cash supply. Unwilling to turn back to safer (though more plodding) technologies such as water or oxen, one girl turned to Snyder and moaned, "Can't we just shut down?"

"Are you getting nervous?" Snyder smiled.

"I can't stand it!" she laughed en route to a run of shutdowns.

Such tensions heighten the imaginative reality of the game, yet the computer marches on without so much as a grin.

Searching for a New World

The essential logic and method of Energy Search are replicated by the companion Search Series programs, yet the tasks at hand are much different. Perhaps the most

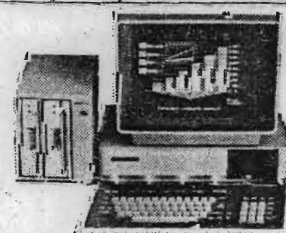
enjoyable and emotionally charged game in the series is Geography Search. Each team is given a sailing vessel and is told to set sail in search of gold in the New World. After a day's sail, each crew is shown a new configuration of stars from which crew members must plot their latitude. They calculate longitude by measuring the relative angle of the sun with a built-in computer clock, and each new day the computer reports wind direction, water depth, and air temperature.

As in the other programs, this crucial data flashes on the screen for brief intervals, forcing students to collaborate in their note taking. (Single players may choose to regulate the pace of the data displays and waive this high-speed group option.) As is delightfully true in real-world sailing, the boats cannot sail straight into the wind, and with the computer's ever-

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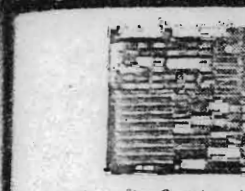
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changing wind direction, the crew must grapple with detours, setting each course to maximize progress given the constraints of weather. Confronted by storms, pirates, errors in navigation, and the vast uncertainties of ocean sailing, the ships soon lose sight of each other, heading off into dangerous isolation in search of riches.

What the Computer Teaches

In each program, the computer oversees rules, choices, decisions, and data searches that directly relate to each target discipline. The workbooks provided with each program disk contain explanatory chapters that provide facts and principles in the discipline and help students carry out the necessary calculations and strategies.

The documentation stresses that students must discover their own answers. Says one teacher's manual, "The overall guideline regarding student questions... is don't answer them!" This strategy forces students to use their workbooks, experiment, look to other sources such as dictionaries or encyclopedias, discover by observing others, or learn from their own trial-and-error experience. This non-teacher-directed philosophy strongly permeates the program materials and Snyder's own thinking, but in more traditional teacher-centered classrooms, extra academic content in the form of special readings, texts, and essay analyses could be added with relative ease.

Teachers will find considerable room for flexibility in working with the series. A Search program is not meant to be used by itself but as a supplement to a particular course of study, much as teachers now embark upon field trips or set up laboratory experiments. Snyder suggests using a Search program for perhaps two class sessions a week while reserving the other three classes to explore the discipline via other activities and methods.

The publisher has done a creditable job in compiling the work-

books that accompany the Search Series. The graphs, charts, and diagrams on which students record data are easy to use and eminently practical. The readings are clear and link academic principles with the evolution of the game. The driving principle behind these packages is that clear, forthright information begets curiosity. Hence we see few obscure tricks and none of the arbitrary withholding of data that makes so many adventure simulations tiresome and often foolishly frustrating.

The greatest weakness of the workbooks is that the presentation of the material is too uniform to be suitable for the broad spectrum of grade levels (5 to 12) the publisher claims can be served by the software. While the vocabulary and sentence structure are appropriately on a higher level for the more complex Archeology and Geography Searches than for Energy, the layout, design, and overall presentation are essentially identical in all the workbooks, making them too juvenile for older students.

Freeing the Teacher

The great strength of the Search Series is that it frees up teachers to interact intimately with students as they engage in an instructive intellectual challenge. The computer is a remarkably good teacher's aide, offering unswerving attention to students. It offers up periodic little true-false quizzes, grading them instantly amid cheers and groans. It is a tireless and patient instructor that the students come to enjoy.

To Snyder the greatest virtue of the simulations is that they get students working together, cooperating, helping, reasoning in groups, and taking responsibility for their own learning.

Teaching students to think, however, is not easily measured on standardized tests. Thus some teachers and administrators will fault the games for not teaching enough facts or for not fitting snugly into previously determined ob-

jectives, and this criticism could prevent the series from becoming the smash hit it deserves to be.

Showing the Way

Still, the Search Series is easily used by an entire class and requires only one computer. And because it can store the progress of many teams at a time, it's easy to shuffle from classroom to classroom, teacher to teacher. Unlike individual tutorial software, the series does not require individualizing students' schedules or a special setting or numerous terminals. It is flexible enough to be used easily from fourth or fifth grade through junior high and can be adapted for high school and adult classes.

At very least, the series is a pathfinder. It shows that educational simulations can engage the mind and demonstrates what a smart and savvy teacher can do with a computer to vitalize a classroom and captivate students. □

At a Glance

Name: The Search Series: Energy Search, Geography Search, Geology Search, Archeology Search, Community Search

Type
Classroom educational simulation

Manufacturer
Webster Division, McGraw-Hill Book Co.
1221 Avenue of the Americas, 28th Floor
New York, NY 10020
(800) 223-4180
(212) 997-2646 (for New York State residents)

Price
\$180 per program

Format
5¼-inch floppy disk

Computers
Apple II and IIe; TRS-80 Model III with 32K bytes of memory and one disk drive

Documentation
32-page Teacher's Manual in vinyl binder with expendable 32-page student workbooks called Searchbooks

Audience
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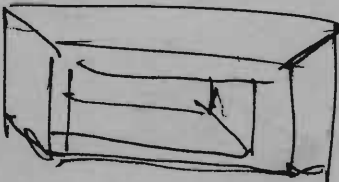
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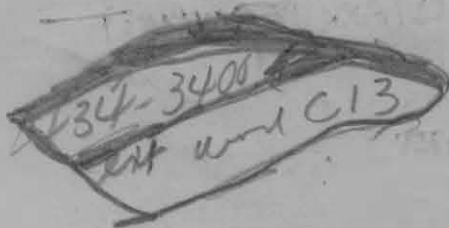
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MR. SKILLER V.P. SOFTWARE

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IQ

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PLYMOUTH

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go public

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JOHN BROCKMAN ASSOC.

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MORTON L. JANKLOW ASSOC. INC.

SOFTWARE AGENCY LTD

BOSTON + N.Y.

PETER SKOLNIK - PARTNER

See
letter

WRITTEN INFORMATION

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GREENBURGER ASSOC.

OFFICE
2320

825 THIRD AVE

~~520~~

CADMEAN
corporation

ann arbor, michigan

LIPERBOAT
Log Cabin -
STANWOOD ON ISLAND

ES/02/E

Type of Game: Educational; Experience Simulator
Focus: Values Clarification

The Values Clarification Game will induce players to determine their values for various circumstances and at different levels of intensity. The purpose of the game is to stimulate introspective thinking, self-reflection and identification of personal belief sets as well as respect/tolerancy for Others' value systems. The Values Clarifications segment is a logical prelude to the Methods of Decision-Making Games.

The Values Clarification Series will consist of four different levels. Each level will represent a certain kind of relationship, i.e., 1) self-self, 2) self-Other (1:1), 3) self-Others (1:many), 4) Others-Others (many:many). These relationships will be played out by the game-participants and will occur within a variety of circumstances. Players will, in a sense, be pitted against each other such that the fundamental beliefs of each will be pulled out into the Open.

The circumstances for each kind of relationship will consist of its own hierarchy as well. Each circumstance will be comprised of a different set of conditions of which the players will have beliefs. As circumstances increase with difficulty so too will the clarification of one's values and thus the longer it may take for those values to emerge. Situations such as this may provoke thought as to whether or not one's values are a function of context or vice-versa.

The variety for games is endless since the kinds of conditions which can arise in a "possible worlds" setting. Furthermore, the kinds and levels of relationships is very far-reaching. For example, on the plane of self-other, the Other can represent a sibling, a parent, an offspring, a friend, a male, a female, etc. Also, Others in the 1:many and many:many relationships can represent political groups, social groups, national groups or families etc. The possibilities are virtually limitless. However, among all the possibilities and variations, that which will (as a result of this game) remain constant is the player since he/she is "self". Through numerous games, as through life experiences, the player will begin to discover his/her self, will begin to understand both why s/he owns particular values and to anticipate the kinds of opinions s/he might hold in future situations.

It is perhaps a social benefit that players will begin to question the geneology of their/our morals and to raise pertinent issues stemming from conviction and thought.

(L.I.)

endless
↑
confused
state
of
confusion
change
dynamically
can be
used for



MICRO D / 17406 Mt. Cliffwood Circle / Fountain Valley, CA 92708 / (714) 540-4781

January 20, 1984

Mr. Ken Ludwig
Cadmean
309 Koch
Ann Arbor, MI 48103

Dear Mr. Ludwig:

Thank you for considering Micro D as the distributor for your product. Please send an evaluation sample of your product to be reviewed by our evaluation staff. This group will review the product and return it to me with an evaluation report.

I am enclosing a Manufacturer Product Information form that must be filled out by you and returned to Micro D before a decision can be made from a marketing point of view. Please return it to me as soon as possible.

Upon receipt of the Manufacturer Product Information form and the completed evaluation report your product will be presented to the Product Adoption Staff. A final decision will be made at that time.

This process takes approximately four to six weeks to complete. At that time, I will notify you of the decision. I will return the merchandise to you or keep it on file at your option.

Thank you, again, for your interest in Micro D. If you have any further questions, please do not hesitate to call me or contact our purchasing department. I am looking forward to receiving your product.

Best regards,

Miky Barton
Marketing Coordinator

MB:mm
cc: Dana Graham

MANUFACTURER PRODUCT INFORMATION

MICRO D, INC.

17406 Mt. Cliffwood Circle
Fountain Valley, California 92708

Date: ___/___/___

Manufacturer: _____

Address: _____

Contact(s): _____

Phone #(s): _____

Product(s): _____

Model #(s): _____

Formats Available: 1.	_____	Date Available:	___/___/___
2.	_____	Date Available:	___/___/___
3.	_____	Date Available:	___/___/___
4.	_____	Date Available:	___/___/___
5.	_____	Date Available:	___/___/___

Product Concept/Utility: _____

Product Uniqueness: _____
(Describe)

Market Information

1. Market Segment Size: _____ \$'s _____ Units

Source: _____

2. Growth Trend: of Market	1980 \$/#'s	1981 \$/#'s	1982 \$/#'s	1983 \$/#'s	1984 \$/#'s
-------------------------------	----------------	----------------	----------------	----------------	----------------

3. Consumer (Target users & why they buy): _____

Competition

1. Primary Competitors: _____

2. Competitive Advantage of your product(s) over the competition: _____

Advertising & Promotion

1. Media Budget - (\$'s): _____

2. % Consumer vs. Trade: _____

3. Please submit copy of advertising plan/schedule/samples (if available).

4. Cooperative Advertising Plan: _____

6. Trade and Consumer Promotions planned: _____

Evidence of Consumer Product Acceptance

1. Test market results: sales rates, geographical locations of test, etc.:

2. Monthly rate of sales and length of time on market: _____

3. Current channels of product movement: _____

If the product is handled by distributors, please list them:

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

Service Policy

Legal Considerations

1. Consumer Warranty: _____

2. Product Liability Insurance Coverage (\$): _____

Pricing (Retail, Dealer, and distributor margins): _____

Quantity Discounts: _____

Opening Order Discounts: _____

Terms of Payment: _____

Return Policy/Price Protection/Stock Balance Program: _____

Manufacturer: _____

By: _____

(Title)

MANUFACTURER PRODUCT INFORMATION

MICRO D, INC.

17406 Mt. Cliffwood Circle
Fountain Valley, California 92708

Date: 10/04/83

Manufacturer: RAMCARDS UNLIMITED, INC.

Address: 1324 MeToo Street Suite 16K .

Silicon Gulch, California 92322

Contact(s): Richard A. Masters

Phone #(s): (408) 555-3321

Product(s): RAMKRAM 16, RAMKRAM 64, RAMKRAM 128

Model #(s): RK-16, RK-64, RK-128

Formats Available:	1. <u>Apple II+, IIe</u>	Date Available:	<u>10/29/80</u>
	2. <u>IBM PC, XT</u>	Date Available:	<u>06/01/82</u>
	3. _____	Date Available:	<u>____/____/____</u>
	4. _____	Date Available:	<u>____/____/____</u>
	5. _____	Date Available:	<u>____/____/____</u>

Product Concept/Utility: Inexpensive, massive amounts of RAM for bus-
iness and home computing.

Product Uniqueness: No other product offers our price/performance
(Describe) ratio. Our 50 Nanosecond RAM chips can not be beat for speed.

*** Market Information (list the total number of units on the market and the potential % of that figure that would buy your product.)

1. Market Segment Size:	<u>\$3,000,000</u>	<u>750K / 15K</u>
	Retail \$'s	Units
		Total/Potential

Source: Mullequin's Market Research, Inc.

2. Growth Trend:	<u>200K/1.3K</u>	<u>750K/5K</u>	<u>1.5M/10K</u>	<u>2.5M/16.6K</u>	<u>4.5M/30K</u>
of Market	1980	1981	1982	1983	1984
	\$/#'s	\$/#'s	\$/#'s	\$/#'s	\$/#'s

*** In the example for Market Segment Size there are 750K+ Apple & IBM computer users in the U.S. Of these, 2% of them would buy our RAMKRAM (15K). This 2% represents the potential market. With an average Retail price of \$150.00 our market size in dollars would be \$3,000,00.00.

3. Consumer (Target users & why they buy): Apple & IBM PC owners who find themselves in need of additional RAM will buy RAMKRAM because it is the best buy for the buck.

Competition

1. Primary Competitors: AbundaRAM, HotRAM, RandoRAM

2. Competitive Advantage of your product(s) over the competition: First expansion RAM product on the market, Name Brand recognition, Price/Performance leader.

Advertising & Promotion

1. Media Budget - (\$'s): 350K for 1984, 100K for 4th quarter '83

2. % Consumer vs. Trade: 80% consumer 20% trade

3. Please submit copy of advertising plan/schedule/samples (if available).
See Add schedule and samples attached.

4. Cooperative Advertising Plan: 5% of gross purchases. 6 mo. accrual.

6. Trade and Consumer Promotions planned: COMDEX, AppleFest, PC Faire, Christmas buy 3 get 1 free special for dealers. Chance to win a free trip to Hawaii for consumers.

Evidence of Consumer Product Acceptance

1. Test market results: sales rates, geographical locations of test, etc.:

Original test marketing in Sept. of 1980 was successful. Test Market was Southern California Computer dealers Association. 1500 units were sold in the 2 week test market period.

2. Monthly rate of sales and length of time on market: Current rate of sale is 1383 units per month (16,600 per year). Sales are increasing at 105% per year. Initial offering to market on Oct. 29, 1980.

3. Current channels of product movement: Product is sold through distributors only. Direct dealer sales became too time consuming. End users are referred to known dealers in their area or to distributors who can refer them to a dealer.

If the product is handled by distributors, please list them:

- | | |
|---------------------------------|----------|
| 1. <u>ABC distributor</u> | 5. _____ |
| 2. <u>Hardsell</u> | 6. _____ |
| 3. <u>Diskware distribution</u> | 7. _____ |
| 4. _____ | 8. _____ |

Service Policy

Third party service is available in most major cities. Factory direct service also available.

Legal Considerations

1. Consumer Warranty: Lifetime Warranty. Satisfaction Guaranteed.
2. Product Liability Insurance Coverage (\$): \$1,000,000

Pricing (Retail, Dealer, and distributor margins): Retail-\$150.00
Dealer-\$90.00(40%) Distributor-\$60.00 (60%)
(attach price schedule please)

Quantity Discounts: Orders of 100 units or more receive an additional 3% DFI.

Opening Order Discounts: 2% DFI on opening orders of 200 or more units.

Terms of Payment: 2% 20 days; Net 60 on approved credit.

Return Policy/Price Protection/Stock Balance Program: 100% return privilege,
30 day price protection, \$1 for \$1 stock balancing permitted.

Manufacturer: RAMCARDS Unlimited, Inc.

By: Richard A. Masters

President
(Title)



John Brockman Associates, Inc. 2307 Broadway New York, New York 10024 (212) 874-0500

Katinka Matson
Vice-President

January 13, 1984

Ken Ludwig
Cadmean Corporation
309 Koch
Ann Arbor, Michigan 48103

Dear Ken:

Thank you for the opportunity to look at THE VOYAGE OF THE MAYFLOWER.
It's a fine program, but we don't think we could market it successfully
for you. Thus, we'll pass.

Good luck with your series.

Sincerely yours,

A handwritten signature in dark ink, appearing to read 'Katinka Matson', with a stylized flourish at the end.

Katinka Matson

KM/hb
encl.

Carl Alray & Ron

Dear MR. MACG,

I read with interest your review of Commodore 64 games in the — issue of Infoworld. In your closing paragraph you asked for recommendations of C-64 specific games for review. Your "The Voyage of the Mayflower" is such a game. I realize that Infoworld does not accept review copies from manufacturers. As a small company just beginning our national advertising distribution we might not come to your attention for some time in the normal course of things. ~~and~~ I have taken the liberty of sending you a copy of our program along with other information with the expectation that, if I have not put you in an immensely awkward position, Infoworld will render a check for \$29.00. ~~and~~ Your policies will have been followed and integrity guaranteed. I hope ~~that~~ that it is possible for you to accept this proposal. Thank you for your attention. ~~and I hope~~

Ken Hedley
President
Codman Corporation

Dear Mr. Moriarty,
I've enclosed for your attention some information about our
new product, "The Voyage of the Mayflower." Jeff Eisenberg suggested
I do so as we are beginning to advertise in ~~Chang~~ ^{Chang} and would hope
for some editorial support.

~~Dear Mr. Moriarty~~

Dec 10, 1983

DEAR MR. MORIARTY,
JEFF EISENBERG THOUGHT THE EDITORIAL SIDE OF AHOY
MIGHT LIKE TO KNOW MORE ABOUT OUR PROGRAM "THE VOYAGE OF
THE MAYFLOWER." I'VE ENCLOSED A NEW PRODUCT ANNOUNCEMENT
AND SOME OTHER THINGS FOR YOU TO LOOK AT. JEFF HAS ALSO
RECEIVED THE SAME MATERIAL AND WILL SEND IT ON ^{BECAUSE} AS WE HAVEN'T
HAD SUCCESS PROBLEMS WITH THE MAIL LATELY. WE WOULD ALSO
LIKE TO SUBMIT A COPY OF ~~THE MAYFLOWER~~ "THE VOYAGE OF THE
MAYFLOWER" FOR REVIEW. TO WHOM SHOULD WE SEND IT? OUR
ADVERTISING BEGINS IN YOUR JANUARY ISSUE. WE HOPE THAT
GROW SUCCESSFULLY TOGETHER.
CADMBAN AND AHOY CAN SHARE FARBENHOL SUCCESSSES.
Thanks,
Ken Ludwig

Chuck Towling
Voyager

MIDNIGHT-OIL

P.O. Box 1808

BETHLEHEM, OREGON 97075

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FORTH

MACHINE language

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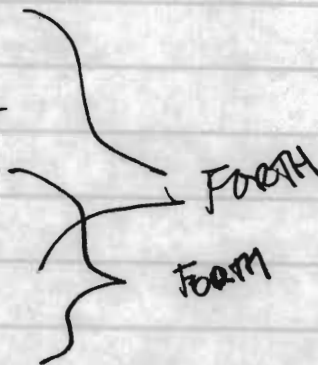
ASSEMBLY ~~FAST~~

↓

Compiler

↓

INTERPRETERS - slow



Fully compiled CODE

CAN COMPILER AND SAVE

AND

INTERPRET

CAN GET AT ALL MACHINES

CAPABILITY

RAPID PROGRAM DEVELOPMENT

HAS MOST OF ADVANTAGES OF ASSEMBLY

LANGUAGE ~~WHILE AVOIDING~~ MACHINE UTIL.

WHILE AVOIDING PROGRAMMER INEFF. OF

~~TRANSLATING~~ ASSEMBLY LANGS.

MODULAR NATURE ALLOWS

SEGMENT MODIFICATION

WITH TOTAL DISRUPTION

NEW
-18'

C-64
-18'

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X12

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- KIDS TELL YOUR PARENTS "THE VOYAGE OF THE MAYFLOWER" IS A TERRIFIC LEARNING ADVENTURE. RECREATE THE HAZARDS AND DRAMA OF THE FIRST PILGRIM VOYAGE. LEARN ABOUT SAILING STRATEGY, WEATHER, NAVIGATION AND HISTORY. THE MORE YOU KNOW THE MORE FUN IT IS. EVERY LEVEL IS A UNIQUE EXPERIENCE WHETHER YOU'RE 6 OR 60. UNFORGETTABLE.
- FAMILIES PIT YOUR IMAGINATION AGAINST THE WORLD AS THE PILGRIMS RISK IT. SHARE THE EXCITING JOURNEY TO A NEW LIFE IN A NEW LAND. RISK THE DANGER AND FEEL THE JOY. LEARN TOGETHER HOW THE MAYFLOWER SAILED INTO HISTORY ON THE COURAGE OF THOSE FEW WHO DARED.

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 Hook Creek Blvd & 25th St
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 Vernon Hills IL 60069
 Boston MA 02128
 Danbury CT 06820
 Norwood MA 02062
 Detroit MI 48229
 Schenectady NY 12305
 Irving TX 75067
 New York NY 10007
 Detroit MI 48211
 Cleveland OH 44115
 Harvey LA 70053
 Sumter SC 29152
 New Orleans LA 70129
 Gainesville TX 76244
 Youngstown OH 44515
 East Berlin CT 06023
 Torrance CA 90503
 Detroit MI 48238
 Evansville IN 47704
 Chicago IL 60603
 Alliance OH 44601
 Malden MA 02148
 Indianapolis IN 46227
 New York NY 10014
 Wilmington MA 01887
 Minneapolis MN 55440
 Saddle Brook NJ 07662
 Rockford IL 61108
 Kansas City MO 64120
 Everett MA 02149
 Hialeah FL 33010
 El Monte CA 91731
 Cleveland OH 44104
 Chicago IL 60618
 Scranton PA 18509
 Memphis TN 38109
 Spokane WA 99202
 Cleveland OH 44114
 City of Industry CA 91744
 Minneapolis MN 55415
 Carlstadt NJ 07072
 Springdale PA 15144
 Albuquerque NM 87125
 Florence VT 05744
 Los Angeles CA 90024
 Lincoln Park MI 48146
 Troy MI 48099
 Columbus OH 43219
 Somerset NJ 08873

PAPER & PAPER PRODUCTS - MANUFACTURING

Paper & Paper Products - Manufacturing

Containers & Boxes, Paperboard

Burt F N Co Inc 2345 Walden Ave
 Cambro Mfg Corp 7601 Clay St
 Cemeo Container Corp 1415 W 44th St
 Cardinal Container Corp One Cardinal Dr
 Carolina Container Corp Prospect Rd
 Carlon-Craft Corp 115-121 Ash St
 Central Container Box 2008
 Central Paper Box Co 225 Grand St Box 1765
 Champion Packages Co 77 Champion Dr
 Chesapeake Container Inc 1344 Beech St
 Chesapeake Corp of Virginia Main St
 Citrus Central Inc Hwy 441 N
 Clark M & Sons Inc 135 Spark St
 Clarke Consolidated Industries 20575 Center Ridge Rd
 Clarke Corp S Pennsylvania Ave
 Clempack Corp 925 Westchester Ave
 Clixm Mfg Co Clixm St
 Colbart Packaging Corp 1205 Carson Dr
 Composite Can & Tube Rte 36
 Connecticut Container Corp 455 Sackett Point Rd
 Connelly Containers Inc
 Righters Ferry Rd & Schuykill
 Consolidated/Eureka Paper Box Inc
 7340 Lampion Ave
 Consolidated Marketing Inc 253 N Common
 Consolidated Packaging Corp 111 E Wacker Dr
 Continental Forest Corrugated Mfg 521 Marion Dr
 Corson Mfg Co 20-24 Michigan St
 Curtis Inc Route 34
 D & D Container Corp 73-60 Grand Ave
 DeCatah Paper Co 1401 Fifth Ave N Box 2727
 D L & D Container Corp 73-60 Grand Ave
 Deere Paper Co Inc Front & Broomall
 Deere Paper Co Inc 7920 Mapleway Dr
 Deere Paper Co Inc Front & Broomall
 Deena Packaging Industries Inc 5900 Decatur St
 Detroit Allied Paper Co Inc 6910 Dix Ave
 Diversa-Pak Inc 4242 31st St
 Dixie Container Corp 2000 Jeff Davis Hwy
 Down River Intl Inc 41750 Michigan Ave
 Drug Package Inc Hwy 70 Service Rd
 Druth Packaging Corp 1300 N Branch St
 Dura-Containers Inc 6400 English Ave
 Eastern Container Corp 320 Parker St
 Economy Folding Box Corp 2601 S La Salle St
 Ellison Co Inc 1302 O'Henry Blvd
 Engraph Inc 6060 St Albans St
 Enterprise Corrugated Continuation Inc
 575 N Midland Ave
 Eskimo Pie Corp 530 E Main St
 Fibreboard Corp 1300 S W Fifth Ave
 Fidelity Container Corp 1501 W Lunt Box 601
 Field Container Corp 1500 Nicholas Blvd
 Field H & Sons Inc 1127 W Division St
 Firestone Coated Fabrics Co Box 887 Waldo Hwy
 Flint Box Makers Inc 2490 E Bristol Rd
 Flint & Walling Inc 1415 Directors Row
 Flint & Walling Inc 32490 Schoolcraft Rd
 Fold-Pak Corp Van Buren
 Fox Kenneth Supply Co Inc 14130 Riverside Dr
 Fruit Growers Supply Co Inc 1400 Union St
 Garber & Brothers Inc 7272 Morgan Hwy
 Gaylord Corp Of America 2225 Fifth Ave
 Gordon Cartons Inc 1601-31 Warner St
 Gordon L & Son Inc 1050 S Paca St
 Gould Stephen Paper Corp 46th St
 Gould Stephen Paper Corp 2700 Patterson SE
 Grand Rapids Packaging Corp 2700 Patterson SE
 Graphic Controls Corp 189 Van Rensselaer St
 Great American Industries Inc 645 Fifth Ave
 Great Lakes Packaging Corp
 WI 9190 11393 Carnegie Dr
 Great Northern Corp Hwy 41 St Stroeb Island Rd
 Greater New York Box Co 149 Entin Rd
 Green Bay Packaging Inc 1700 N Webster
 Greif Brothers Corp 621 Pennsylvania Ave
 Hall Y E Inc 136 Eastport Rd
 Hanschy Industries Inc 2525 N Elston
 Harley Corp Camp Croft Indian Park Hwy 295
 Harvard Folding Box Co Inc 71 Linden St
 Heminway Corp 155 S Leonard St
 Howell F M & Co 79-95 Pennsylvania Ave
 Hub Folding Box Co Inc 14-18 Binford St
 Ideal Box Co Inc 4800 S Austin Ave
 Imperial Cup Corp 808 Fountain St
 Imperial Paper Box Corp 252 Newport St
 Inland Head Inc 1211 Ave of the Americas
 Indiana Carton Co Inc 2620 W Sample
 Ingress Mfg Co Inc 1001 E College St
 Inland Container Corp 151 N Delaware
 Interstate Container Corp 300 E 42nd St
 Interstate Folding Box Co Verity St
 J & J Corrugated Box Corp 350 N Main St
 K & H Corrugated Case Corp Osiris Rd
 Kardon Industries Inc 1201 Chesnut St
 Kaur Diversified Industry Inc One Indiana Square
 Lauryns Folding Box Co Inc 360 Cold Spring Ave W
 Lawless Container Corp 240-250 Canal St
 Lawrence Packaging Supply 113 N 13th St
 Lawrence Paper Co Inc 2801 Lakewood St
 Lebanon Packaging Corp Route 72 & 22
 Lebaron Star Corrugated Continuation Inc 1266 Profit
 Love Box Co Inc 700 E 37th St N
 Mack-Chicago Corp 2445 S Rockwell St
 402 330-1100 Mainline Inc 13434 F St

SIC-265

Great Neck NY 11021
 Jefferson LA 70121
 Chicago IL 60638
 Grand Rapids MI 49508
 Los Angeles CA 90047
 Middletown OH 45042
 Nashville TN 37228
 New Bedford MA 02746
 Dedham MA 02026
 Melrose Park IL 60160
 Milwaukee WI 53212
 Indianapolis IN 46206
 Winston-Salem NC 27102
 Jersey City NJ 07305
 Chicago IL 60618
 East Aurora NY 14052
 Chattanooga TN 37402
 Baltimore MD 21226
 Itasca IL 60143
 Ft Worth TX 76118
 Belleville NJ 07109
 Marion IN 46952
 Midland Heights MO 63043
 Paterson NJ 07659
 East Walpole MA 02032
 Birmingham AL 35201
 Maspeth NY 11378
 Valley Stream NY 11590
 Boise ID 83728
 Louisville KY 40518
 Rockford IL 61101
 Brockway PA 15824
 Wooster OH 44691
 Kansas City MO 64105

Maxwell Sroge Co.
303 E. Ohio, Chic. 60611
(312) 266-4900

^{COLORADO SPRINGS}
303 633-5556
Alan Drey (dry) Co.

333 N. Michigan, Chic 60601
(312) 346-7453 No

CREDIT CARD LIST ?
PROVEN OUT BY MAKER OF
COMPUTER

LIFESIZE SOLICITOR
DENVER

800-525-3533 No.

303-534-5231

STANDARD RATE & DATA
DIRECT MAIL
CONSUMER & BUSINESS

ALVIN B. ZETLER

800-223-0814

↓ - (2R) 689-4900
KEN DICKMAN

5000
8 90 THOUSAND

12000

HOT LINE

NON-OBLIGATORY FACTORY
DISCOUNT INVOICES
ADVANCE 70%



30% when purchase paid
2% 10
1% every 10 days
MAX. 12% to 14 days

DIMMEST & GROSS

Tom R. 663-0024

NEW C-64

SAIL TO AMERICA

A totally new computer experience

- **Parents** Tell your kids Cadmean's *The Voyage of the Mayflower* has all the color, sound and excitement they love. Challenge the mighty Atlantic, defy its roaring storms and bring your passengers safely to the new world. There's never been an experience like it. Anywhere.
- **Kids** Tell your parents *The Voyage of the Mayflower* is a terrific learning adventure. Recreate the hazards and drama of the first Pilgrim voyage. Learn about sailing strategy, weather, navigation and history. The more you know the more fun it is. Every level is a unique experience whether you're 6 or 60. Unforgettable.
- **Families** Pit your imagination against the world as the Pilgrims knew it. Share the exciting journey to a new life in a new land. Risk the danger and learn together how the Mayflower sailed into history on the courage of those few who dared.

All this and a **FREE** 11 x 16 Poster for only \$29.

School and dealer inquiries welcomed

DISK ONLY

ORDER NOW. **FREE** shipping for MasterCard and Visa orders. Call (313) 994-0845 Day or Night. C.O.D., checks, money orders add \$3.00 shipping.

CADMEAN CORP., 309 Koch, Ann Arbor, MI 48103

FILLINGER TYPESETTING 3054-102

Ken Ludwig
Cadmean Corp.
December 6, 1983



MARCA
ATTORNEY

FILLINGER TYPESETTING 3054-102

Ken Ludwig
Cadmean Corp.
December 6, 1983

Michigan Retailers Assoc.
1.9% \$100 —

1-(517) 372-5656

VISA - MASTERCHARGE

Donna - Computer Gazette
8PM tell 5
over time

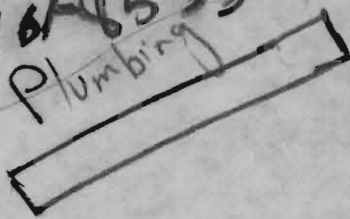
Dis Com
3:30 (Fri)
call J. Frye
996-8566

454

4600 1620
 250
 6870

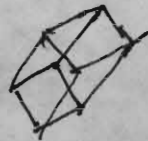
LAUREN
996-3524

Mrs. Berkle
761-8533
Plumbing



Demo to Scott More
unfowals

~~1 (404) 634-2317~~



TED TURNER
~~XXXXXXXXXX~~

T. TURNER
~~XXXXXXXXXX~~

T.W.
T. Edelman

WTBS
~~XXXXXXXXXX~~
(404) 822-1717
EXT 137

COMPUTE! Publications, Inc.

One of the ABC Publishing Companies

DATE: February 3, 1984

TO: Mr. Ken Ludwig
CADMEAN CORP
309 Koch
Ann Arbor, MI 48103

This will confirm your reservation for advertising space as follows:

ADVERTISER: CADMEAN

AGENCY: IN HOUSE AGENCY

PUBLICATION: COMPUTE!'s GAZETTE

ISSUE DATE: MAY

MATERIAL DUE: REPEAT APRIL WITH
TYPESETTING CHANGES

SIZE: 1/8 PAGE

* FREQUENCY: 6X

RATE CARD #: #2

READER SERVICE #: YES NO (\$50.00 charge per number in addition to space cost)

COMMENTS: PATTI PLEASE PLACE FAR FOWARD.

* NOTE: IN ORDER FOR THE ABOVE FREQUENCY RATE TO APPLY, THERE MUST BE A SIGNED FREQUENCY AGREEMENT ON FILE IN COMPUTE!'S HOME OFFICE. NEW FREQUENCY AGREEMENTS MUST BE RECEIVED NO LATER THAN MATERIAL CLOSING DATE FOR THIS ISSUE. (FREQUENCY AGREEMENTS WILL BE ACCEPTED BUT ARE NOT REQUIRED FOR 1x RATE OR FOR 1/9 PAGE PRODUCT MART ADVERTISEMENTS.)

If production is required on this ad, an additional charge will be made.
Space order specified is non-cancellable after space closing date for this issue.

Please sign and return one copy of this form to confirm insertion to:

Ken Ludwig
Signature

2-7-84
Date

Advertising/Production Coordinator
COMPUTE! Publications, Inc.
P.O. Box 5406
Greensboro, N.C. 27403

CADMEAN
Company

Thank you -- and please call us if we can be of further assistance.

Cordially,

Jerry Thompson
Jerry Thompson

cc: PATTI WILLIAMS

1290 Howard Ave., Suite 303
Burlingame, CA 94010
415-348-8222, CO 303-595-9299.
TX 713-731-2605, Midwest 312-726-6047.
New England 617-720-1888.

Copy Center

301 North First Street • Corner of First and Miller
313/769-5462 • Ann Arbor, Michigan 48103

QUALITY

24HR. - W/ PICK-UP
\$46 MO.

25 ORDERS OR CONTRACTS
-25 per order or contract

PHONIS

Terminating line - local

\$100 deposit

38.25 Hook-up

9.75 monthly

W

QUALITY

Copy Center

301 North First Street • Corner of First and Miller
313/769-5462 • Ann Arbor, Michigan 48103

Recorded Publications lot

\$2.20 + envelope + code
apply labels not include

5000 \$1.80
10000 \$1.75 } RPO UGRIF160

BRAND LINE
COSTS MORE

TURN AROUND TIMES

CASSETTES 2 WKS.

DISCS.

SHRINK WRAPPED.

Bill Houny

RESULTING
18TH
9AM

QUALITY
Copy Center

301 North First Street • Corner of First and Miller
313/769-5462 • Ann Arbor, Michigan 48103

COM. ELECTRONICS

RECORD PUBLISHING
LABS

CAMPDEN N.J.

-09 Photo
Plates

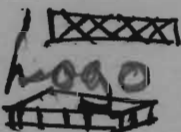
All Double. 609 963-3000
with Ampex.
RW Labels

Bill Young
MARKETING

500 \$ 50
Copies color 20
500 legs 20

C-20
\$4600 MASTER

-6 ea includes cassette



SAN JOSE CA.

(408) 998-1919

STEVE WEINSTEIN

Ann
769-6683

COPY CENTER

301 North First Street • Corner of First and Miller
313/769-5462 • Ann Arbor, Michigan 48103

QUALITY

DYSAN

500 Copies

WE Supply Box + CARD

SANTA CLARA, CA.

3 DAYS = 2 PROOF COPIES

Approval → P.O.

12 WORKING DAYS FOR

PRODUCT - WORST CASE

DUPPLICATION ONLY

ADD 3 DAYS PACKAGING

\$75.00 PER MASTER
FOR EVALUATION

104-1 5 DOWSING

UNDER 1000 \$3.70 ea.

1ST 5000 \$3.55

5-10K 3.40

10-25K 3.25

Disc. duplication,
LARGE, ENVELOPES,
HUB RING

\$75. per label \$75 SIGGRAPH NETWORK
set up fee SET UP
includes labels. .08 ea

EUROPEAN PLANT
TRANSLATION SERVICE

January 23, 1984

Mr. Ken Ludwig
Cadmean Corporation
309 Koch
Ann Arbor, MI 48103

Dear Mr. Ludwig:

This is to acknowledge our receipt of your product, The Voyage of the Mayflower, which was submitted to COMPUTE! for review.

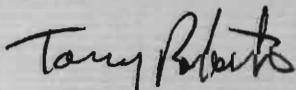
Owing to space limitations, we regret that we are unable to review every new product which is submitted to us. However, we make every effort to review those which we feel are of the most interest to our readers.

If your product is selected for review, it will most likely be reviewed by a freelance reviewer. We have a panel of such writers who are qualified to evaluate new products and write reviews. Of course their anonymity is important for reasons of objectivity. Therefore, any contact with your company will be through COMPUTE!. If your product is updated or significantly changed before the review is published, please contact me as soon as possible.

Due to the nature of the publishing industry, we cannot predict the dates of publication, nor are we able to provide advance copies of reviews. If the review is substantially negative, you will be given an opportunity to reply in the same issue of the magazine. Please contact me if you have any questions.

Thank you for thinking of COMPUTE!.

Sincerely yours,



Tony Roberts
Reviews Editor

December 15, 1983

800-343-7620

Mr. Ken Ludwig
Cadmean Inc.
309 Koch Street
Ann Arbor, MI 48103

250
> 2.25 + TERMS = Business
\$2.17 Form

Dear Mr. Ludwig:

Please consider this a written quotation for supplying Cadmean Inc. with duplicated 5¼" diskettes. As you requested, I am basing my runs of approximately 100 through 10,000 quantities.

<u>100</u>	<u>500</u>	<u>1000</u>	<u>2500</u>	<u>5000</u>	<u>10000</u>
2.37	2.17	2.02	1.92	1.82	1.72

The prices above include the following products and services:

- * High quality OMNI 5¼" Single Side/Double Density Diskettes.
- * Diskettes to be duplicated (Lifetime Guarantee) in required formats.
- * White Tyvec sleeve.
- * Applying customer furnished labels.
- * Fast and reliable turnarounds and service.

OMNI Resources Corporation manufactures a quality diskette at competitive prices. We use only our disks in our software duplication service assuring a top quality product with fast turnarounds. OMNI's reputation in the software industry is excellent; we will be glad to forward references if requested. OMNI Resources Corporation and I look forward to starting a fine business relationship with Cadmean Inc. and yourself.

Sincerely,

OMNI RESOURCES CORPORATION

Raleigh S. Kerber

Raleigh S. Kerber
Central Regional Sales Representative

RSK:kmr

TERMS ?

A check out
REF
+ BANK
LETTER HEAD



\$15

1-517-592-8852

THE ANN ARBOR NEWS

CONTRACT FOR CLASSIFIED ADVERTISERS

Ann Arbor, Michigan,

Short procedure
4-11-84
888
Jan 10 1984

The ANN ARBOR NEWS is hereby authorized to publish a minimum of three lines, or more, of Classified Advertising every publication day within _____ months from this date, for which I/WE agree to furnish copy and pay at the rates set forth and earned according to the rate table printed on this order, in MONTHLY payments, not later than the 15th day of the MONTH following that in which the advertising was printed.

(Line Rates For Consecutive Insertions Without Change of Copy)

COPY USE FOR . . . DAYS	1	2	3 & 4	5 & 6	7
3-4 Lines _____ (per line)	.82	.77	.69	.66	.59
5-12 Lines _____ (per line)	.72	.69	.61	.59	.55
13-139 Lines _____ (per line)	.68	.66	.59	.55	.52
140 Lines (10") & up _____ (per line)	.65	.62	.54	.52	.48
616 Lines (44") & up _____ (per line)	.61	.56	.52	.49	.45
924 Lines (1/3 pg. 66") & up _____ (per line)	.55	.52	.48	.45	.43
1386 Lines (1/2 pg. 99") & up _____ (per line)	.51	.49	.47	.44	.42
1848 Lines (2/3 pg. 132") & up _____ (per line)	.47	.45	.43	.43	.41

Above Rates Effective January 1, 1984

THE ANN ARBOR NEWS agrees to publish said Classified Advertising if payment of each statement is made in accordance with the terms stated above.

It is further agreed that should the undersigned discontinue advertising or should advertising be cancelled on account of credit, the advertiser agrees to pay 4¢ (four cents) per line additional for each line used up to the time of the discontinuance of this order.

THE ANN ARBOR NEWS shall not be held responsible for typographical errors except to the extent of the cost of the first insertion, and then only for that portion that may have been rendered valueless by such error. The Publisher reserves the right to edit and classify all copy, also reserves the right, at its absolute discretion and at any time, to reject any advertising copy, whether or not it has been previously acknowledged and/or published.

It is agreed that if war, act of God, or of the government, or extraordinary circumstances renders it a hardship upon newspaper to carry

out this contract, that it may cancel without penalty.

Advertiser shall indemnify and save Publisher harmless from any loss or expense, including reasonable attorney fees, resulting from all claims or suits based on the contents of the copy submitted to Publisher and published.

The Advertiser also agrees to furnish complete copy for advertisement before the deadline determined by the newspaper. On any days copy is not furnished it is agreed The Ann Arbor News will repeat the last regular order or in lieu of this the advertiser will be charged a minimum of 3 lines daily.

It is especially understood that no lines may be used under this contract by the advertiser for the promotion either directly or indirectly, of any business, organization or enterprise other than stated below. The newspaper retains ownership of all advertising copy which it helps create or reproduces in its columns and such cannot be reproduced by others without permission of the newspaper.

By Erin Jackson
Classified Advertising

Firm Ken Ludwig Building

Approved Ken Ludwig
Classified Advertising Manager

Address 309 Kalam

Verbal Agreements Will Not Be Recognized

Kind of Business Construction / Remodel

By Ken Ludwig

Ken Ludwig 994-0845

Guide tells how to sell your software

ESTILL SPRINGS, TN—ATC Software announces a new manual that tells programmers how to sell their own personal-computer software.

The manual tells how to obtain national directory listings, how to price a new software product, how to arrange for advertising, how to write a users' manual and how to operate a successful mail-order-fulfillment service.

The 80-page manual is available for \$20 from ATC Software, RT2 Box 448, Estill Springs, TN 37330. ■

ordered

9/3

Volume 5, Number 36

STRATEGY WORLD

Open ended strategy games that encourage players (ages 8 and up) to control the rules of the game on the computer. The basic concepts of games commonly played by children on the playground (including tag, streets and alleys, and hide and seek) are incorporated into the software.

In Group Interactive games action takes place between multiple players with the computer acting as a game board.

Watch for these exciting software products.

For further information call: Dan Oehlsen
Executive Producer
Children's Computer Workshop
1 Lincoln Plaza
New York, New York 10023
212-595-3456

CW
CHILDREN'S COMPUTER WORKSHOP
AN ACTIVITY OF
CHILDREN'S TELEVISION WORKSHOP

**IT'S A
WHOLE NEW
WORLD
AT
CBS SOFTWARE
AND
CHILDREN'S COMPUTER
WORKSHOP**



LIST	.065
POSTAGE	.12
PRINTING	.093
INSERTS ETC.	.41
POSTAL FEES	.04
	<hr/>
	.369

UNIT
PACKAGING
PICK UP PACKAGE

Check on
Envelopes for shipping

LABEL -

COST X1000

ENVELOPES -

1000 SSS SD.

Level II

hay, grain, roots stay on

feed - due livestock before feed

SHIP WENT 16 KNOTS

USED ONLY FROM PHOTO DID NOT USE
SACT AND PROSERVED

LEVEL I

RE SET - SET WAS BLINKING AFTER
STORM - CAN RESET BLINK?

• 8 1/2 x 11 2 sides 20# 2000 pes.
FOLDED WHITE = \$ 72.35
14.75 Folding

Single Sheet 43.95
14.75

2 Color - Black + 1 Color = 175.10

PRINTED ENVELOPES #10 \$69.60

@ 106.20 M

..

Spooky Print - w. Stampin

UNIT PACKAGES - MAILING

\$41.00 M - Lower Policy, Resort
Motoring, Deciding

POST OFFICES

\$ 20 fees - app + license

..

Carriage Pre-Sort

5 Digit Pre-Sort

\$405 TOTAL M

Doss Requires Samples
min 5000.

\$65M.

CHESIRE

10 DAYS APPROVAL
10 DAYS FOR ORDER

2000 pes.

\$ 325 list

185.90

82.00

300.00

993.

Priority
inserting
postage + Fees

Ann Arbor Printing & Mailing

Ann Arbor Preview + Mailing

PETE

2000

PRINT 2 pcs. - 175.00 4000 pcs.
+ Fold
2 Colors 255.00

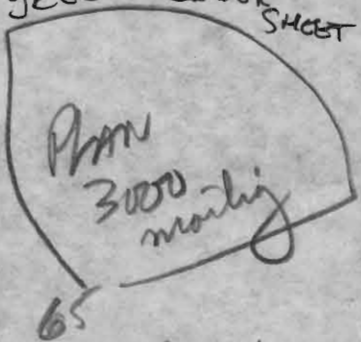
ENVELOPES #10 - \$ 76. 2000

INSERT, LABEL
SORT ETC. \$ 75

POSTAGE 220. } 335

PERMIT FEE 40 } 175

GREEN COLOR SHEET! 76



5800 PCS
AVG cost = .346

average cost
3000 \$.394

\$ 586

325

\$ 911

\$ 45.5 ea

\$ 27.3 ea add
1000

RPL DISC.

RPL VERIFIED & GUARANTEED

MAXELL, NASHUA, VERIBATH, ~~DISC~~
SENTINEL

250 - 2.25

ENVELOPES, APPLY LABEL

300 labels 44.00

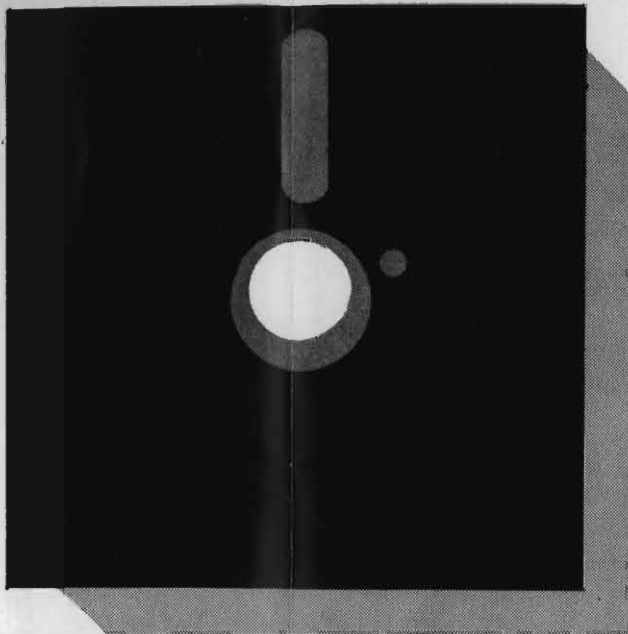
600 labels 52.00

thousand 600

...unduplicated duplicating service.

most technologically advanced disk
ette duplicating and formatting service
try. Whether you need 10 or 100,000
you can be assured
quality duplication
stem. Our
is the finest and
ble anywhere. And
y first quality RPL
ks.

se services . . .
ting, packaging,
ng, fulfillment and
ing . . . mean quick
d and prompt
ne price . . . usually
most producers
aying for blank
assettes. In all . . .
service that's
licated!



RPL . . . for highest quality.

The RPL duplication quality standards are second to none. And we duplicate on our own "higher than required standards" disk. You get consistent quality on each copy. And before we copy your master, RPL makes certain that each duplicate is electronically surface evaluated. Our professionally designed duplicating equipment assures you that the read/write area of the disk is centered perfectly. This enables disks to be used on drives that may be slightly misaligned. And, RPL's signal level standard exceeds ANSI standards.

RPL...any size or format.

The RPL product is available
in most formats, including:

Xerox
Commodore
TRS-80
IBM
Apple
Data General
CPT
AM 425
Lexitron
DEC
Lanier
Wang
Atari

And we can duplicate in 5 1/4
or 8 inch disks, 48 or 96
TPI, single or double side
media. Guaranteed first
generation quality, regardless
of quantity.

RPL . . . uncompromised security, certification and verification.

As your software duplicator, RPL assures you complete physical security of your master and duplicated copies . . . 100% certification and verification of each copy. Encryption and serialization are available when required.

Data integrity is maintained by using the highest quality media available and by carefully maintaining the mechanical and electronic specifications of the duplicating equipment. Your master and duplicates are stored in locked, protected vaults.

... duplicates
ware better,
er and for less.

- A national leader with 35 years in magnetic duplicating.
- Complete in-house service from duplicating to delivery.
- Disk or cassettes for most computer systems.
- 10 to 100,000 copies—all master quality.
- 100% security, verification and certification.

35 years of
netic duplicating.

ears as a recognized leader in the
duplicating business, RPL has a
quare-foot plant with capacity and
esources to commit to "state of the
uter disk and cassette duplicating.
omers include major U.S. corporations
nment agencies.

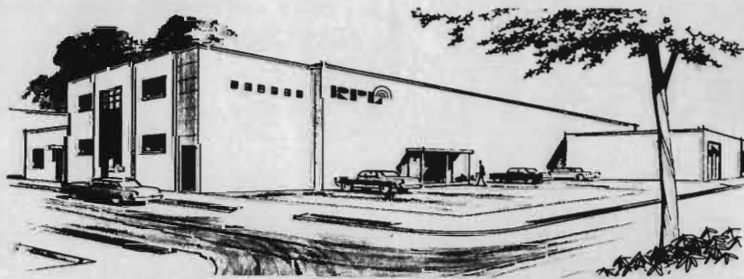
spend hundreds of hours and
dollars creating software, you can
RPL's technical support staff, service
r duplicating.

nveniently located in Camden, NJ...
r land and air transportation...

RPL

RECORDED PUBLICATIONS LABORATORIES

A Division of Recorded Publications Mfg. Co., Inc.



1100 State Street • Camden, NJ 08105

New York Office: 2 Penn Plaza • Suite 1500 • New York, NY 10121

TELEPHONES

Camden (609) 963-3000

Philadelphia (215) 922-8558

New York (212) 868-3115



RECORDED PUBLICATIONS LABORATORIES

'The Software Duplicating People'

