

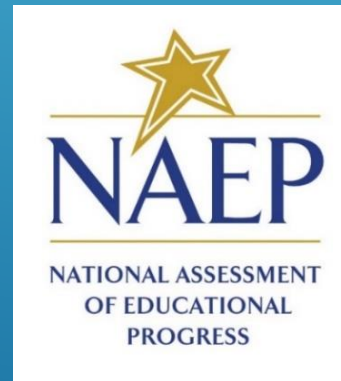


Zap the Gap!

All children reading proficiently



Why are 1/3 of 4th and 8th graders
unable to read at a basic level?



2022

Brain development

Underlying **biology** Sound Processing in the Brain

determines language ability



3 yr

predicts early literacy



5 yr

predicts future struggles in school



10-12 yr

White-Schwach et al. (2015) PLoS Biol

Auditory Neuroscience Laboratory
Northwestern University, Illinois

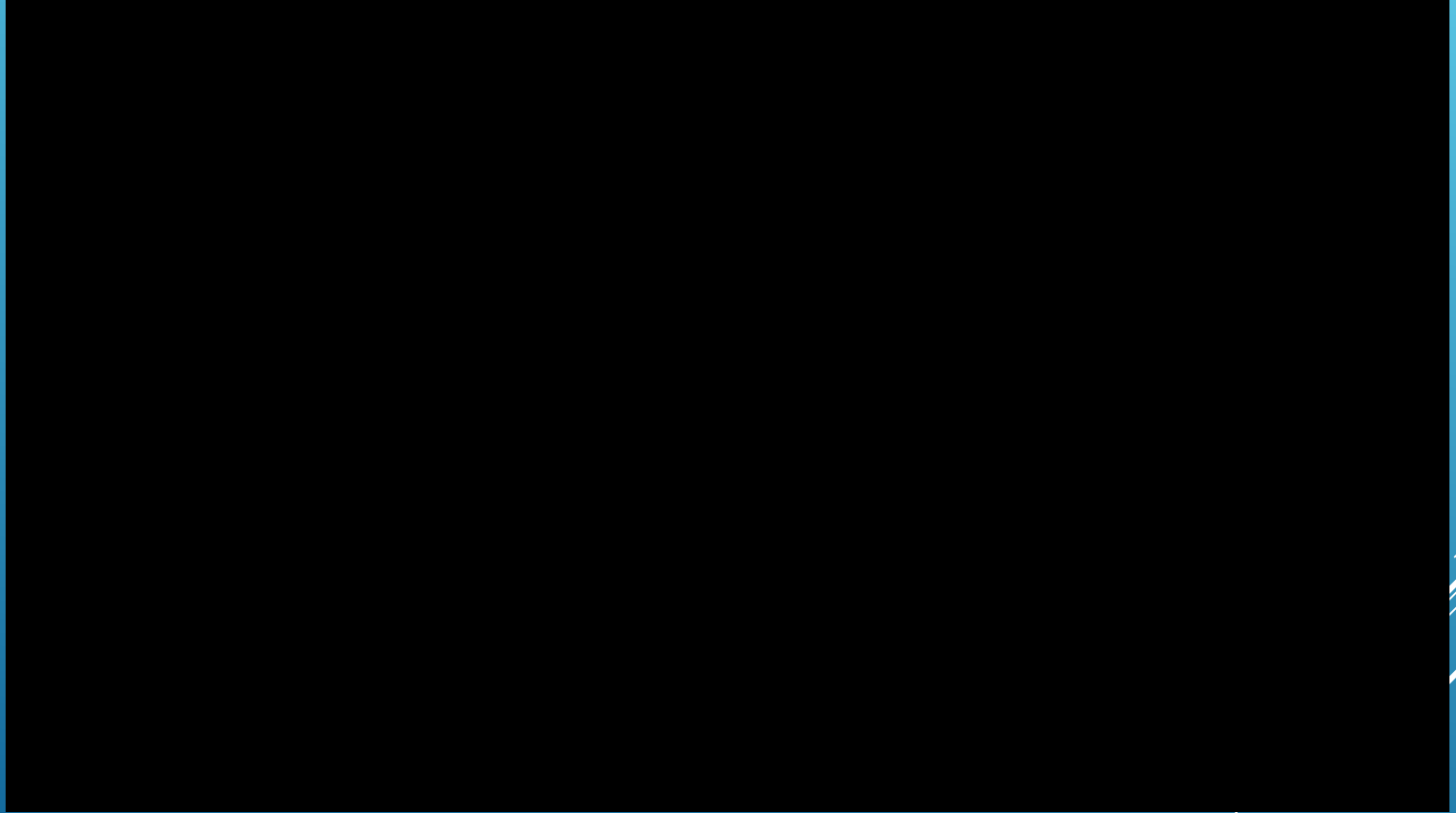
Sound processing begins in womb



Sound processing develops more effectively by hearing singing



Singing is inborn and precedes talking



Singing helps develop the brain for language and literacy




- Auditory processing
- Auditory memory
- Neural encoding of speech
- Phonological awareness
- Beat synchronization

Children who *cannot* pat a steady beat are likely to struggle with reading.



Basic music skills

1. Pat a steady beat
 2. Clap the rhythm of the words of a song
 3. Match a pitch
 4. Sing in tune
- 

Research

Young children are *not* developing music skills.

88% of K and 1st graders could *not* keep a steady beat.

Music skills are easy to develop

3-6 month-olds can start to develop them, and 3-year-olds can be capable singers.



Teach music skills



Pat the beat with two hands on lap matching tick of a metronome app. Pat beat while singing a song.

Clap the rhythm (every syllable of the words) while singing a song.

Match pitch by hearing a pitch played on a pitch pipe app and matching it on “loo.”

Sing in tune by practicing easy songs, such as “Twinkle, Twinkle, Little Star” in children’s natural vocal range—from middle C up.





A Song a Day! Brain Prep for Pre-Readers

50 sequenced lessons for PreK & K





The Rock 'n' Read Course

PreK-5th grade classroom teachers



- auditory processing
- auditory memory
- phonological perception
- beat synchronization

Assess basic music skills



Musical Fitness Assessment

Musical fitness is the ability to perform basic music skills

Child's Name

Date

KEEP THE BEAT

1. Open a metronome app: Metronome (Android) TrueMetronome Lite (Apple).
2. Set metronome to 120 beats per minute.
3. Show how to pat with both hands on your lap exactly
At the same time as the metronome click.
4. Ask child to pat the beat with both hands.

Did they match the beat?

No Partly Yes

KEEP THE BEAT WITH A SONG

1. Together, pat a slower beat with both hands on lap and sing "**Twink**-le, **Twink**-le, **lit**-tle **star**, **how** I **won**-der **what** you **are**." Pat on the bold syllables.
2. Ask child to sing it again without you, while patting.

Did they keep the steady beat?

No Partly Yes

CLAP THE RHYTHM

1. Ask child to clap how the words go in "Twinkle" while singing the song, one clap for each syllable.
2. Show them how to clap two times for the first word "Twink-le."
3. Ask child to sing and clap whole song alone.

Did they clap each sound?

No Partly Yes

MATCH A PITCH

1. Use a pitch pipe app, such as Pitch Pipe (Classic), or piano.
2. Play D (on piano, use the D to the right of middle C).
3. Ask child to match the pitch using "loo."

Did they match the pitch?

No Yes

SING IN TUNE

1. Ask child to sing "Twinkle" again.

Did they sing the song in tune?

No Partly Yes



Evidence

- 2014** **Summer school pilot with a mobile computer lab on a bus**
After singing with the software program Tune into Reading (TiR), 3rd-5th graders made substantial gains in reading.
- 2016-'21** **2500 2nd-5th graders—\$600,000 from MN Legislature**
After 13.5 hours of TiR usage, students gained one year (avg.) in reading achievement.
- 2023** **1st graders**
Better skills on the *Musical Fitness Assessment* were correlated with higher reading scores.
- 2023** **A Song a Day lessons pilot with PreK and K**
After 13 hours of music-making, music skills improved significantly.

Free videos of music skills



PICA
Parents In Community Action, Inc.

Head Start (Hennepin County)



Add music skills to the MN Early Learning Standards

Early Childhood Indicators of Progress

Minnesota's Early
Learning Standards:
Birth to Kindergarten

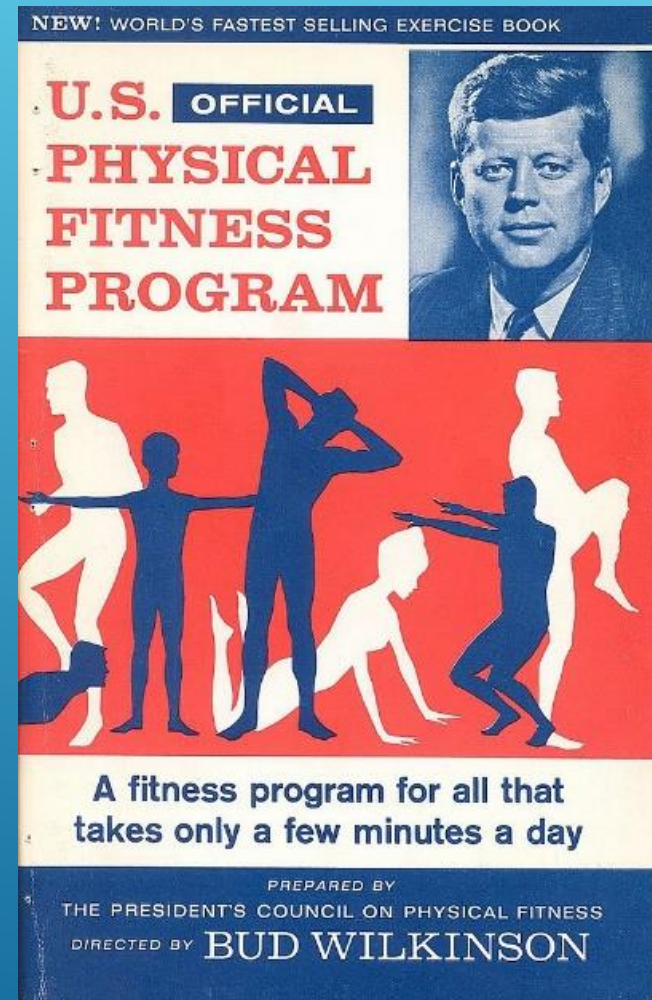
January 2017



Launch a musical fitness movement

Model

A national program that ignited a *physical* fitness movement in the 1960s

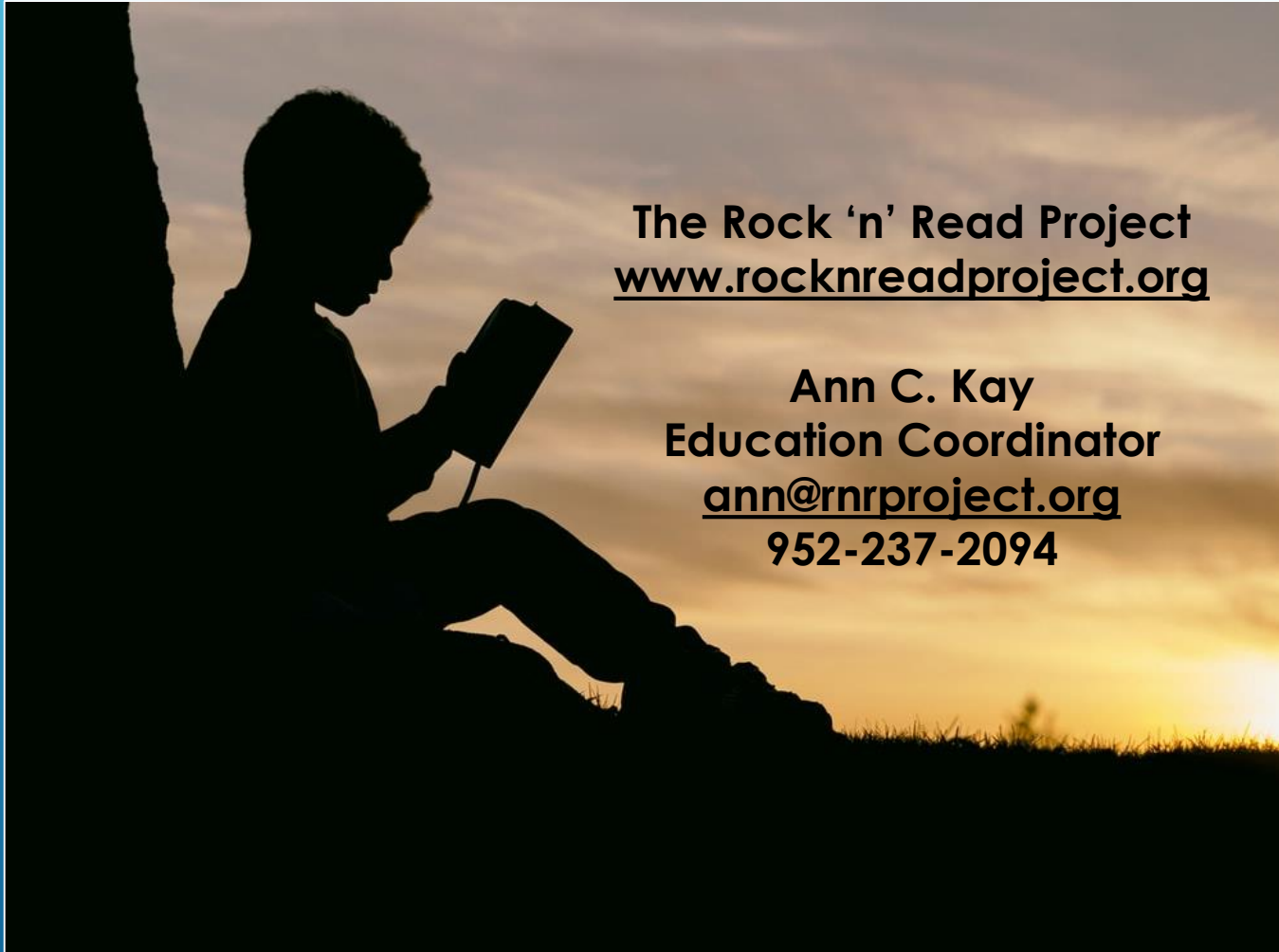


Zap the Gap! Program

All children reading proficiently through musical fitness



Join us!



The Rock 'n' Read Project
www.rocknreadproject.org

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