

A bright, modern hallway with large windows and colorful floor tiles. The hallway is well-lit with natural light from the windows and artificial light from ceiling fixtures. The floor features a colorful geometric pattern in shades of purple, green, and yellow. The walls are white with purple accents. An "EXIT" sign is visible on the right wall.

# Activity Breaks in the Classroom for Academic Excellence

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*University of Michigan  
School of Nursing*



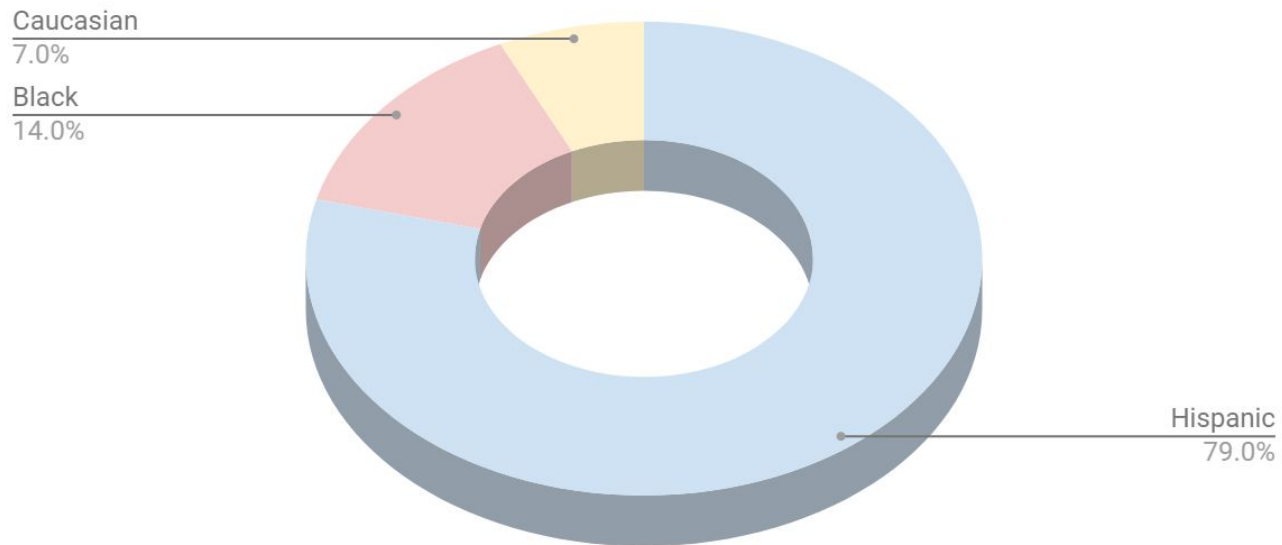
# Munger Elementary-Middle School



# 1. Background

## Munger Elementary-Middle School: At A Glance

- ▣ 961 students (2017-2018)
  - 468 girls, 493 boys



(Detroit Public Schools Community District, 2018)

## Poverty in Detroit Public Schools

- ▣ Munger is located in one of Detroit's poorest neighborhoods
  - **Population:** 31,017
  - 44.4% of residents live in poverty
  - 57% of children under 18 years old in the neighborhood surrounding Munger live ***below the poverty level***
  - Around 60% of Munger students receive ***free*** or ***reduced lunch*** based on their family incomes

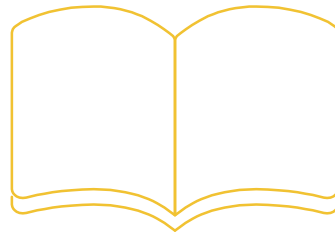
(American FactFinder, n.d.), (Niche, n.d.)

## Poverty and Academic Achievement

- ▣ Growing up in poverty can lead to reduced academic achievements (Jensen, 2009)
- ▣ In 2017, **68%** of fourth grade students in America ***read at a below proficient level*** based on the National Assessment of Educational Progress (NAEP) assessment (National Center for Education Statistics, 2018)
- ▣ **85%** of fourth graders who scored below proficient are from ***low-income families and go to low-income schools*** (Annie E. Casey Foundation, 2010)

## Poverty and Academic Achievement

At Munger, *more than half* of the students in each grade are *not proficient in English* and have a reading level *below* the national norm.



(Detroit Public Schools Community District, 2018)

# Poverty and Child Development

- ▣ The **longer** a child lives in poverty, the **greater** their academic deficits ⇒ long-term costs of impaired academic functioning
- ▣ **Underdevelopment** of several areas of the brain
  - Affects processes critical to learning & educational functioning
- ▣ Altered brain structures make children **vulnerable** to environmental conditions ⇒ negatively affects academic skills
  - Elevated stress
  - Inadequate nutrition
  - Inadequate physical activity
- ▣ **Childhood poverty** = risk factor for **poor cognitive performance** during adulthood due to altered hippocampal function
  - Can lead to future hardships ⇒ lower income and wages

(Hair et al., 2015)



## 2. Take10!

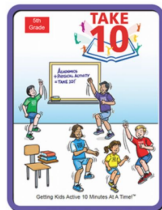
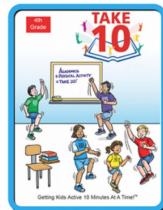
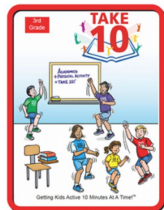
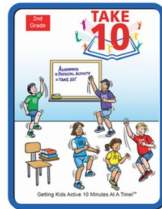
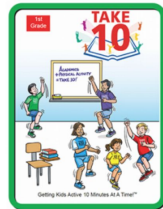
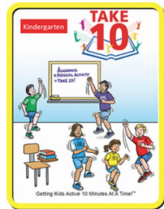
# Take10! for Brain Breaks

## *Brain Breaks:*

Brain breaks are physical activity breaks taken during a lesson to help kids refocus

## *Take10!:*

Classroom-based physical activity program that aims to “integrate movement with core curriculum concepts in each activity” for 10 minutes  
(Take10, n.d.)



## Take10!: Does it work?

***Studies show that “brain breaks” and organized activities used in schools situated in high poverty areas are effective***

(Jensen, 2013; Mavilidi, Lubans, Eather, Morgan & Riley, 2018; Coolkens, R., Ward, Seghers & Iserbyt, 2018)

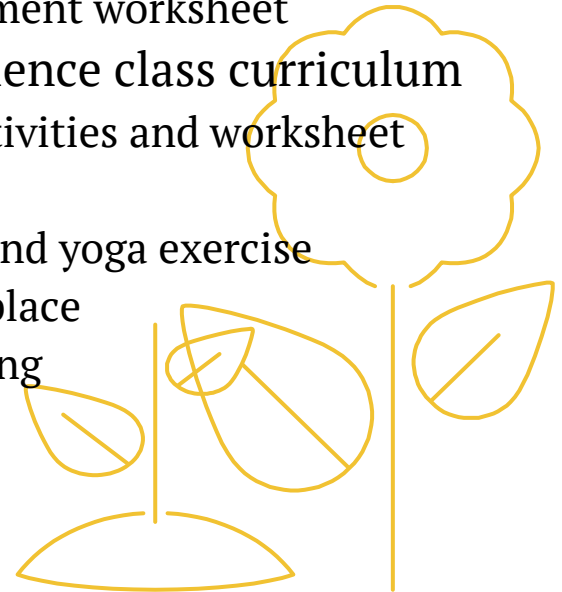
***Physical activity breaks in the classroom have lead to improved on-task behavior amongst students, which improves academic performance***

(Mullender-Wijnsma et al., 2015)

# Take10!: Pilot Program

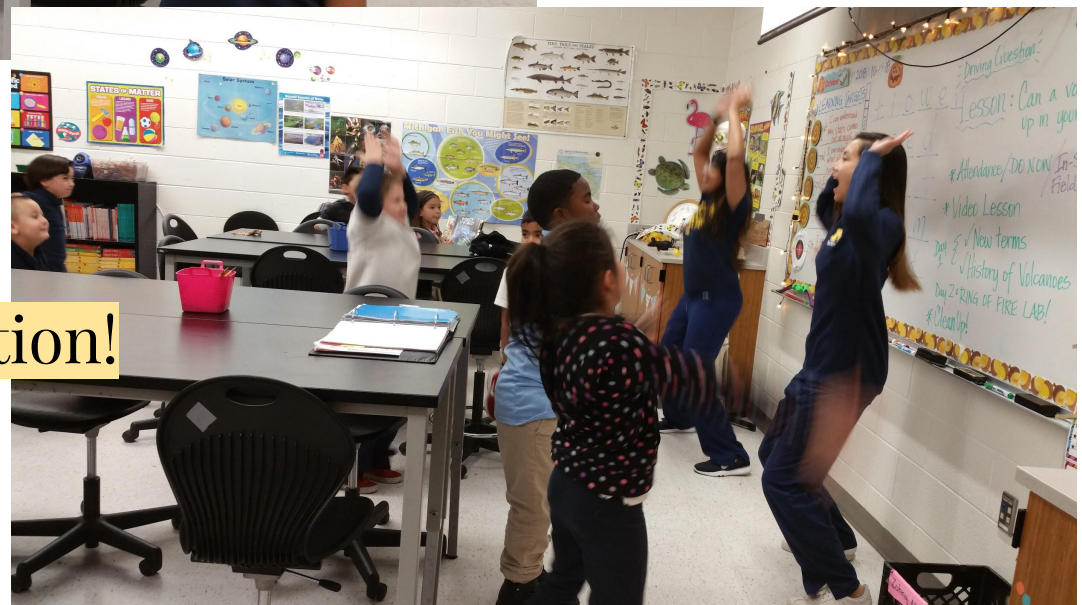
## ▣ **Fall 2018:**

- Partnered with Ms. Ellen Hoyer, science teacher
- Two second-grade science classes
  - First class: received Take10! Brain Breaks & post-assessment worksheet
  - Second class: only received post-assessment worksheet
- Brain breaks designed to supplement science class curriculum
  - Used Take10! Binder as reference for activities and worksheet
  - Example
    - Plant growth stages ⇒ stretching and yoga exercise
    - Plant parts spelling ⇒ exercise in place
      - Jumping jacks, hopping, jogging





Take10!



In action!

# Take10!-based Post-Assessment Worksheets

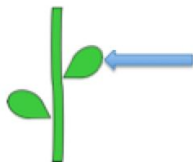
Name \_\_\_\_\_ Date \_\_\_\_\_

Spell the plant parts.



1. \_\_\_\_\_

2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

Spell these characteristics then match them to the animals!

1. Lays \_\_\_\_\_ g s



2. Has \_\_\_\_\_ c a l \_\_\_\_\_



3. Has \_\_\_\_\_ u \_\_\_\_\_

\*4. Has \_\_\_\_\_ o n \_\_\_\_\_



# Take10! Brain Breaks: Evaluation + Next Steps

## ***Evaluation***

- ▣ Positive reactions from the second grade students
  - Cooperative and eager to do “brain breaks”
- ▣ Students were noticeably more calm and focused on the worksheet or assigned activity
  - Increased on-task behavior was observed by both nursing students and Ms. Hoyer

## ***Next Steps***

- ▣ Expand Take10! Brain Breaks across all grade levels
  - Purchase more Take10! Binders to create age-appropriate brain break content
- ▣ Gain administration and teaching staff support to work with PNE 402
- ▣ Develop independence among teaching staff of incorporating “brain breaks” into their lesson plans
  - Ensure the sustainability of “brain breaks”

# 3. Mini-Grant Updates



## Grant Expansion

Thanks to your **generous** donation, the following projects are occurring or will start soon in **three** schools that are part of the Detroit Public Schools Community District.

**Munger  
Elementary  
Middle School**

Take10! Program  
(K-5th)

**Dixon  
Educational  
Learning  
Academy**

Book Club &  
Hygiene Classes

**Cody High  
School**

Hygiene Classes

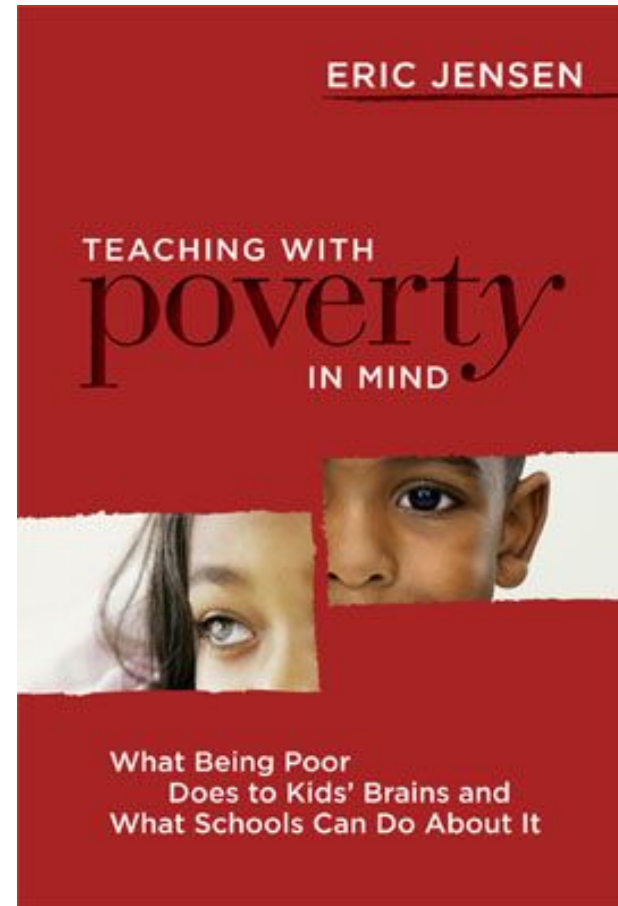
## Dixon: Hygiene Classes

- ▣ Neighborhood: high poverty rates, violence, and homelessness
  - Scholastic achievement = 30th percentile
- ▣ Nursing students asked to teach Pre-K students about hygiene
  - Reason: Teachers noted children came to school smelling of marijuana, with no socks and unwashed clothing
- ▣ ***“Being the Best Me”***
  - Age-appropriate learning tool to design weekly hygiene lessons for 48 Pre-K students
  - First week: students taught to brush their teeth, completed a coloring project, and took information home so parents could see what they learned



## Dixon: Book Club

- Eric Jensen's *Teaching with Poverty in Mind*
  - Effects of poverty on stress and brain development in children
  - Interventions focused on improving school experiences
- PNE 402 student read the book and formed book club
  - Recruited 3 teachers, 1 social worker, and the Attendance Manager
- Weekly group discussions led by student
  - Publisher offers a list of discussion questions for each chapter



## Cody: Hygiene Classes

- ▣ Located in Detroit -- about one mile from Dixon
  - Approximately 1,000 students
- ▣ Principal requested that PNE 402 students prepare an educational program on hygiene for the students
- ▣ Books purchased from Teacher's Store to help nursing students create age-appropriate hygiene lessons for the high school students



## Library Grant Budget to Date

**Awarded: \$970**

| Item                          | #                    | Amount          |
|-------------------------------|----------------------|-----------------|
| <b>Take10! Binders</b>        | <b>8</b>             | <b>\$634.40</b> |
| <b>Jensen Book</b>            | <b>12</b>            | <b>\$228.12</b> |
| <b>Toothbrushes</b>           | <b>48</b>            | <b>\$32.18</b>  |
| <b>Hygiene Teaching Books</b> | <b>5</b>             | <b>\$60.38</b>  |
| <b>Office Max Binder</b>      | <b>1</b>             | <b>\$9.53</b>   |
|                               | <b><u>Total:</u></b> | <b>\$964.61</b> |

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*Thanks for listening!*

**Any questions?**

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<https://www.detroitk12.org/>

<http://take10.net/>