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# Maximizing Nonverbal Ability in Gifted Learners in the Classroom

Mark Hess

Portable Gifted and Talented



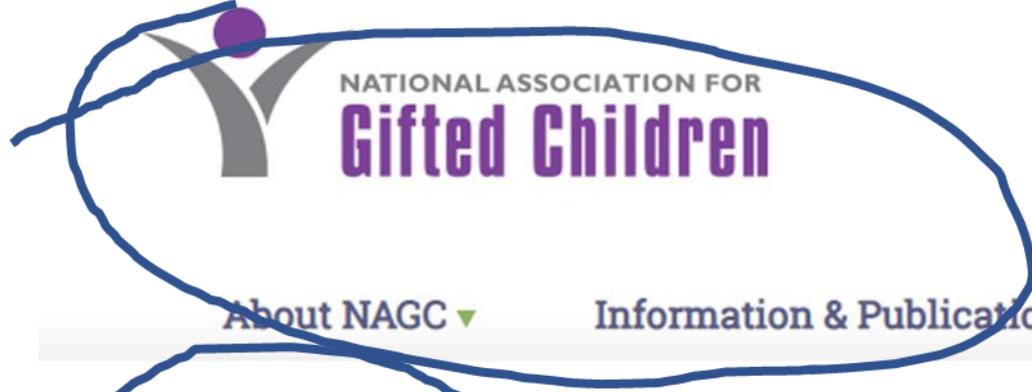
TEXAS ASSOCIATION FOR THE  
GIFTED & TALENTED

# Who is Generation Z?



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born between 1995-2012 later



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Enter your keywords



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## Search results

### Growing up Gifted and Generation Z: A Problem with Compassion?

... Mark Hess As a defender and champion of **Generation Z** (born 1996-2010), it was with chagrin that I read about college kids ...

### Growing up Generation Z and Gifted: Bomb Cyclone Perfectionism

... kids wrapped inside feelings more intensely than others, **Generation Z** gifted kids wait inside an atmosphere that has the potential for bomb cyclone ...

### Growing up Generation Z and Gifted: Will it be Potatoes or Cocaine for Your Child?

... raised the protective shields of millions of parents of **Generation Z** kids—parents whose impulse to protect their children from all things both ...

### Growing Up Generation Z and Gifted: Safe Spaces

... three more times before the end of the school year. **Generation Z** has never known the world without internet, and they have never known school ...

- Early ESSA plans don't do enough to signal that all students are important
- Fate of the Javits program funding does not hang in the balance

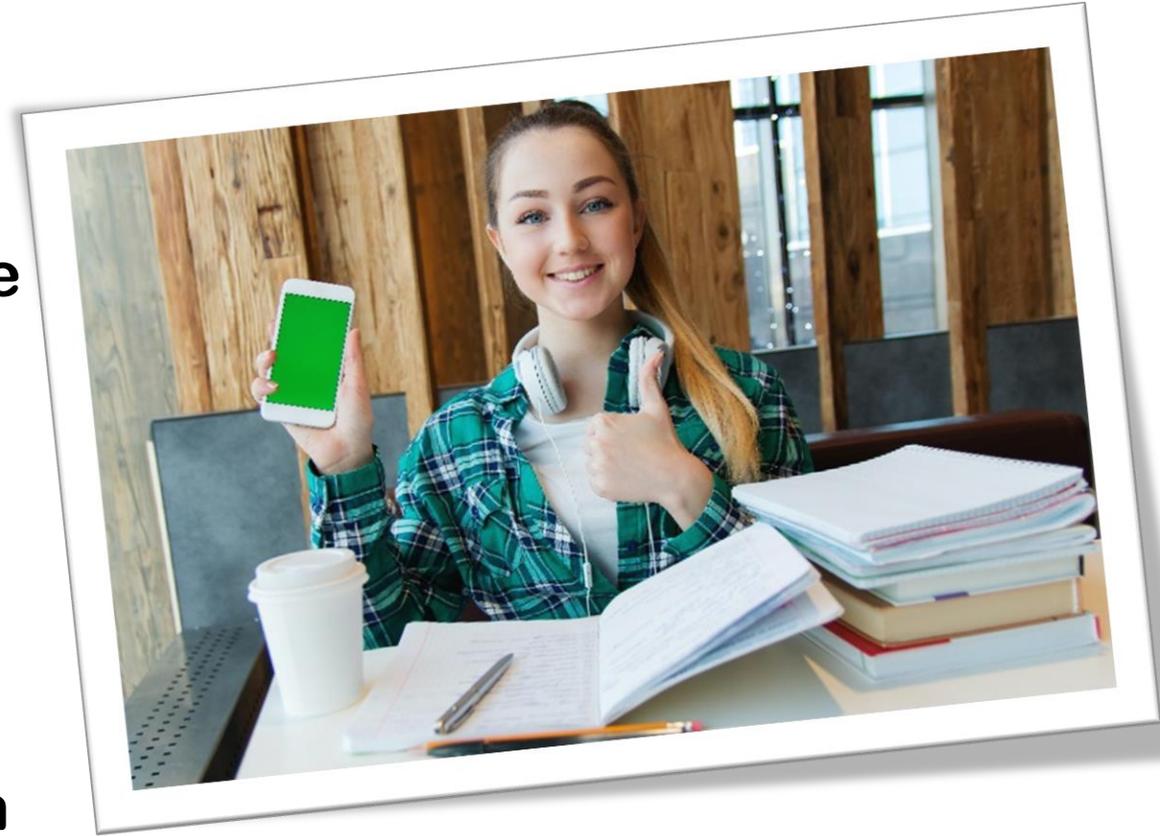
- the University of Colorado School of Medicine students who, while hundreds of students on their Boulder campus threw a last minute fling as classes closed, mobilized more than 300 classmates, nursing, pharmacy, and physical therapy students through social media to volunteer at nine different locations including hospitals,
- and medical student Amal Cheema, who wrote an *op-ed piece* for NPR that stated "We risk our moral character in

# Generation Z

- Who is the first generation not to know a world without internet or cell phones.
- Who is less likely to take part in every single face-to-face social activity measured across four data sets of three different age groups

## Seniors

- 2 ¼ hours per day texting
- 2 hrs. internet
- 1.5 hrs. electronic gaming
- .5 hrs. on video chat ...
- Receive 3,000 text messages per month
- 2015 spent 2x time online as 2006.



**... a generation loaded with talent**



## **Generation Z**

- **Who loves storytelling**
- **Who thinks globally**
- **Who Knows Collaboration and group learning**
- **Who Values Personal and Emotional Safety**
- **Who are forward looking and practical**
- **Who is beautifully accepting of individual differences**



~~Generation Z's Attention Span  
is 8 Seconds – Less than a  
Goldfish~~



**Thanks for being here . . .  
Because you could have  
been watching cat videos  
instead.**

**Just give me 8 more  
seconds . . . 😊**



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# Let's Think About How Visual Our Virtual World Is:

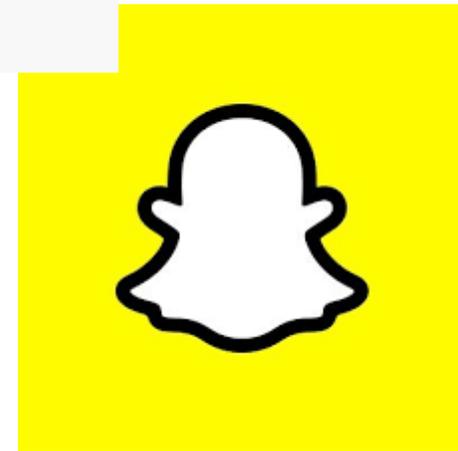
NET



60% of GenZ Identifies YouTube as their Preferred Way to Learn



Tik Tok



...and not e-mail, and not a phone conversation, unless you want to Facetime.



***“I’ll go in and look at  
stuff, but I won’t read  
any signage.”***

*“I’ll go in and look at stuff, but I won’t read any signage.”*

# Nearly 60% see YouTube as the Preferred Way to Learn

## Generation Z Watches 2x as Many Videos on Mobile Phones as any other Demographic

Vision Critical and Training Generation Z, *Forbes*

Is this, in and of itself, bad?



[This Photo](#) by Unknown Author is licensed under [CC BY](#)

A close-up photograph of a baby with light brown hair and dark eyes, looking directly at the camera with a serious, almost stern expression. The baby is wearing a green and white long-sleeved shirt. The background is a blurred beach scene with sand and a light blue sky.

**CHALLENGE**

**ACCEPTED**

**This is a highly visual  
generation and therefore  
loaded with NONVERBAL and  
VISUAL TALENT.**

...so let's take some time to understand what that means.



# 80% of Elementary Curriculum is Language-based

--Michael Thompson, Ph.D. in *It's a Boy*

**“Students who show a relative strength on the Nonverbal Battery can be either very good at reasoning with spatial stimuli or particularly adept at solving novel problems that are unlike those encountered at school.”**

--CogAT Score Interpretation Guide

**So . . .**

**Maybe there is a disconnect  
here?**



# What if Mozart ... were born in Mongolia?





**UMM...**

**WAT?**

quickmeme.com

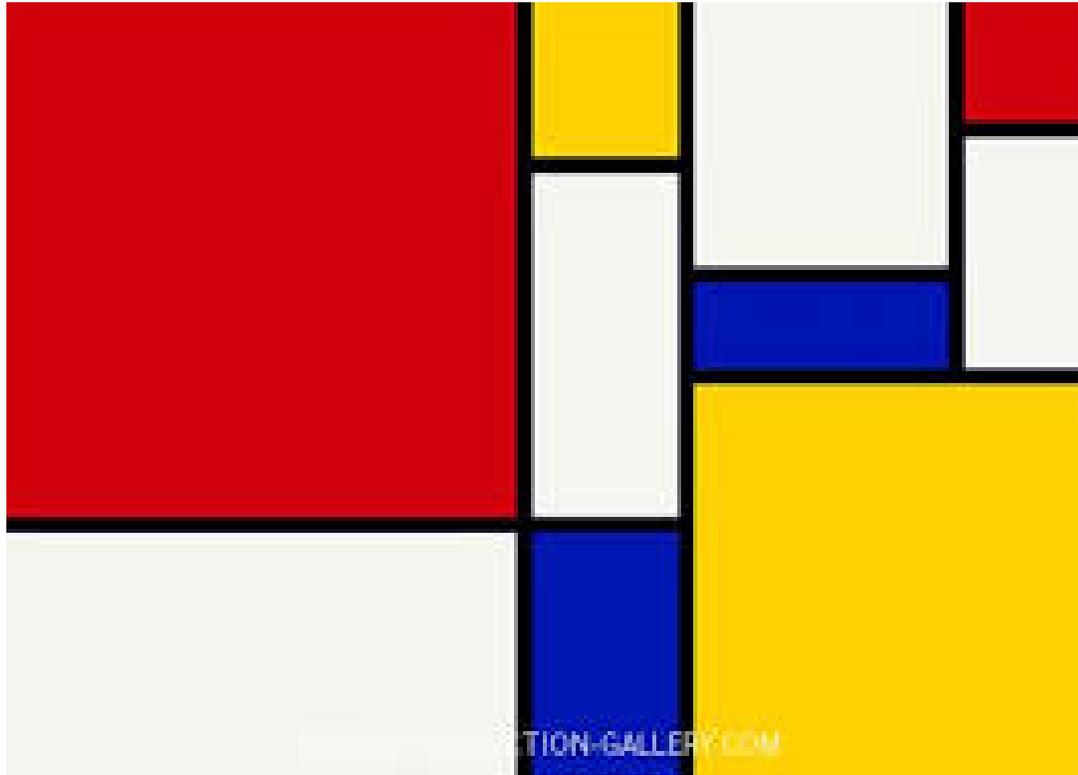
**Allow me to introduce you to the  
most hated building in Boston ...**

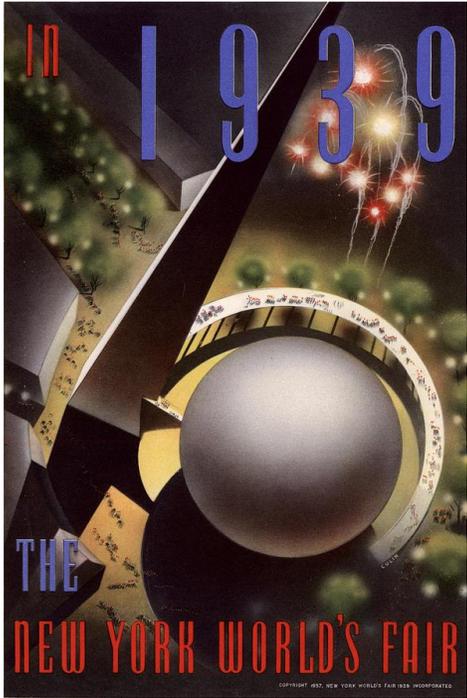


## Brutalist Architecture

- History
- Social and Cultural
- Language Etymology
- Engineering and Design
- Environment
- Politics
- Chemistry
- Art







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Elementary and Middle School GATE

# Film Noir

Project, Reading, Writing, Creativity

Which Photo is the Most Noir?

A Matinee Falcon Parody

Top Secret



Suspect Also Known As Mr. Clamy!

Known for Having a youtube channel and level 3 minion!

Last Known Location Mr. Hess's Room.

Often Heard Saying Lionel, Prof!

Biggest Crime Minibombing

PNF-404 as a minion

Known Associates Lionel Gaming, Prof. Prodigy, pNF-404

Photo of Clue Left at Scene of Crime



# This is Nonverbal Ability



# This is Nonverbal Ability

Rather be under bluer skies?  
let yourself go



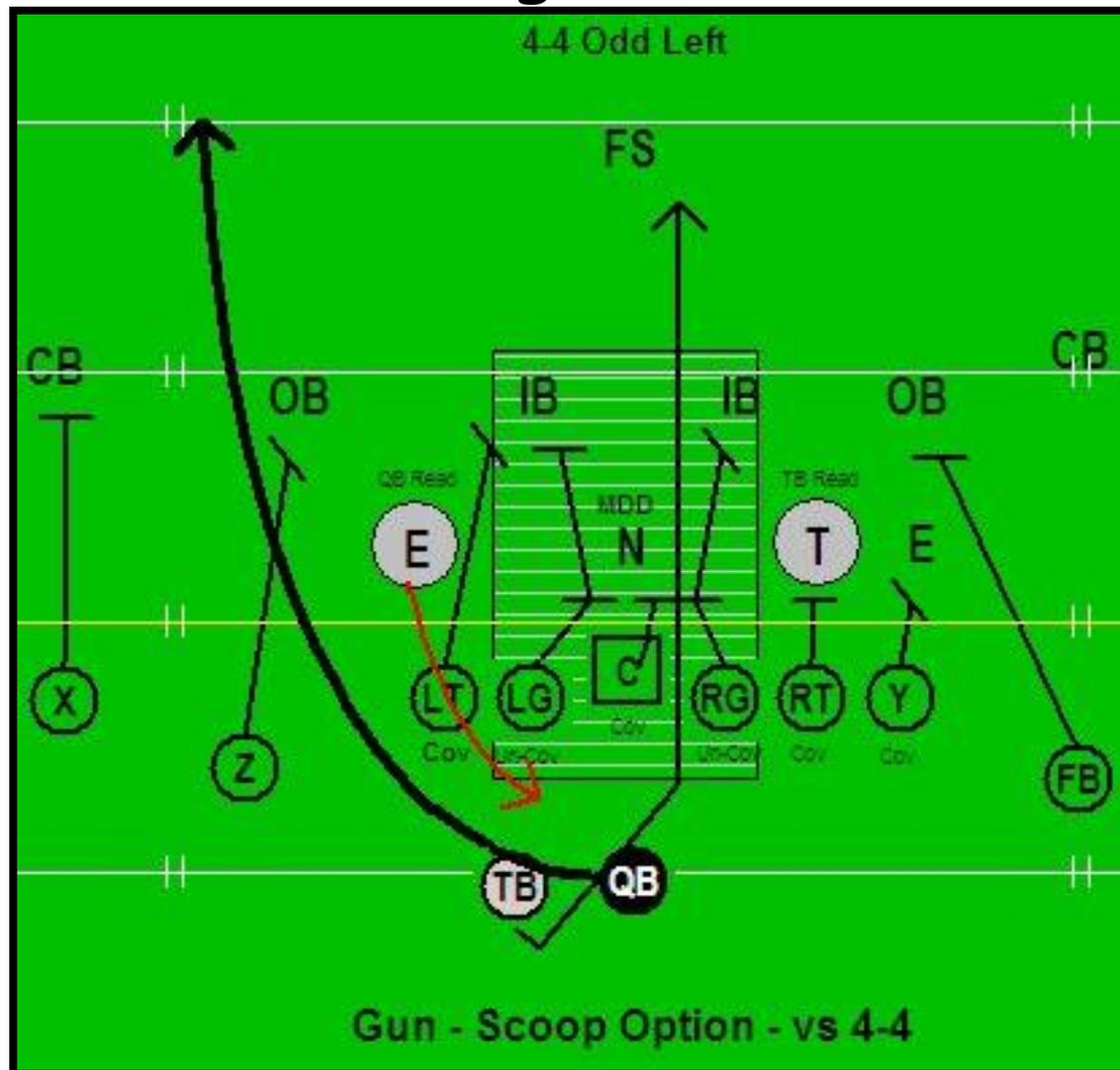
[Expedia.co.uk](http://Expedia.co.uk)



# This is Nonverbal Ability



# This is Nonverbal Ability



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[Texas Tech Pass Play](#)

# This is Nonverbal Ability

Nonverbal intelligence has been found to be statistically associated with ... one's ability to recognize emotions.

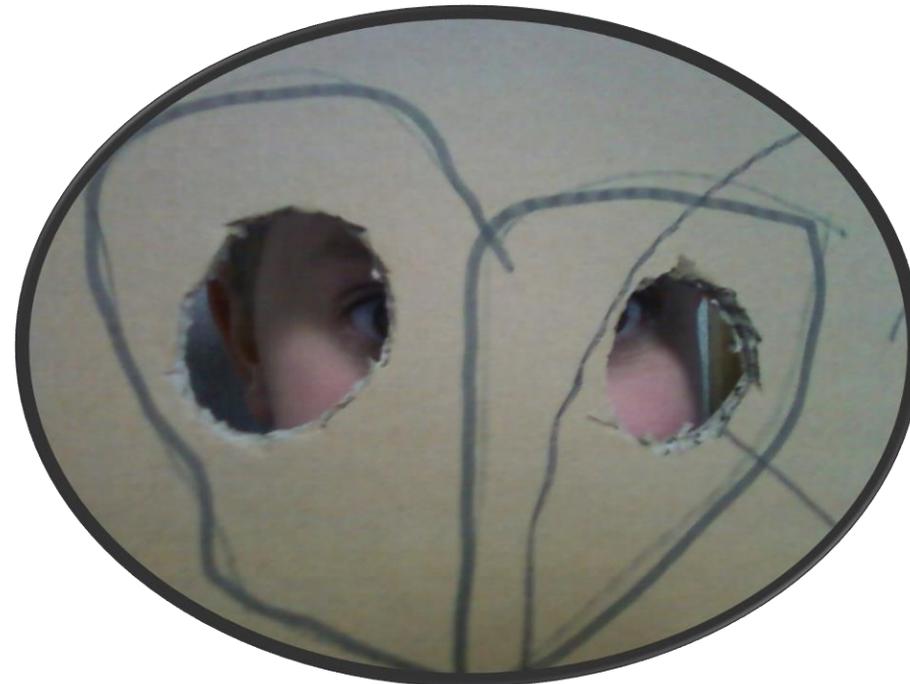
Albanese, Ottavia, Simona De Stasio, Carlo Di Chiacchio, Caterina Fiorilli, and Francisco Pons. "Emotional Comprehension: The Impact of Nonverbal Intelligence." *Journal of Genetic Psychology*. 171.2 (2010): 101-115.

How are you feeling today?



Because research shows that **most interpersonal communication is nonverbal and not auditory**, those with strong nonverbal ability can seem to have a sort of “sixth sense” for interpersonal communication. They might quickly interpret and respond to visual cues from others such as gestures, facial expressions, posture, eye contact, and movement.

This ability offers those with high nonverbal ability **THE POTENTIAL** to be very **empathic individuals**, effective leaders, and skilled interpersonal communicators.



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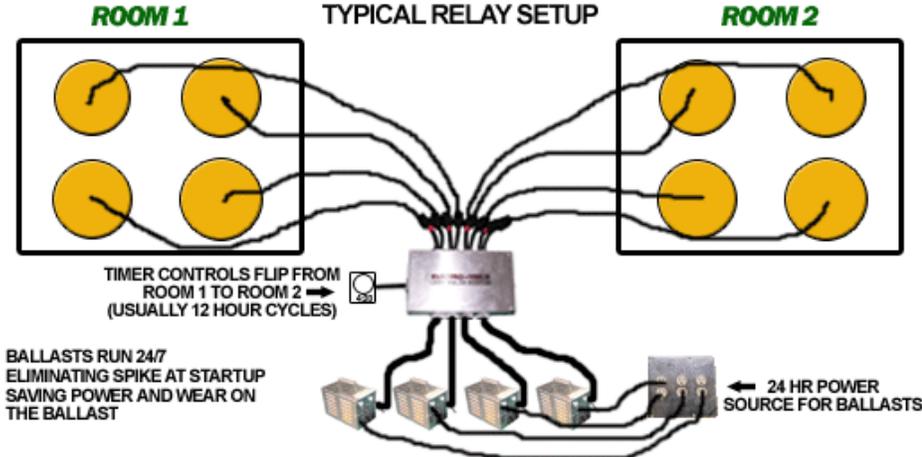
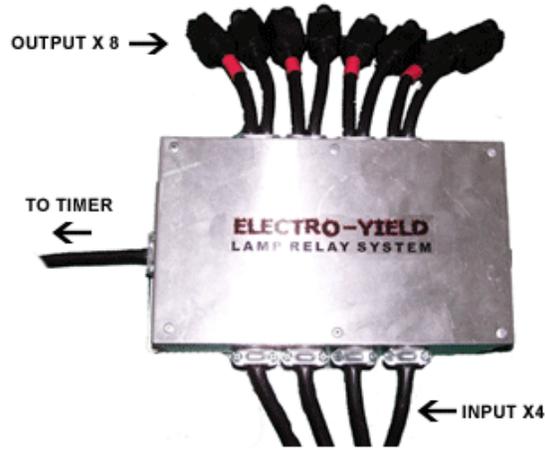


**This is  
Nonverbal  
Ability**

# This is Nonverbal Ability



# This is Nonverbal Ability



# This is Nonverbal Ability



# This is Nonverbal Ability



# This is NOT Nonverbal Ability

Algebra Help Math Sheet

## ALGEBRA PROPERTIES

ARITHMETIC PROPERTIES	EXPONENT PROPERTIES	PROPERTIES OF INEQUALITIES
ASSOCIATIVE $a(bc) = (ab)c$ COMMUTATIVE $a + b = b + a$ and $ab = ba$ DISTRIBUTIVE $a(b + c) = ab + ac$	$a^n a^m = a^{n+m}$ $(a^n)^m = a^{nm}$ $(ab)^n = a^n b^n$ $a^{-n} = \frac{1}{a^n}$ $\left(\frac{a}{b}\right)^{-n} = \left(\frac{b}{a}\right)^n = \frac{b^n}{a^n}$ $\frac{a^n}{a^m} = a^{n-m} = \frac{1}{a^{m-n}}$ $a^0 = 1, a \neq 0$ $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$ $\frac{1}{a^{-n}} = a^n$ $a^{\frac{n}{m}} = \left(\frac{1}{a^{\frac{1}{m}}}\right)^n = (a^{\frac{1}{m}})^{\frac{1}{n}}$	If $a < b$ then $a + c < b + c$ and $a - c < b - c$ If $a < b$ and $c > 0$ then $ac < bc$ and $a/c < b/c$ If $a < b$ and $c < 0$ then $ac > bc$ and $a/c > b/c$
ARITHMETIC OPERATIONS EXAMPLES	PROPERTIES OF COMPLEX NUMBERS	
$ab + ac = a(b + c)$ $\frac{a}{\frac{b}{c}} = \frac{ac}{b}$ $a\left(\frac{b}{c}\right) = \frac{ab}{c}$ $\frac{a-b}{c-d} = \frac{b-a}{d-c}$ $\frac{\left(\frac{a}{b}\right)}{c} = \frac{a}{bc}$ $\frac{a+b}{c} = \frac{a}{c} + \frac{b}{c}$ $\frac{a}{\left(\frac{b}{c}\right)} = \frac{ac}{b}$ $\frac{ab+ac}{a} = b+c, a \neq 0$ $\frac{a}{b} + \frac{c}{d} = \frac{ad+bc}{bd}$ $\frac{\left(\frac{a}{b}\right)}{\left(\frac{c}{d}\right)} = \frac{ad}{bc}$	$i = \sqrt{-1}$ $i^2 = -1$ $\sqrt{-a} = i\sqrt{a}, a \geq 0$ $(a + bi) + (c + di) = a + c + (b + d)i$ $(a + bi) - (c + di) = a - c + (b - d)i$ $(a + bi)(c + di) = ac - bd + (ad + bc)i$ $(a + bi)(a - bi) = a^2 + b^2$ $ a + bi  = \sqrt{a^2 + b^2}$ $\frac{1}{a + bi} = \frac{a - bi}{(a + bi)(a - bi)} = \frac{a - bi}{a^2 + b^2}$	
QUADRATIC EQUATION		
For the equation $ax^2 + bx + c = 0$ , $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$		

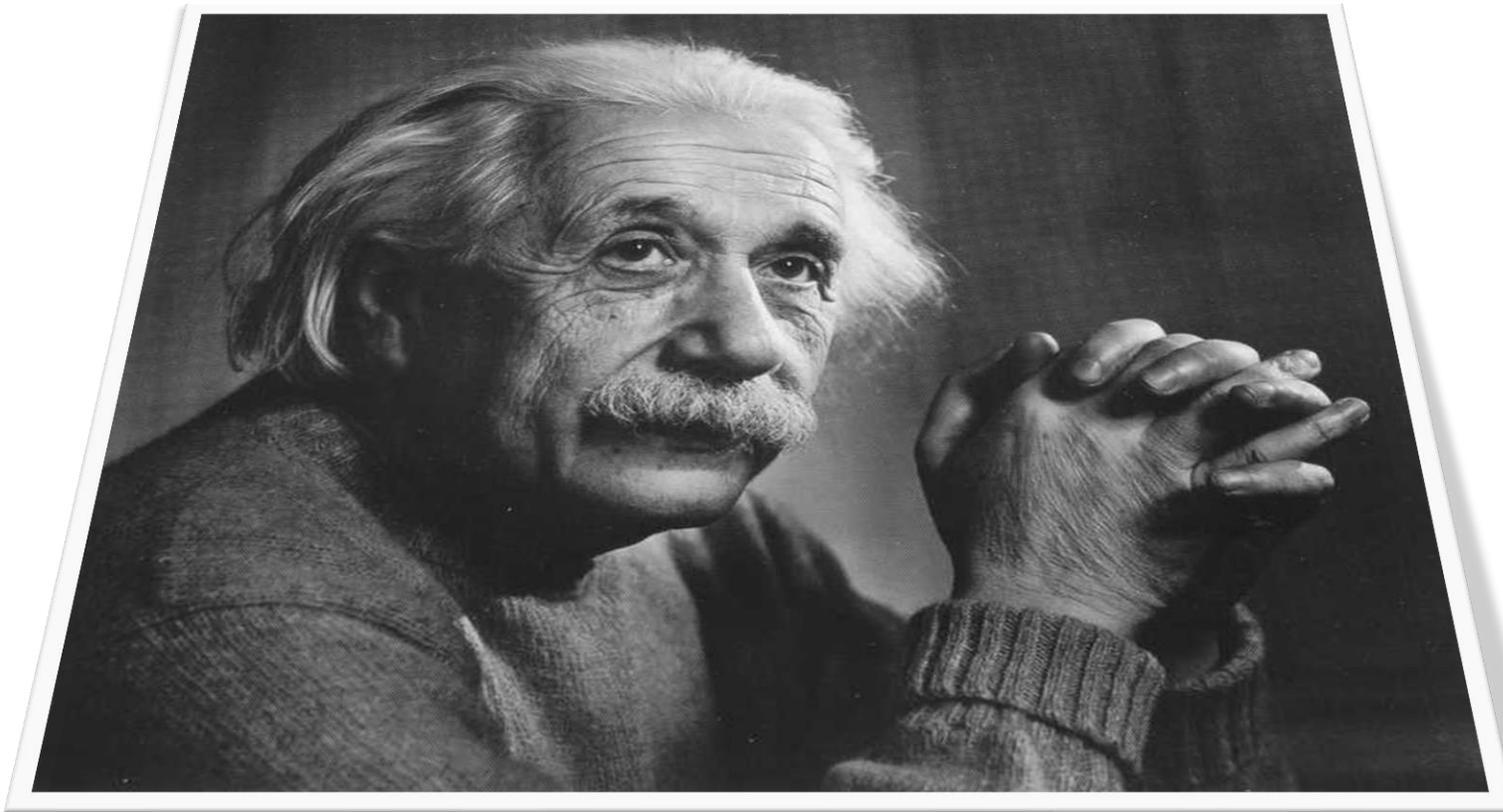
<http://img.technospot.net/algebra-reference-sheet.png>

The CogAT Nonverbal Score's Correlation to Math Achievement:

.15

The CogAT Nonverbal Score's Correlation to Reading Comprehension and Vocabulary Achievement:

.07

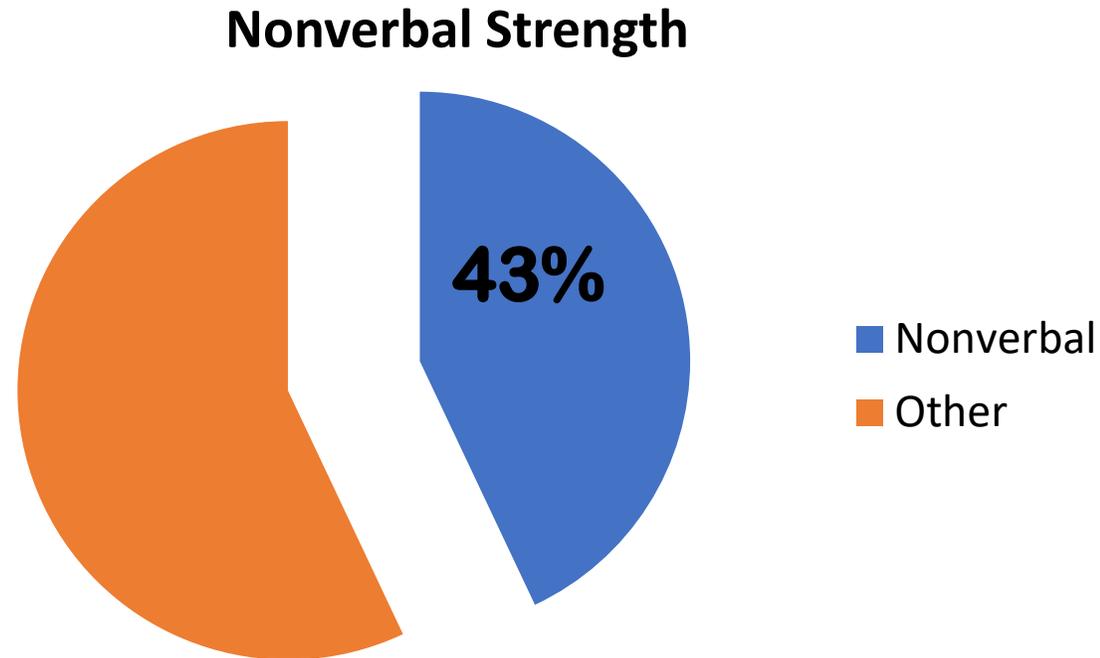


**“These thoughts did not come in any verbal formulation. I rarely think in words at all.”**

<http://jpetrie.myweb.uga.edu/einstein.html>

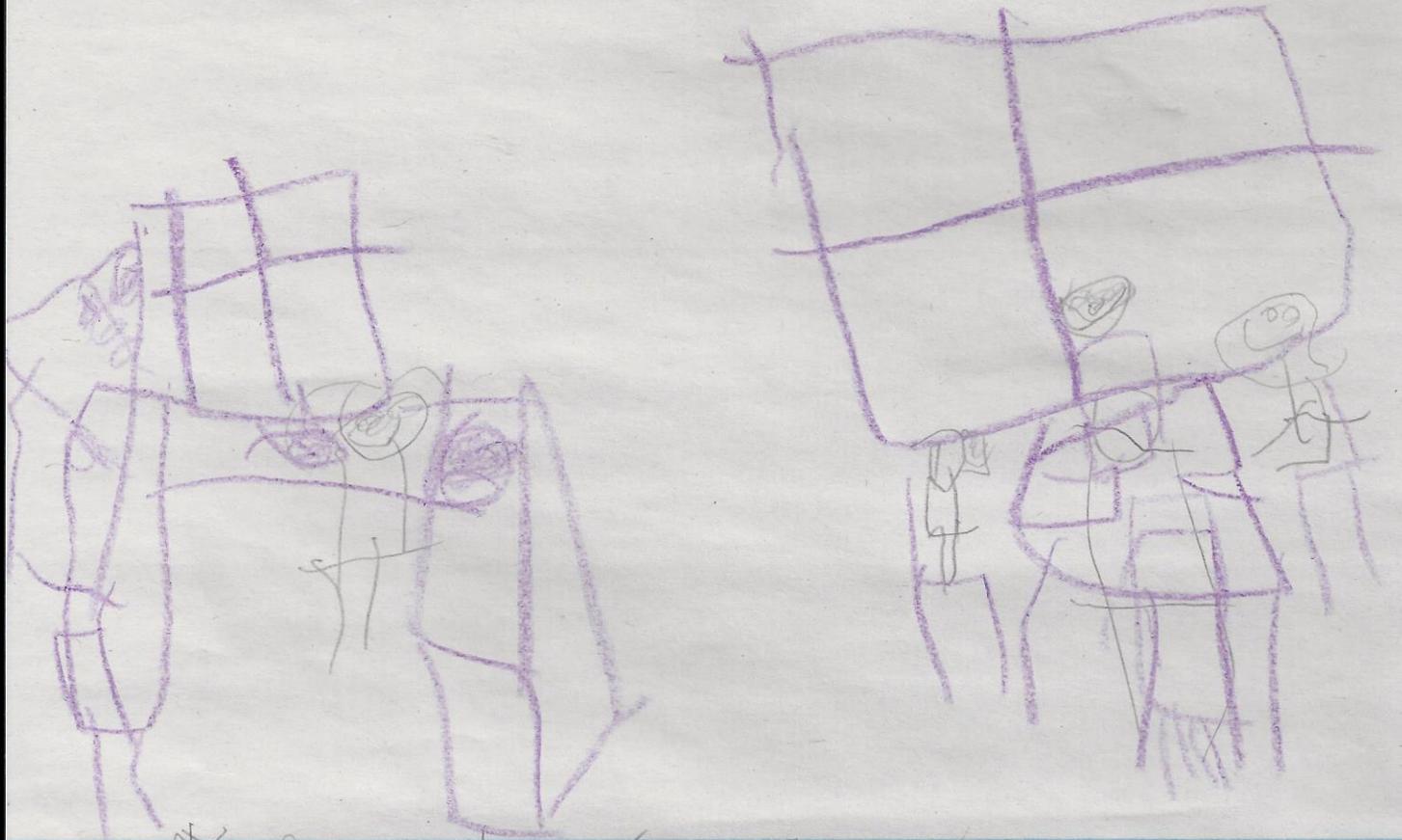
Do you personally reason through language, through images, or a combination? Which do you rely on?

# Do More than 1/3 of Your Students Show Nonverbal Ability as a Strength?



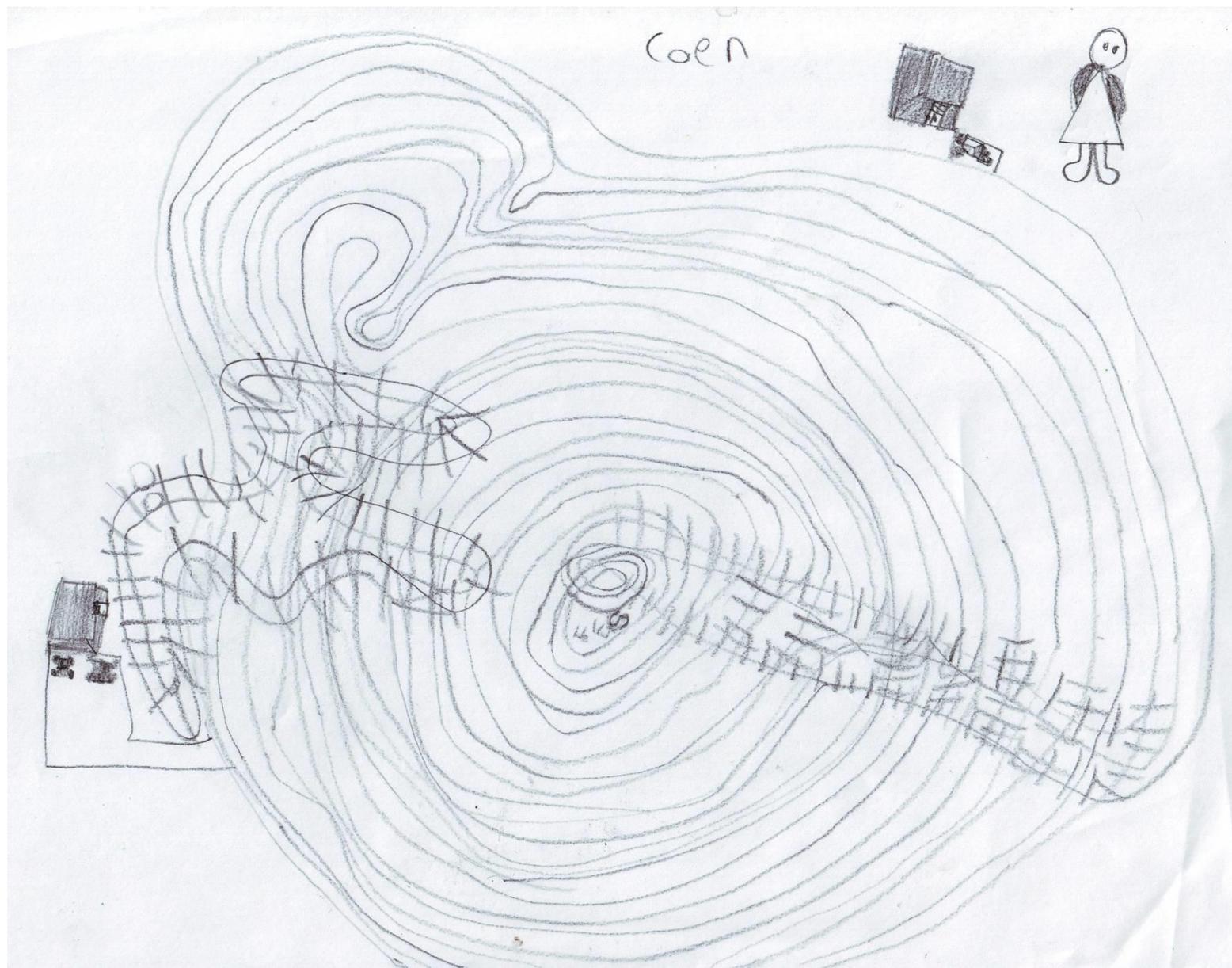
- I bet they do! Check for a historical record based on the three areas tested with CogAT.

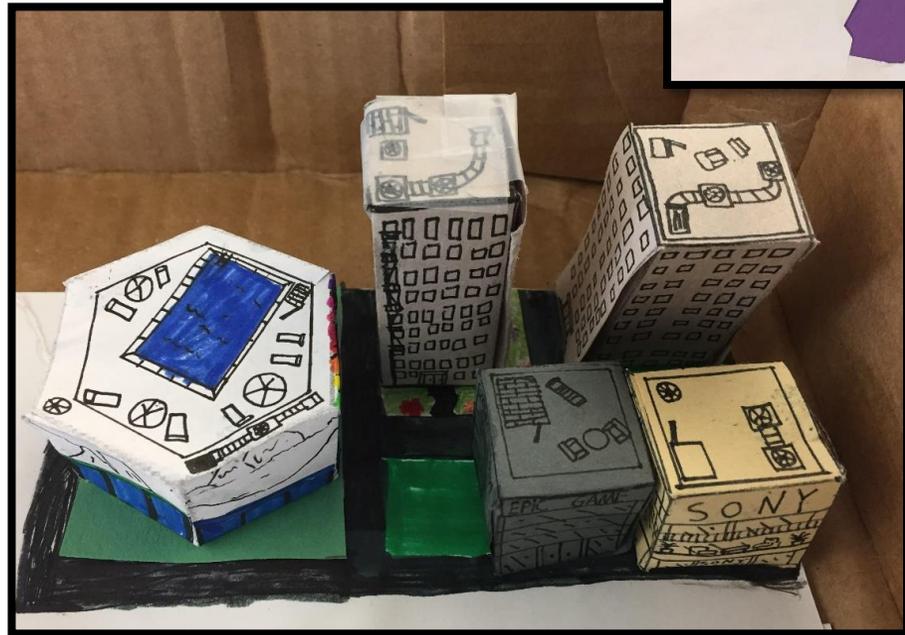
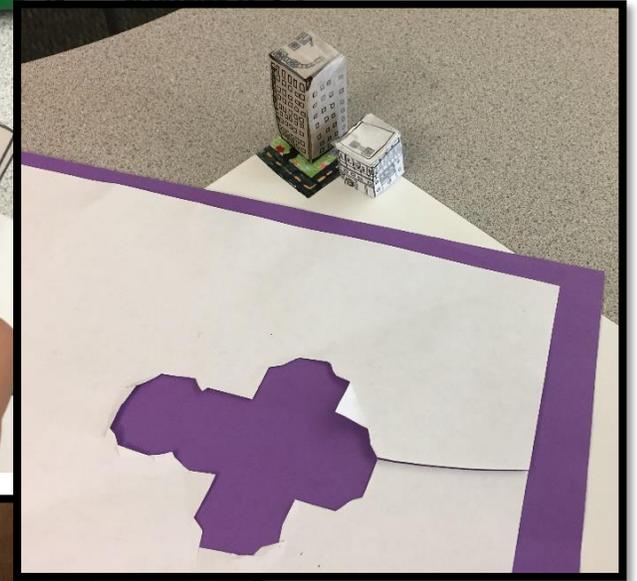
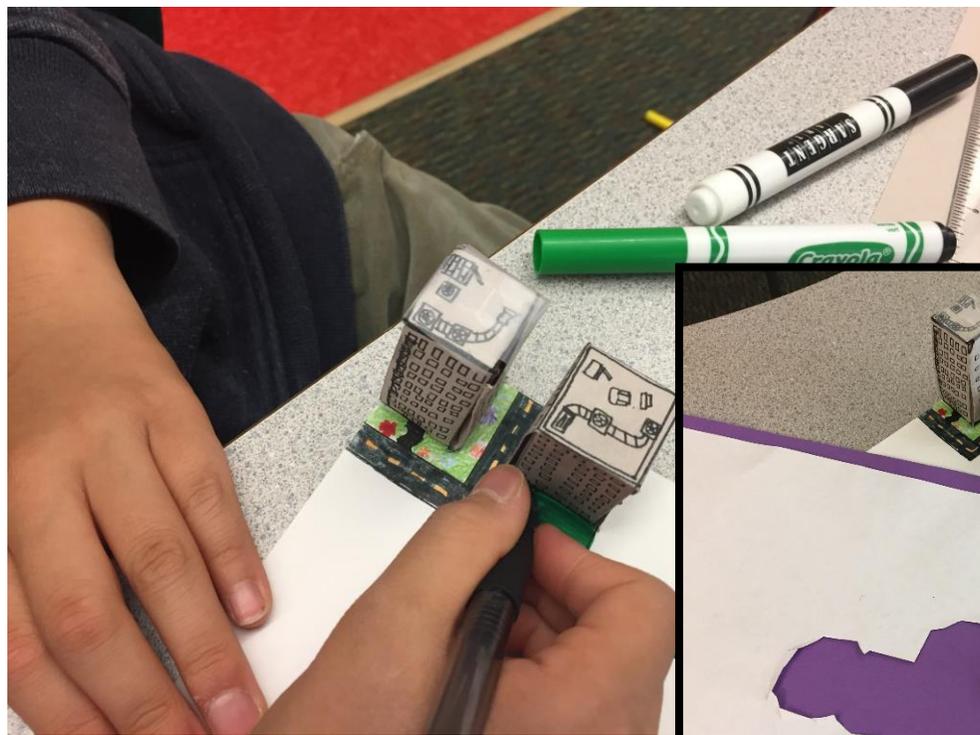
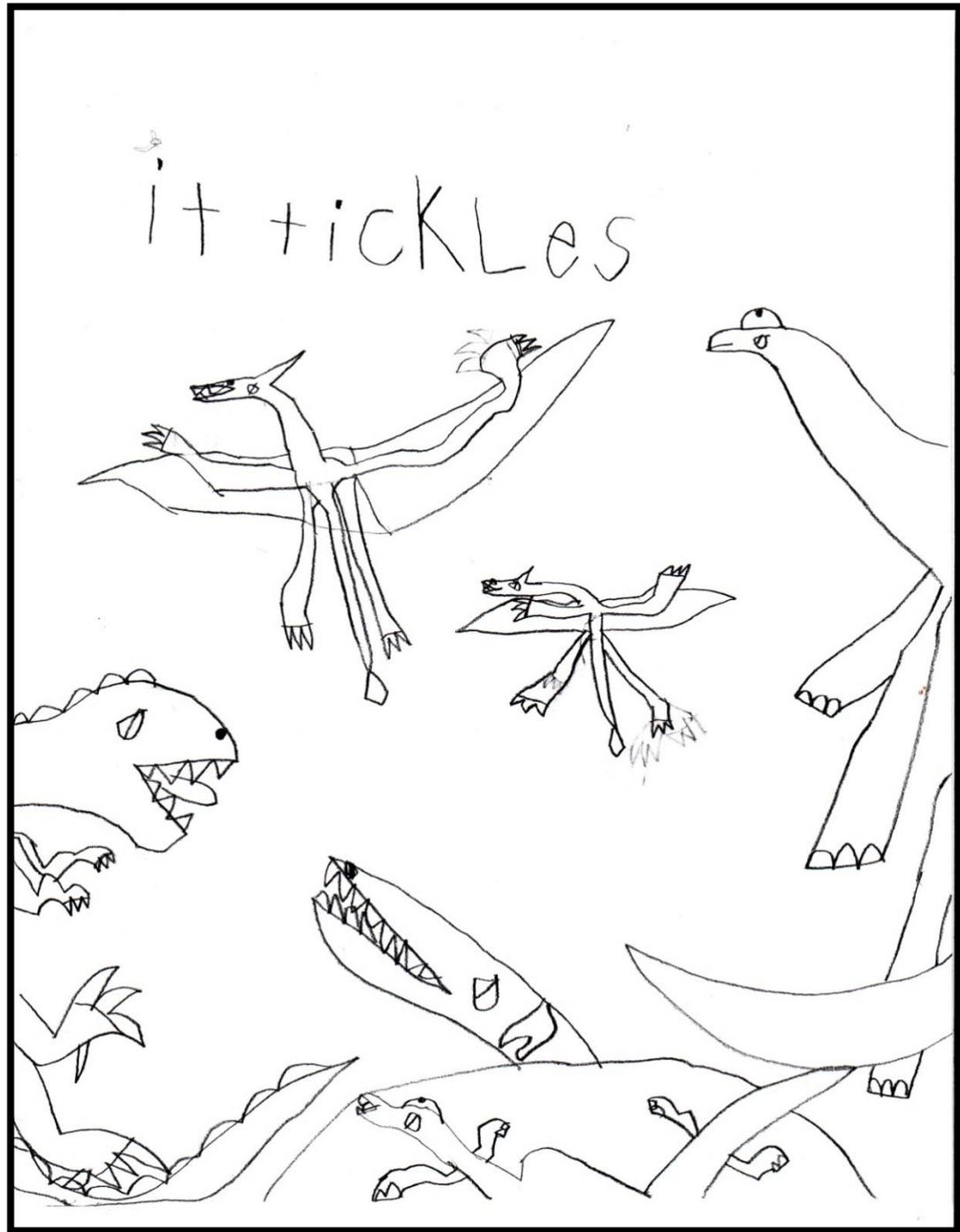
UACROW



act ioh BEKOP + WOV

How would it feel to be able to fly?





**Nonverbal tasks may involve concepts such as:**

- **Concrete or abstract ideas**

Can you insert concrete statements that express the range of abstract emotions and feelings expressed visually here?

Who is this person?

What situation is he in?

How do you know?

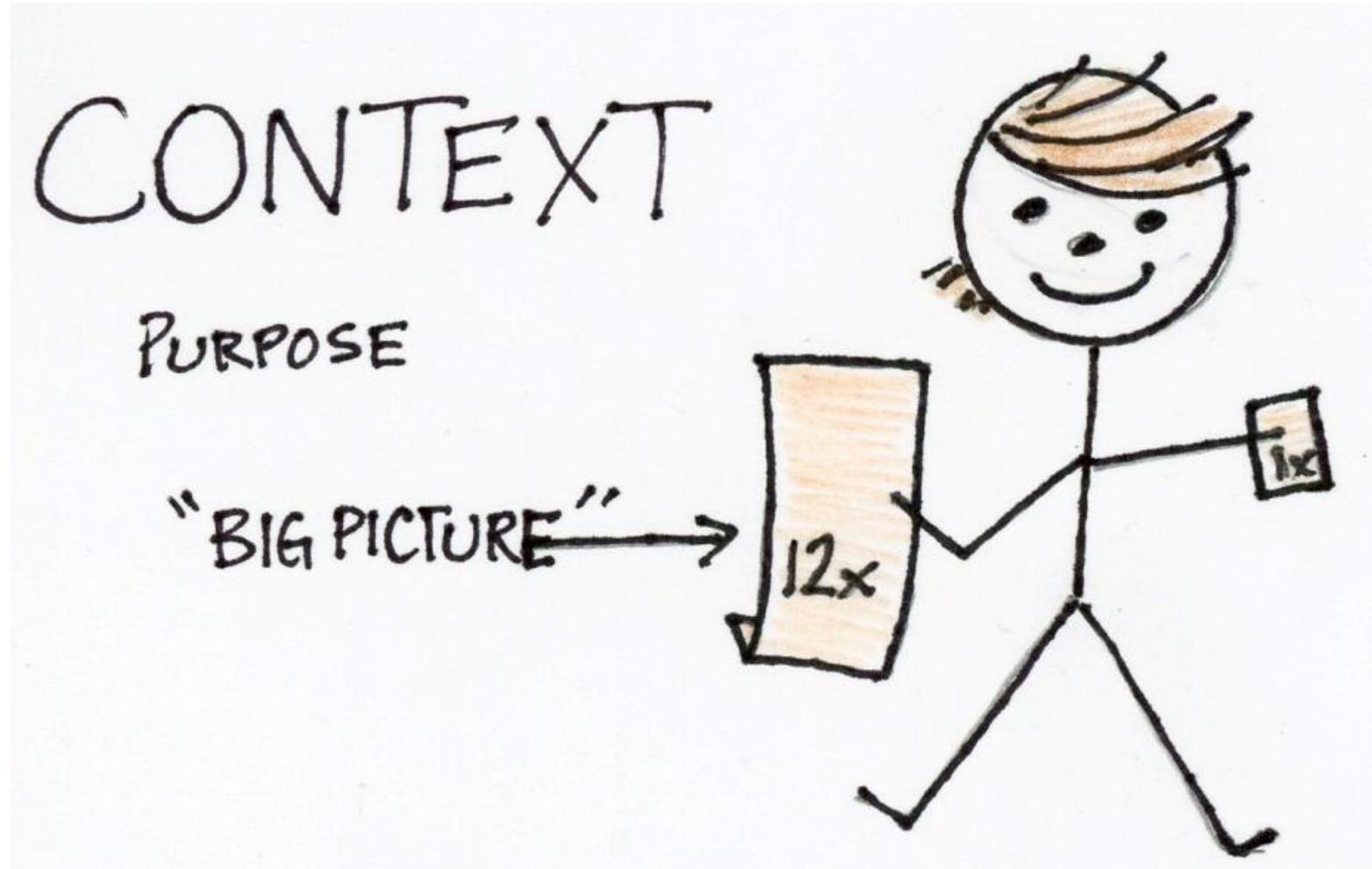


# 80% of Elementary Curriculum is Language-based

--Michael Thompson, Ph.D. in *It's a Boy*

What can we do?

We can build context for readers.





**What can we do?**

**Draw it.**

**Cartoon it.**

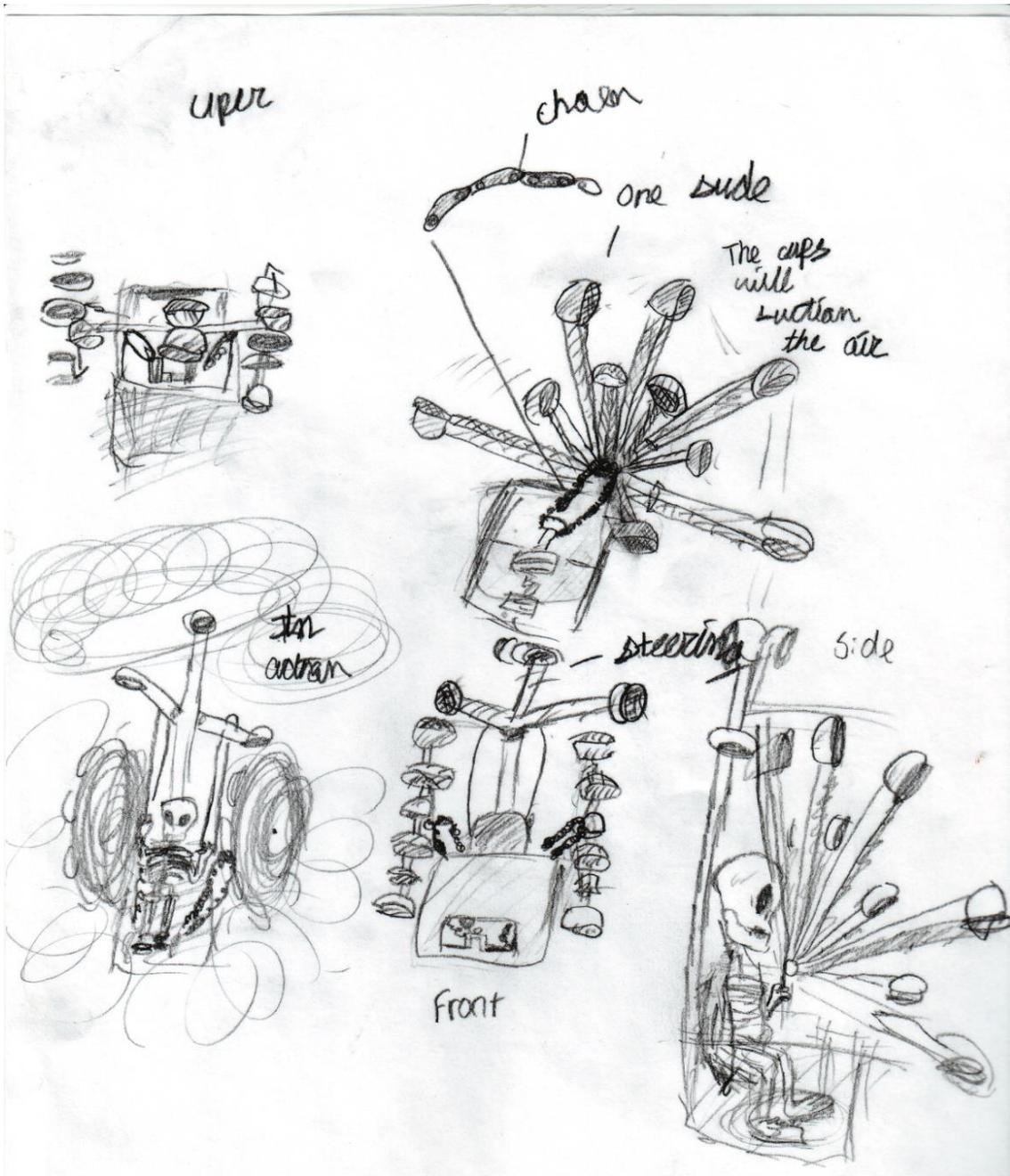
**Picture it.**

**\*Working memory operates through two channels:**

- 1. Sounds or Phonological Loops**
- 2. Pictures or Visual-Spatial Sketchpad**

**And working memory is a greater predictor of school-based success at age 5 than reading scores, motivation, a positive attitude, math scores, and IQ**





Alex Swenson  
May 7

15/15

APR D.  
11/17

### Theory

My theory is that if cups suck the air then, theoretically if you were to spin about a fastly it will make the mechanism rise. If you pull the strings attached to the steering mechanism you will turn the opposite direction. Chains are what make the axels spin on the cups. There is a lightweight chair inside the pocket of which you sit. Overall, that is my theory and directions to my invention.

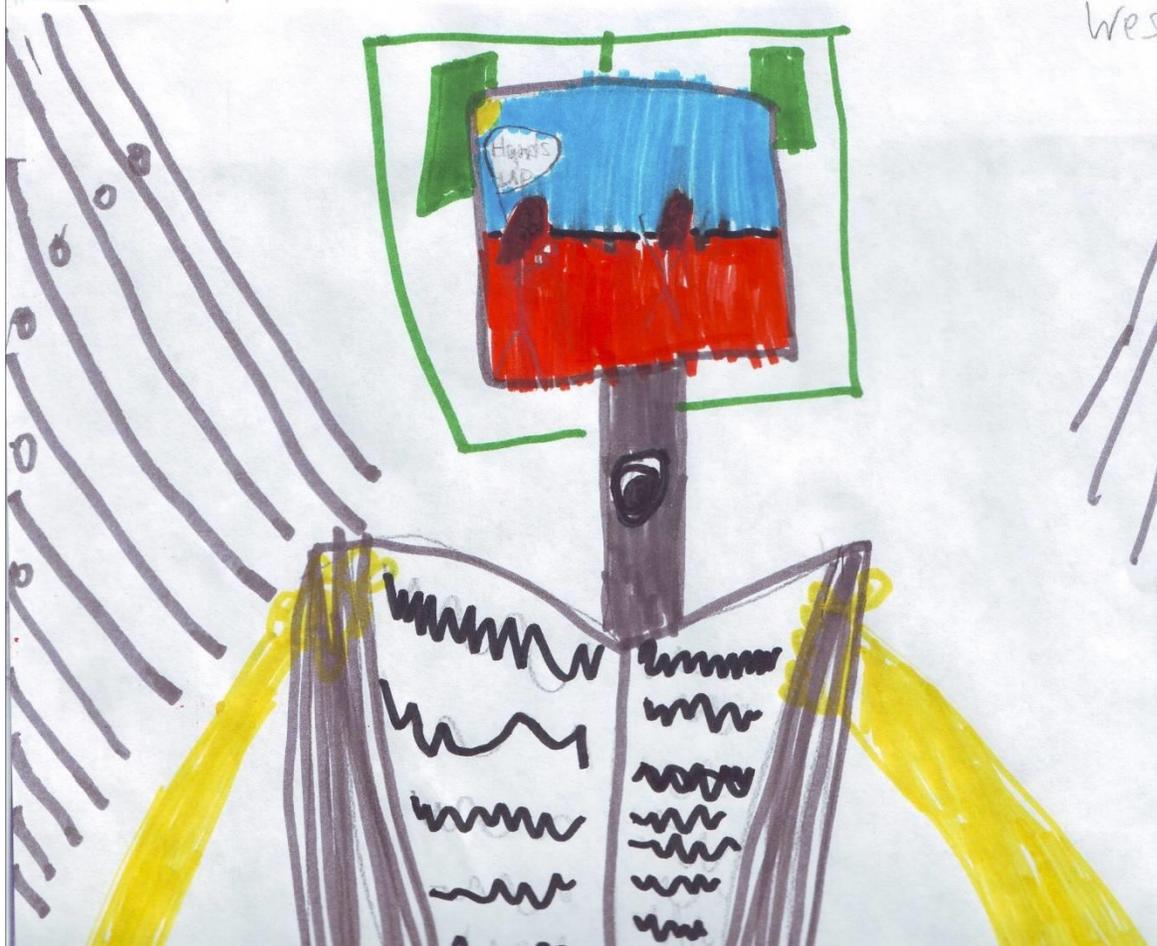
Pairing pictures and writing and speaking "activates" several areas of the brain.

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Hi, my name is Wesley, and I'm  
an inventor. I am inventing  
a book that shows you what  
you are reading. On a screen,  
of course, this can be helpful  
because some people don't want  
to think of what is happening.  
Well, see you in the future!

Wes



“Reading is “flat line.”  
--Linda Kreger Silverman

“I just can't get a good  
picture in my head.”  
--NV GT student

“They would no more  
dream of using a  
synonym than they would  
consider changing all the  
names of the pictures in  
an art gallery.”  
--Linda Kreger Silverman

# Cartooning



Notice how this student demonstrates depth of thinking through the use of multiple perspective, integrating and combining foreground and background, a sense of humor, and a clear understanding of gestures and facial expression. This was drawn by an 8<sup>th</sup> grader.

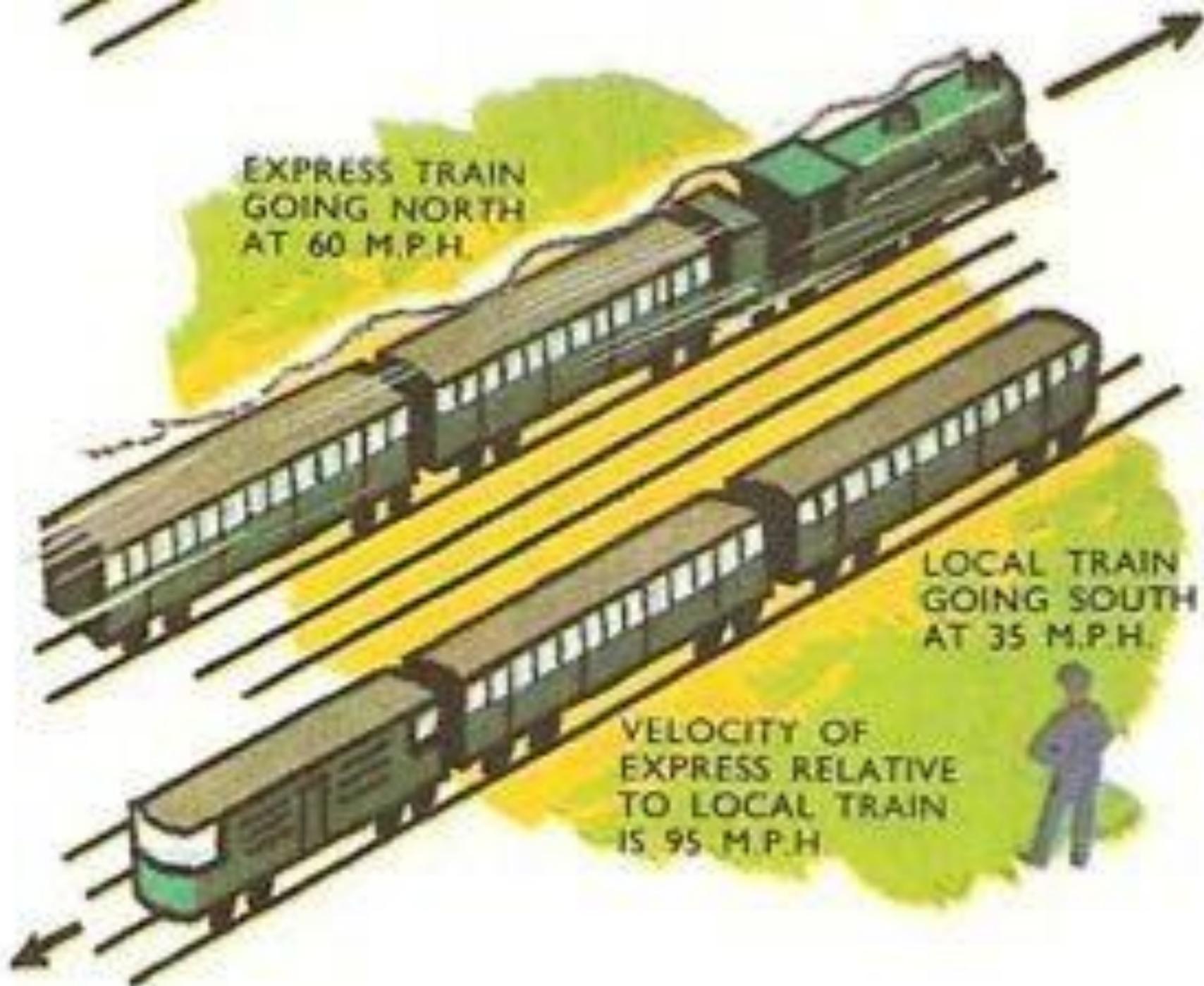


Image from  
quora.com

## *What's Going On in This Picture? | May 17, 2021*

Look closely at this image, stripped of its caption, and join the moderated conversation about what you and other students see.



**What can we do?**

**Graph it.**

**Nonverbal tasks involve skills such as:**  
**The ability to recognize visual sequences and remember them . . .**

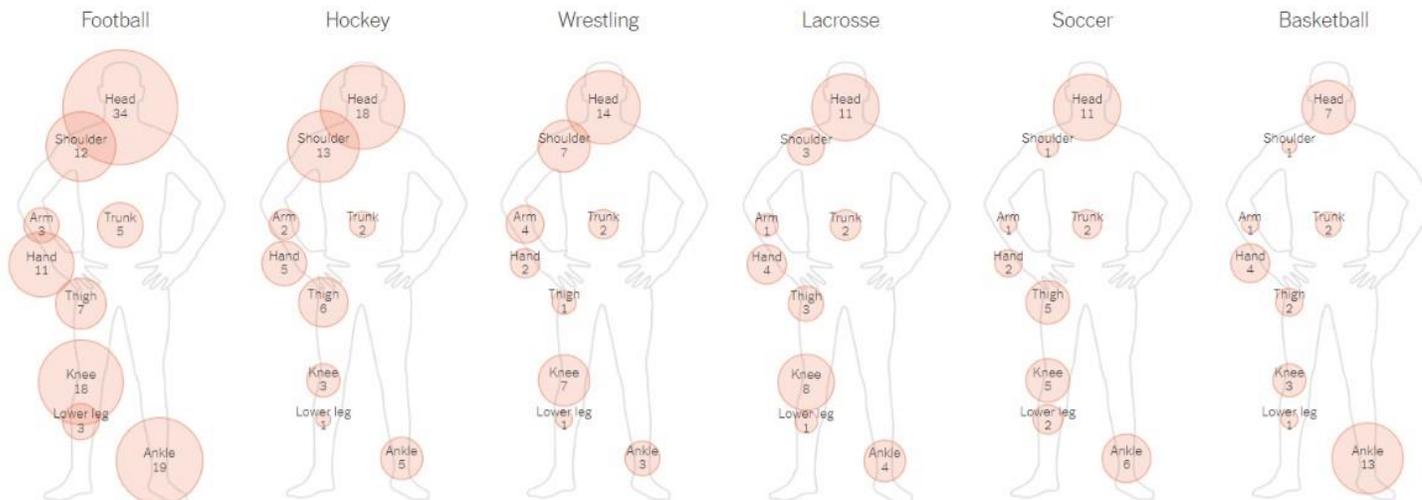


**Nonverbal tasks involve skills such as: Understanding the meaning of visual information and recognizing relationships between visual concepts . . .**

## *Over 60 New York Times Graphs for Students to Analyze*

A collection of graphs, maps and charts organized by topic and graph type from three years of "What's Going On in This Graph?"

Common injuries for boys among popular high school sports  
Injuries per 10,000 competition plays



Students can recognize concepts visually once they understand the meaning of them. In this way, a chart can cue their understanding.

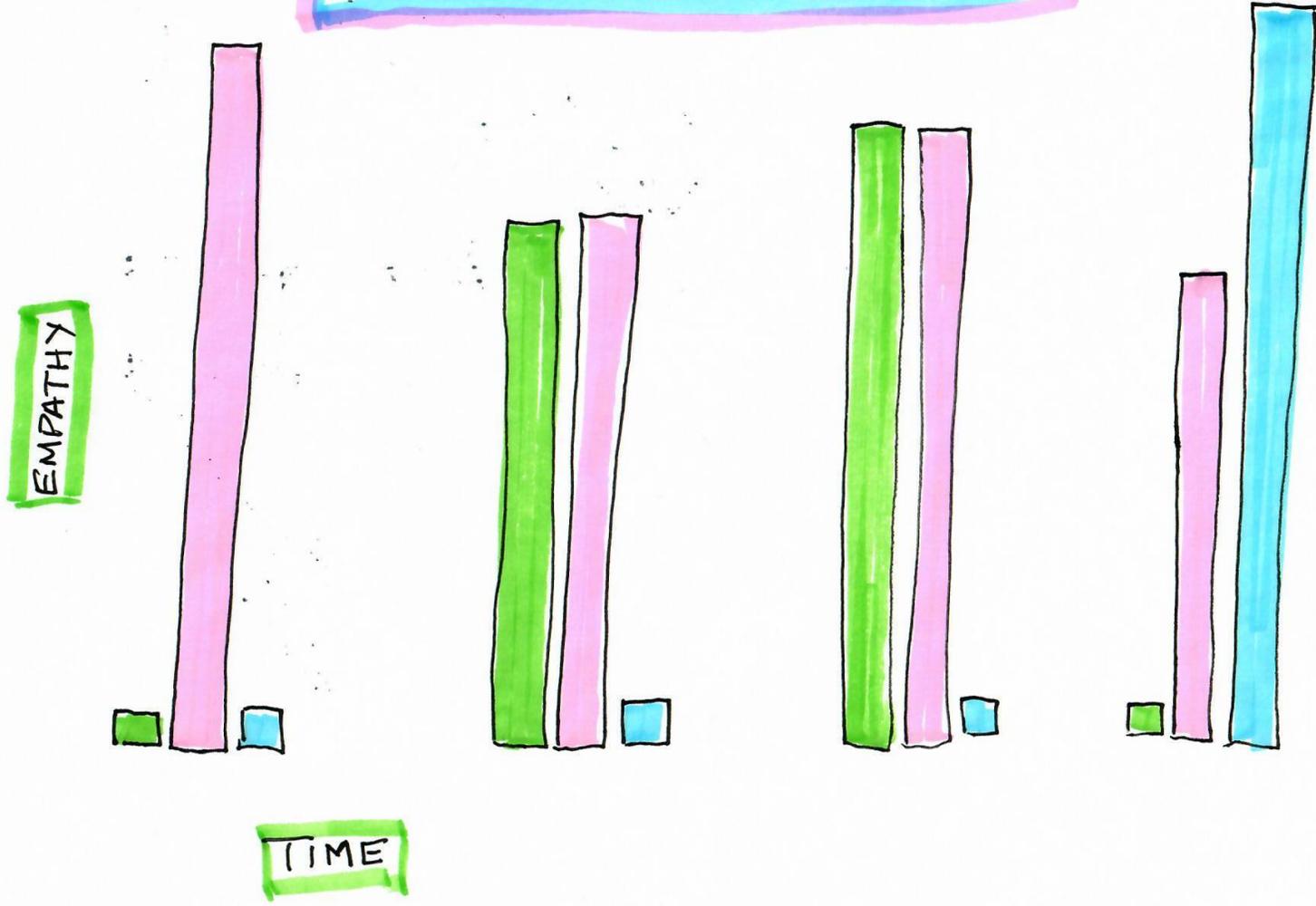
## SOCIAL DISTANCING

---



# CHARLOTTE'S WEB EMPATHY GRAPH

-  Charlotte's concern about Wilbur
-  our concern about Wilbur
-  Wilbur's concern about Charlotte



**What can we do?**

**Visual Analogies**

Nonverbal tasks involve skills such as:  
Performing visual analogies



Giant Anteater



Echidna

**Quick Lesson:** have students draw a third animal or item that coincides with the analogy presented. Explain the analogy through pictures, written language, or discussion.

Change Words  
into Images

Change Images  
into Words

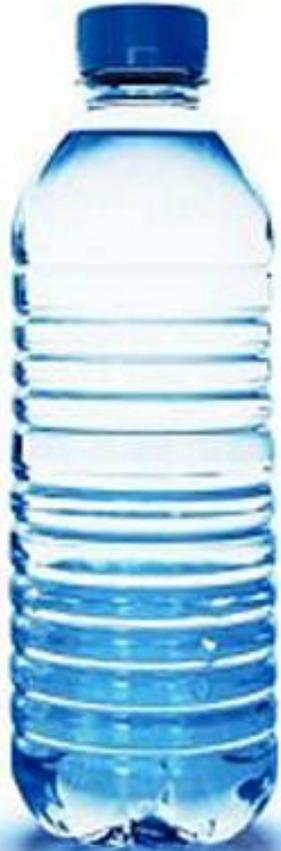
4,000 years later, and we're back  
to the same language...



Change  
Numbers into  
Images

Change  
Concepts into  
Images

**Higher Order Thinking Extension:**  
**Connect these two.**



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**What can we do?**

**Treat Images like Literature.**

# Treat Images like Literature

- **Inferences**
- **Critical Thinking**
- **Themes**
- **Responses which Refer to Details in the Source**
- **Treat them as Nonfiction or Fiction**
- **Treat them as Poetry**

**Nonverbal tasks involve skills such as: Recognition of causal relationships in pictured situations.**

The photo on the right is a Pulitzer Prize winning photograph from Hurricane Katrina. Images often carry strong emotional weights. Use images to open discussions with students and to summarize important understandings about literature, science, math, social studies, and the world in which we live.



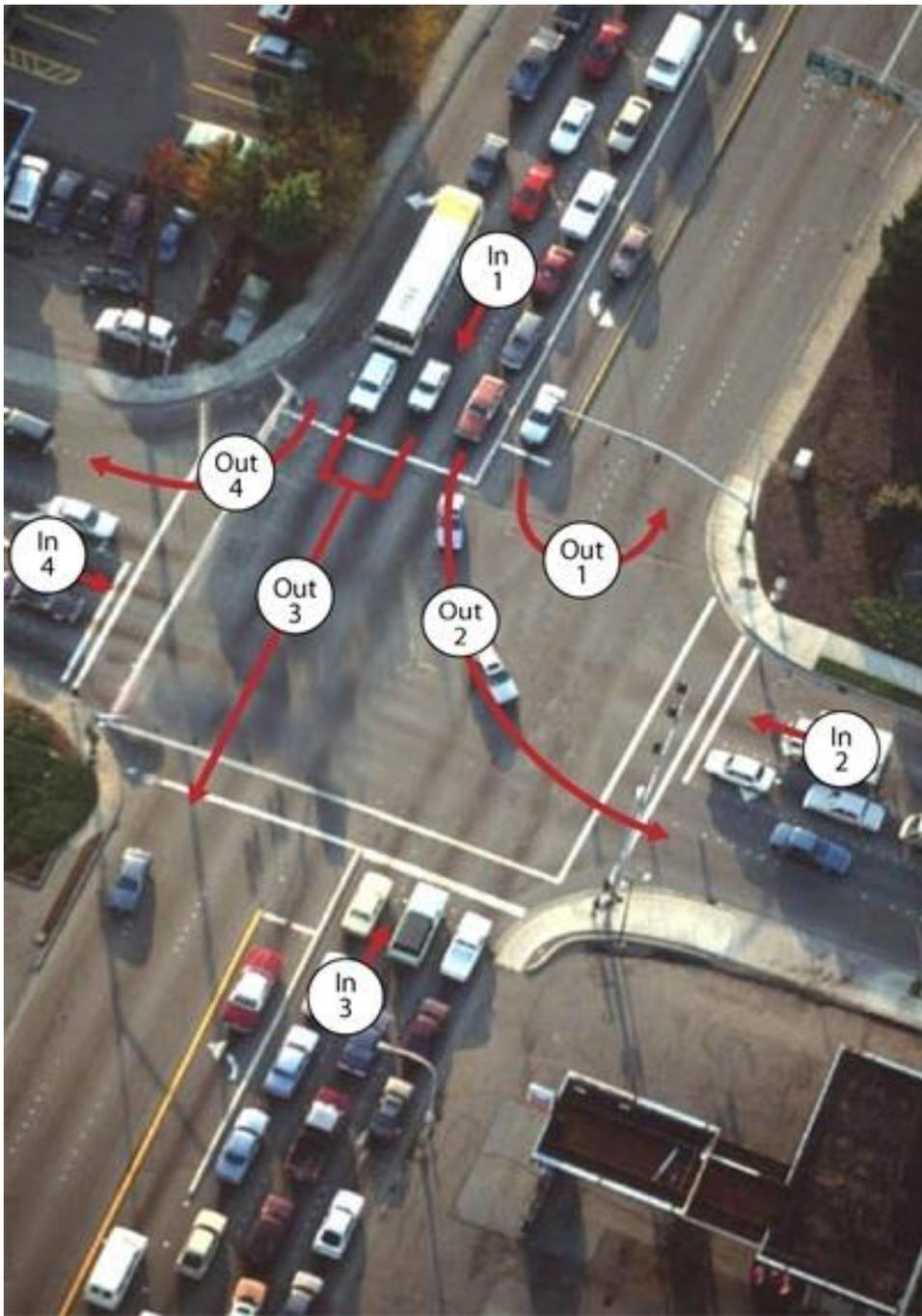






And these causal relationships can reach to the metaphorical level:

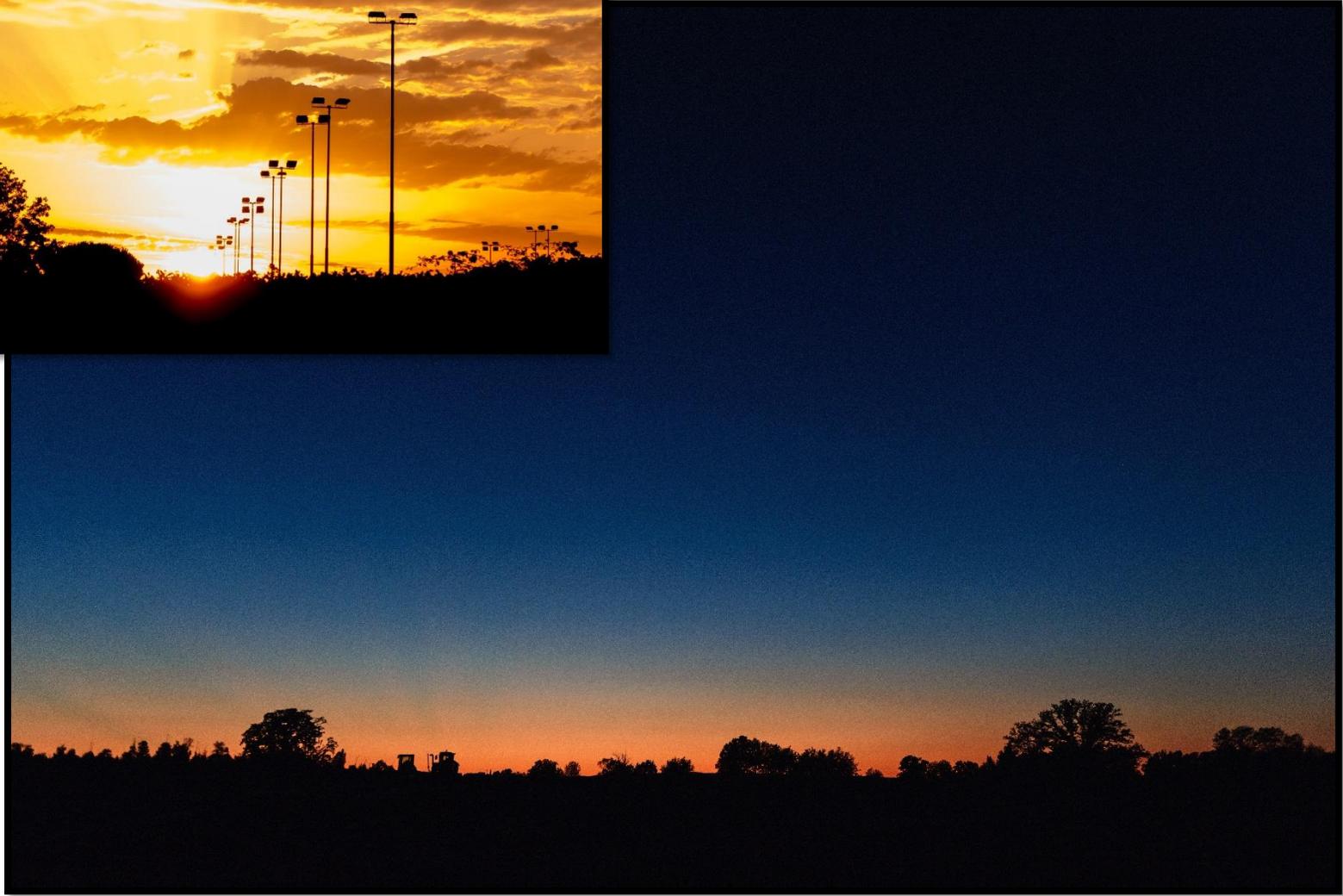
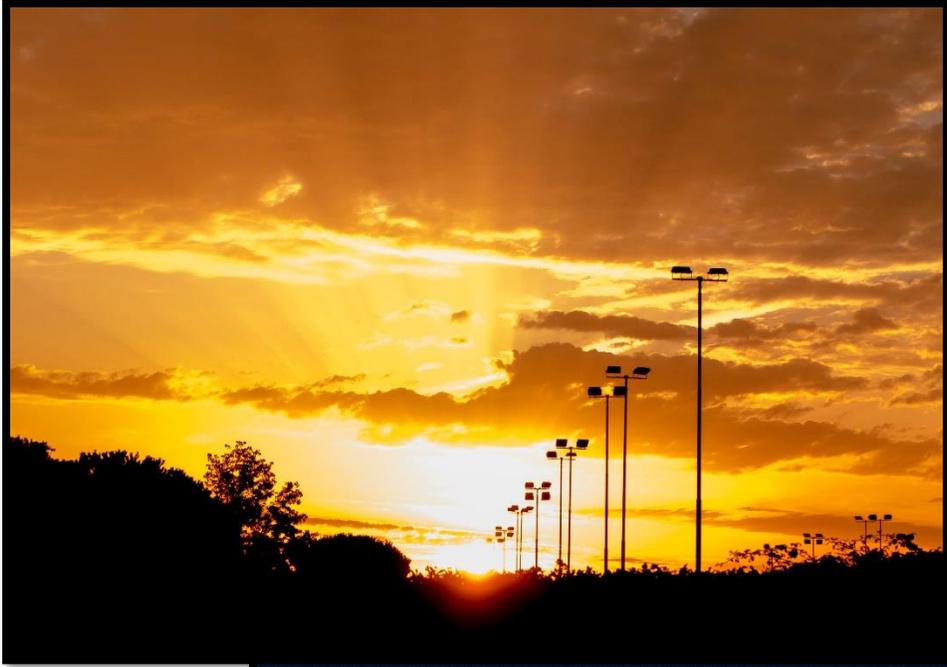




**Nonverbal intelligence is important because it enables students to analyze and solve complex problems without relying upon or being limited by language abilities.**

**What areas in school rely the most on nonverbal intelligence?**



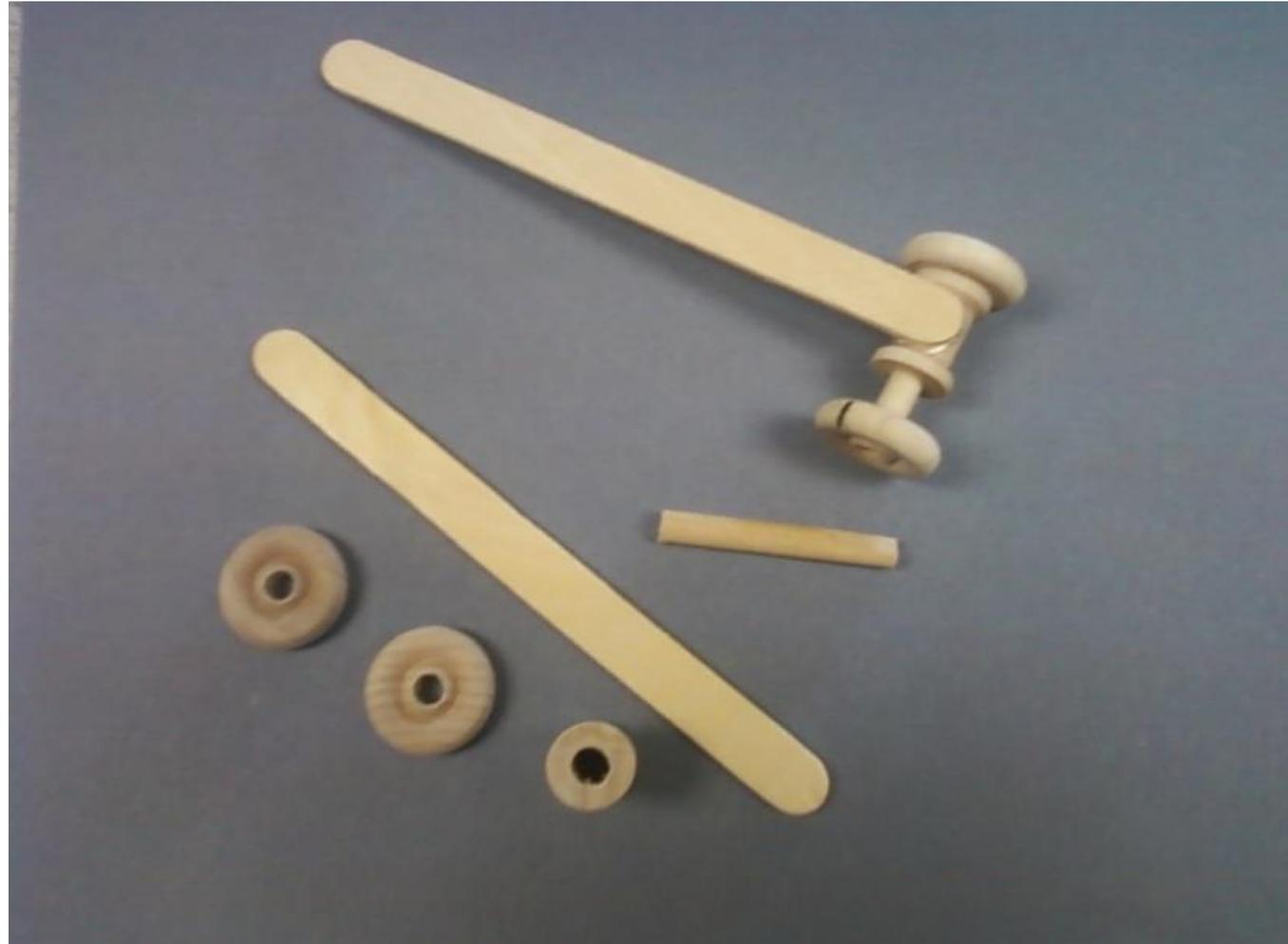


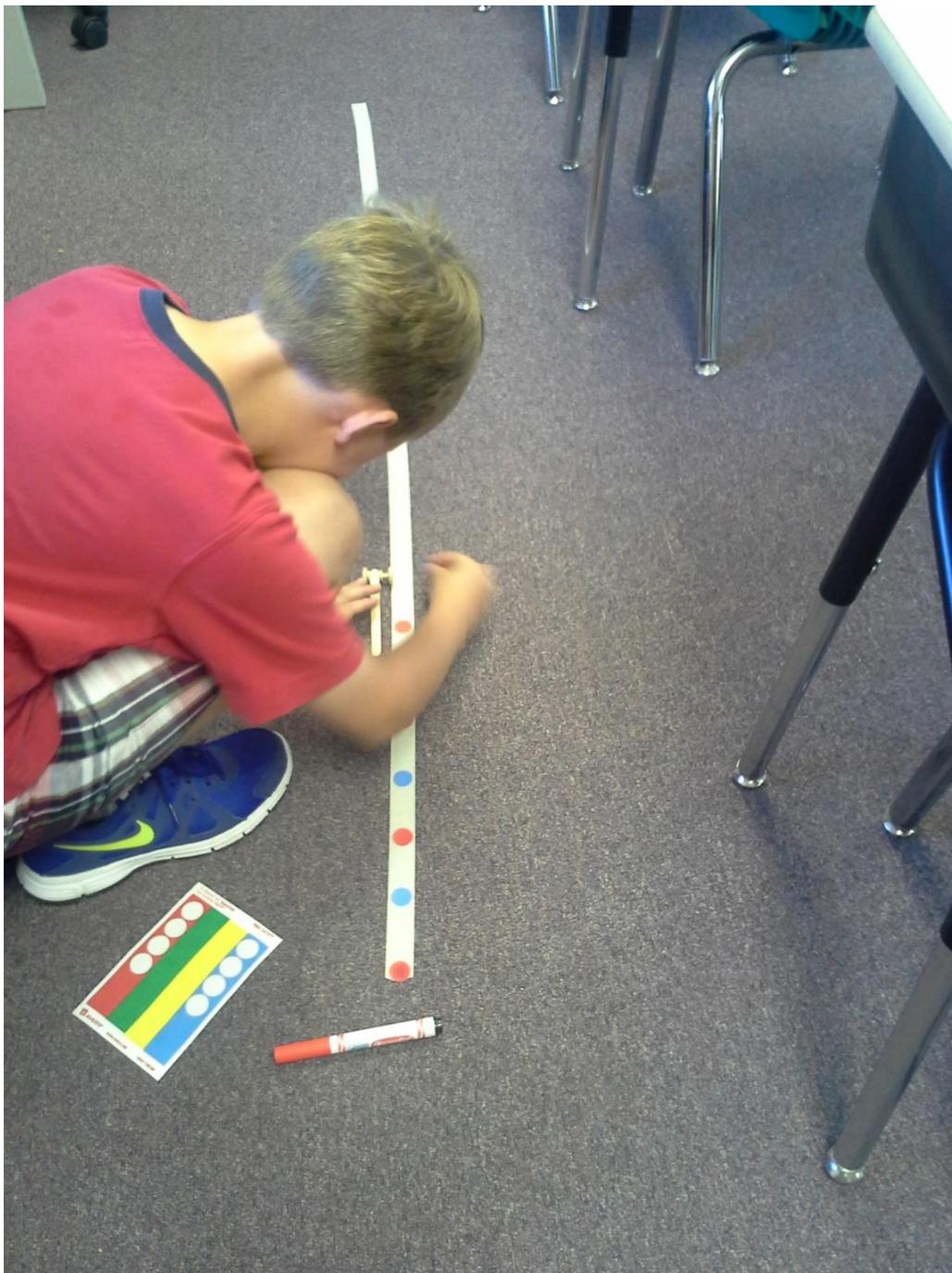


Nakayla Salvador  
2-23-2014

**What can we do?**

**Build Stuff.**



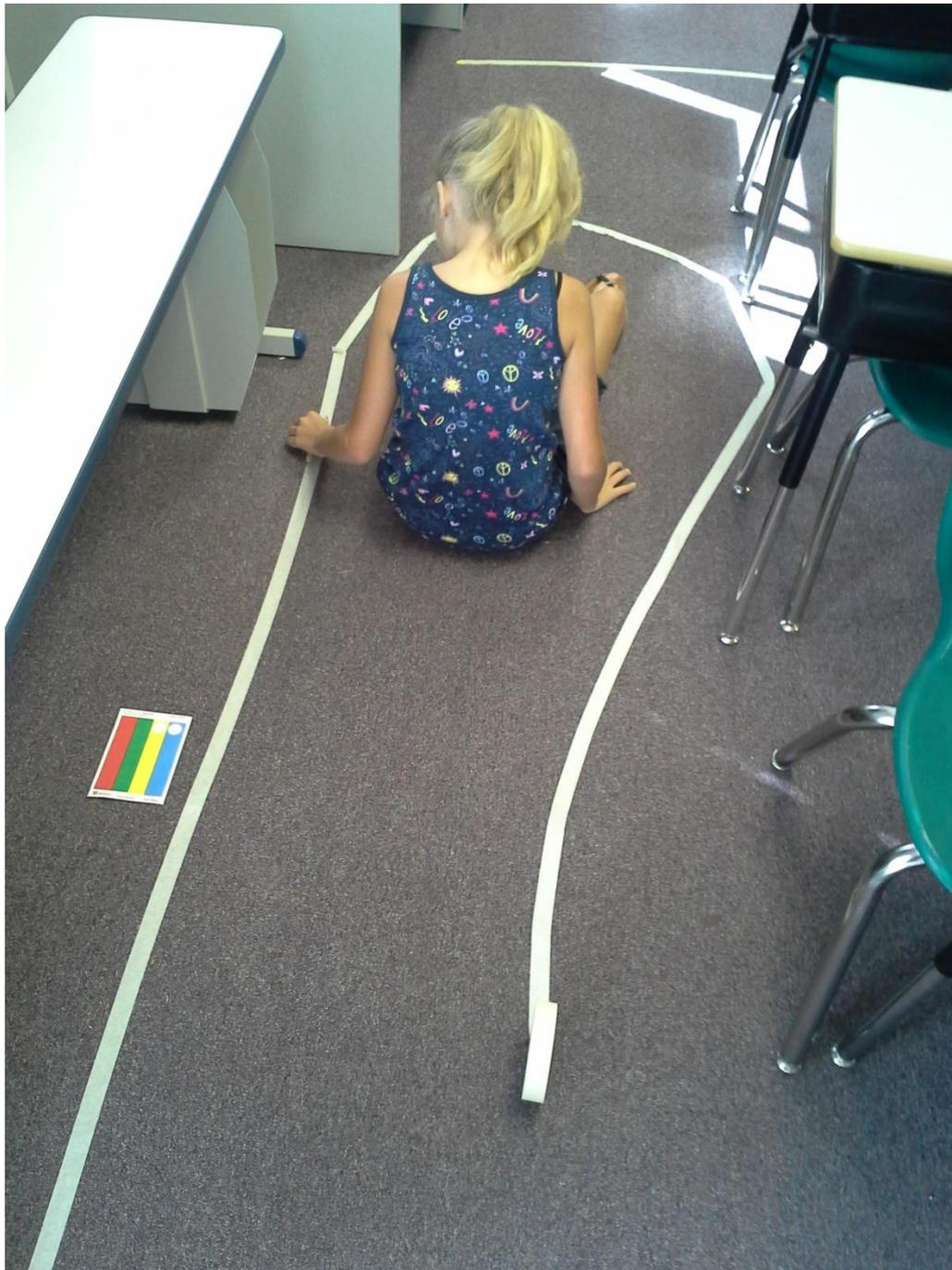


## **Hands-on Projects**

- **Slow down to speed up**
- **Think**
- **Process**
- **Absorb**

**Be a part of what  
your students  
experience.**

**Are they linear, or  
are they . . .**



**...not so  
linear.**

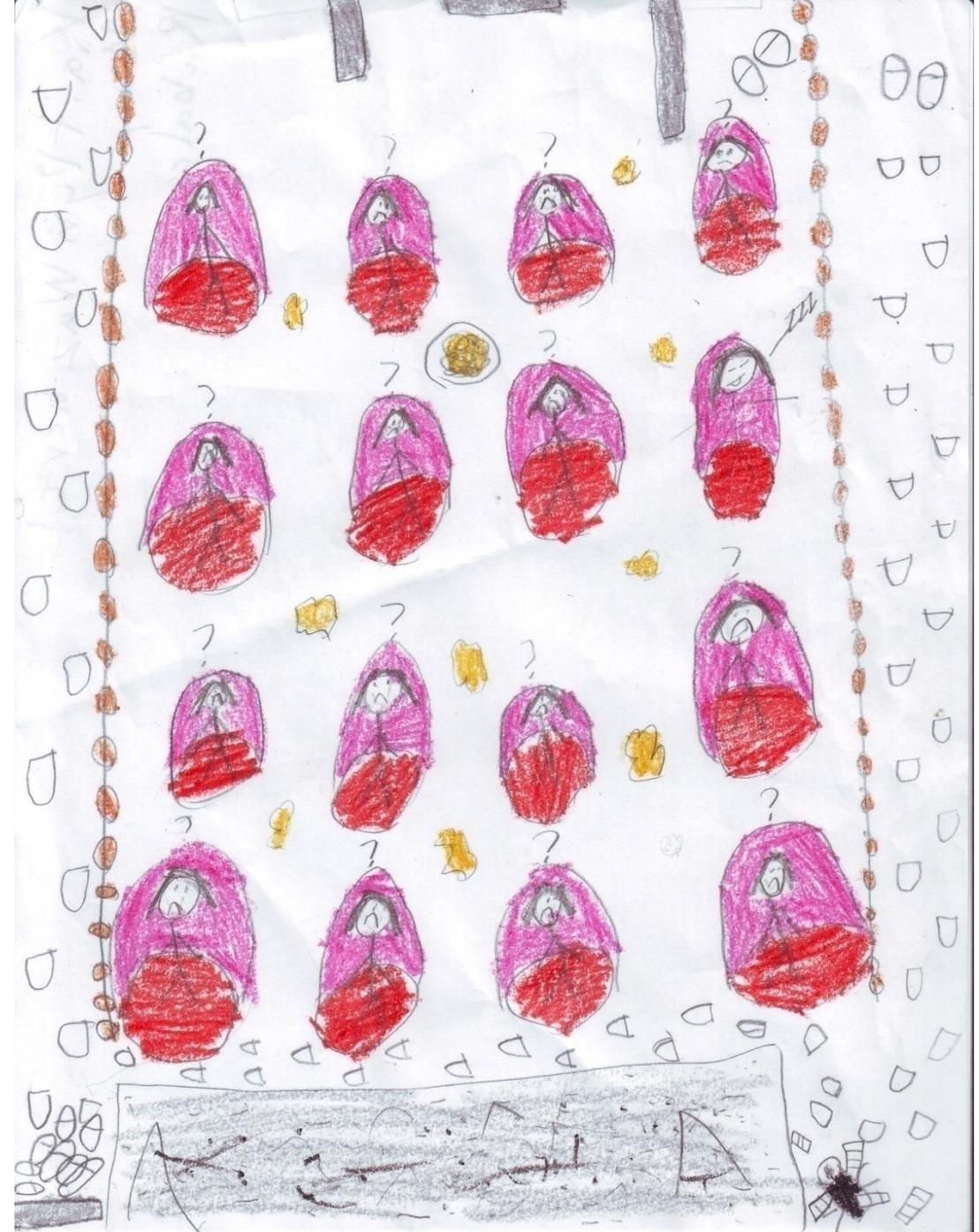


**Hands-on Projects Value  
Creativity and  
Originality**



# Using and Evaluating Student Products to Show Understanding

Included in the FREE RESOURCES Handout



Change Words  
into Images

Change Images  
into Words



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

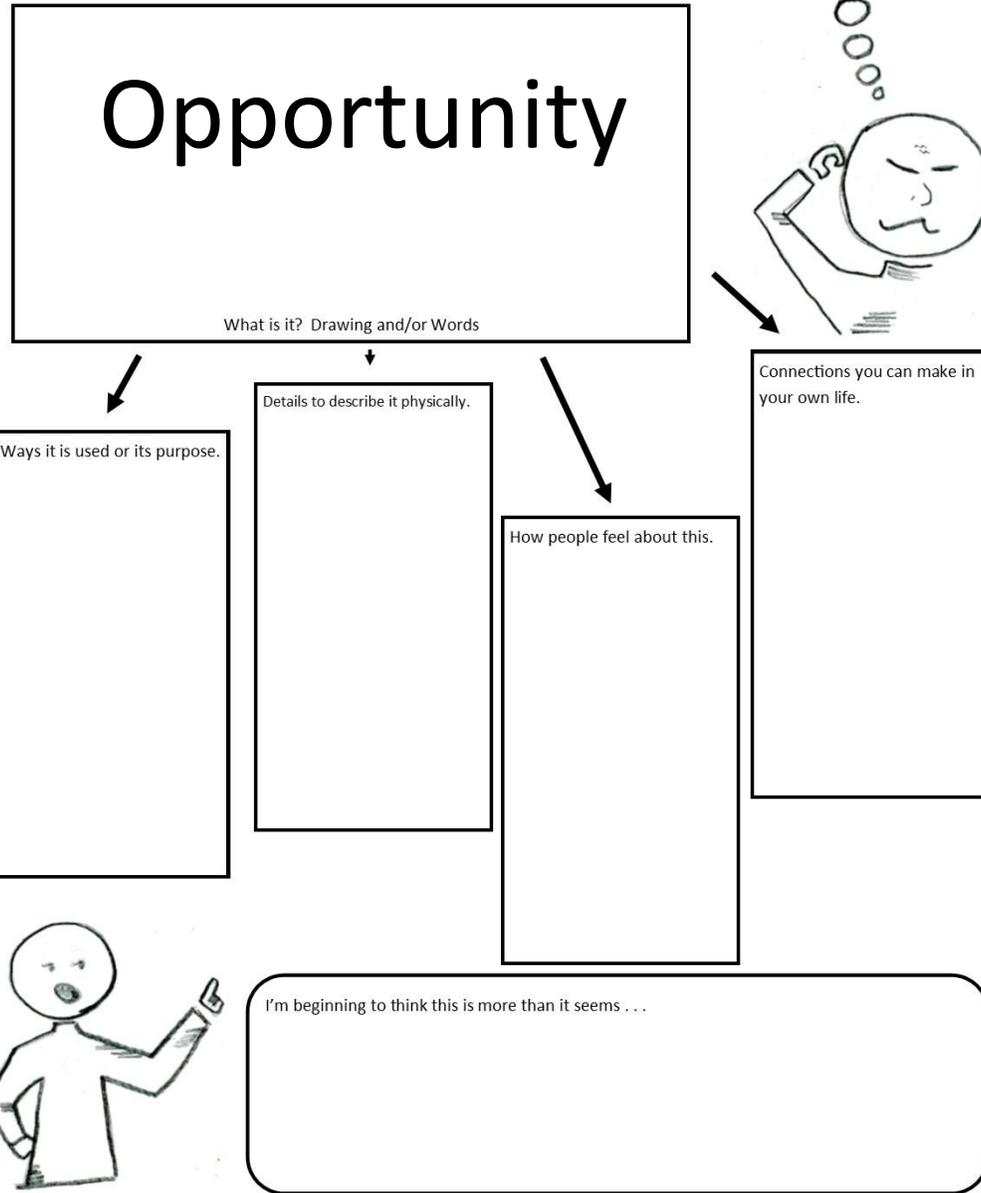
**opportunity**

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Name \_\_\_\_\_

**Wonderings: How can this thing be more than the thing itself?**

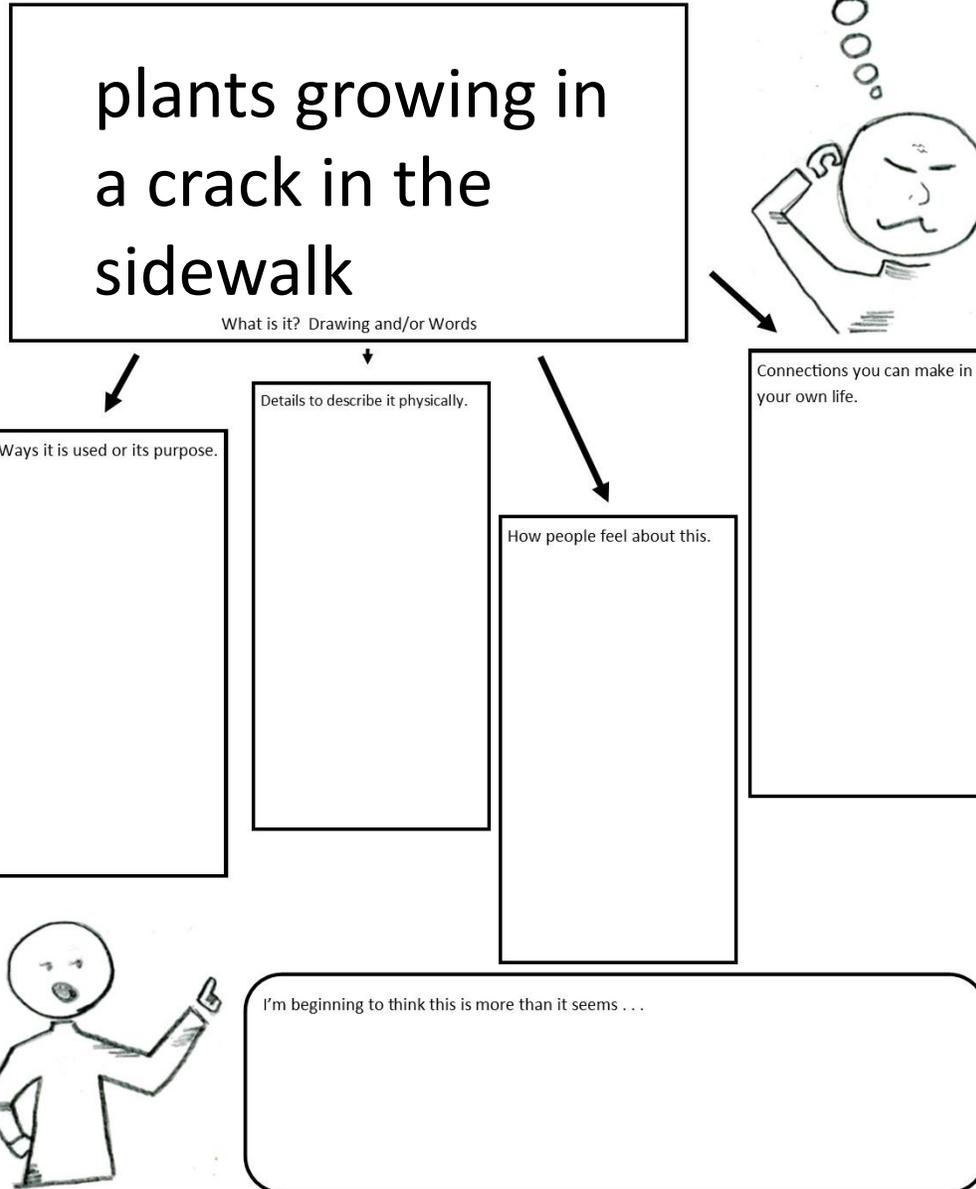


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## Wonderings: How can this thing be more than the thing itself?



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Add word here:



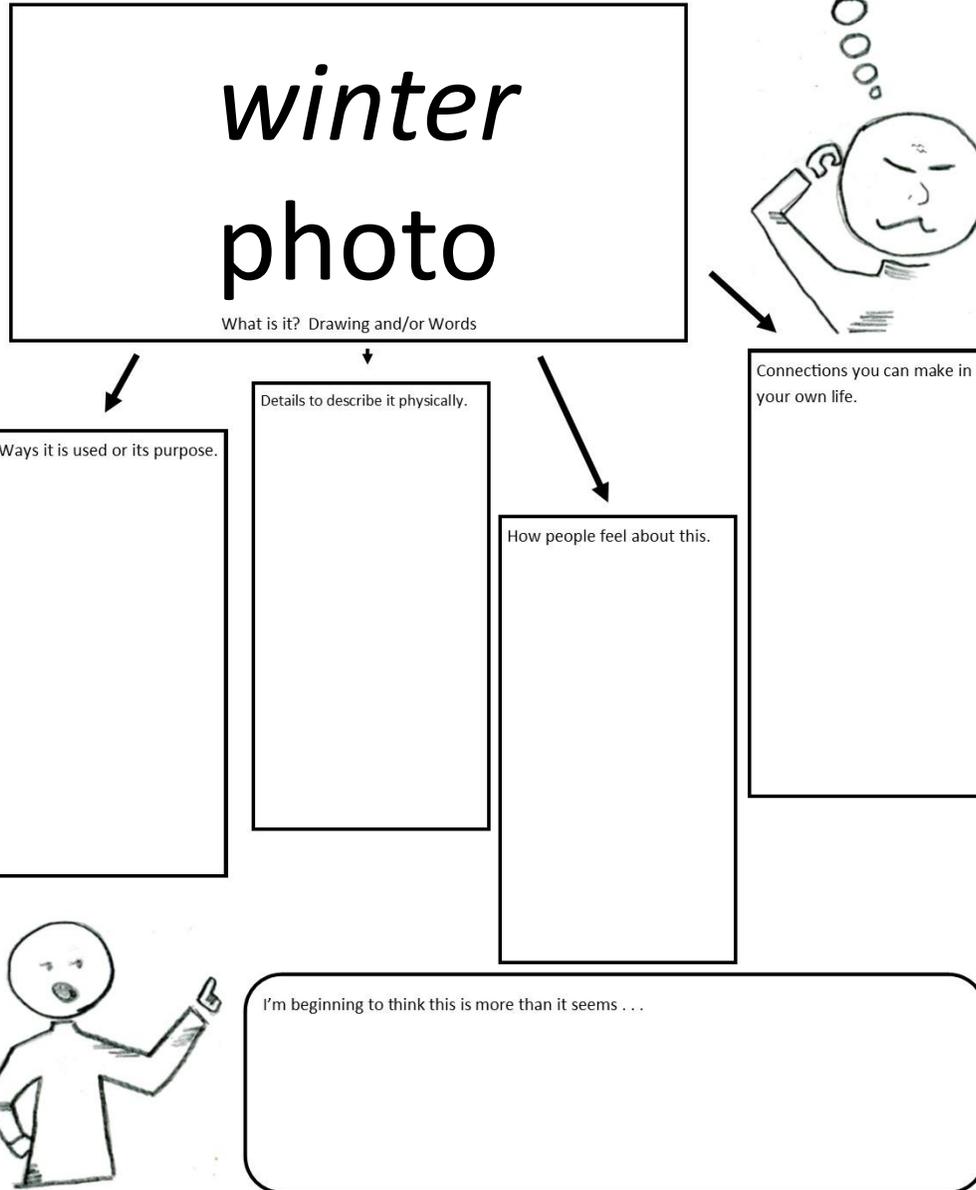
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## Wonderings: How can this thing be more than the thing itself?



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# Wishes

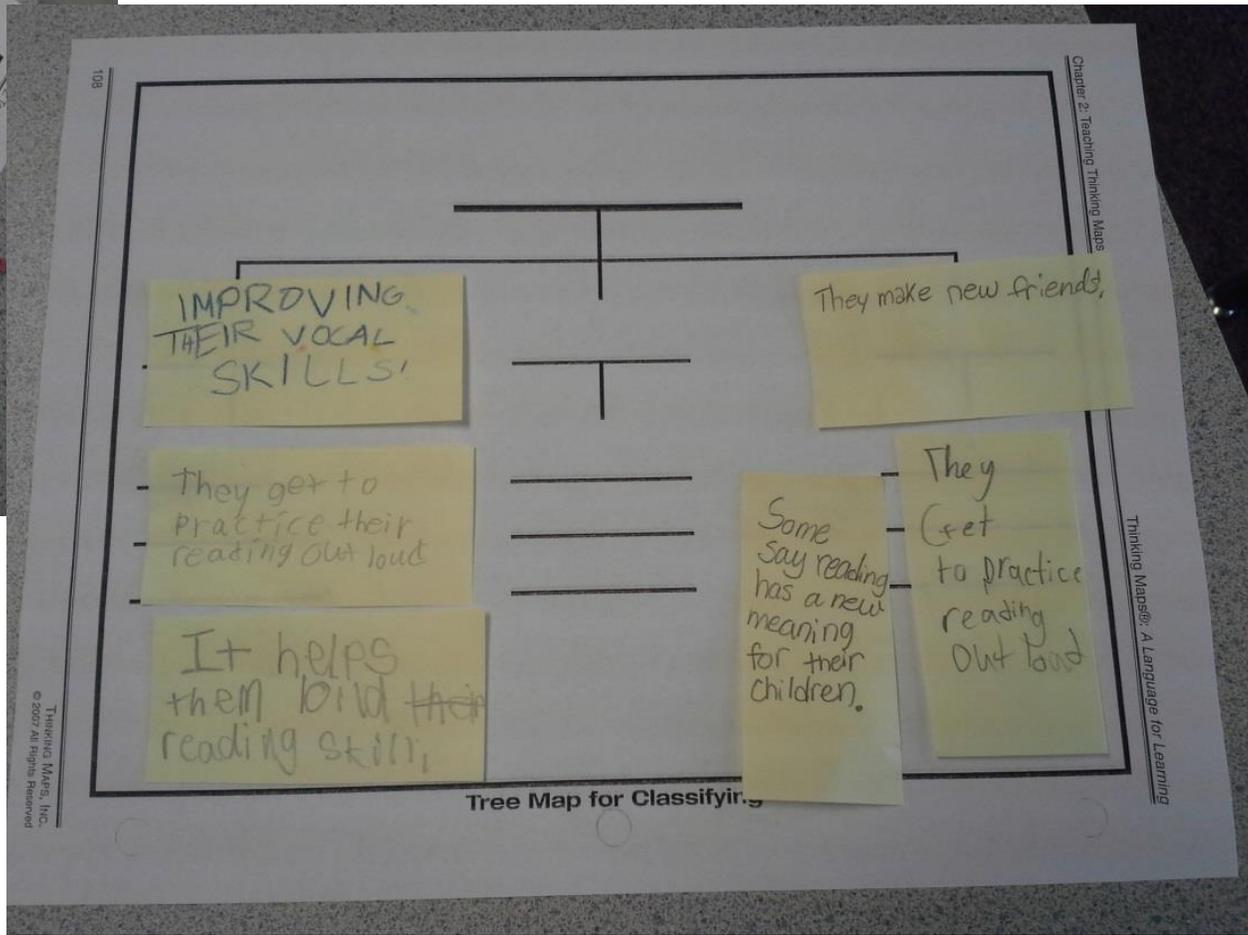
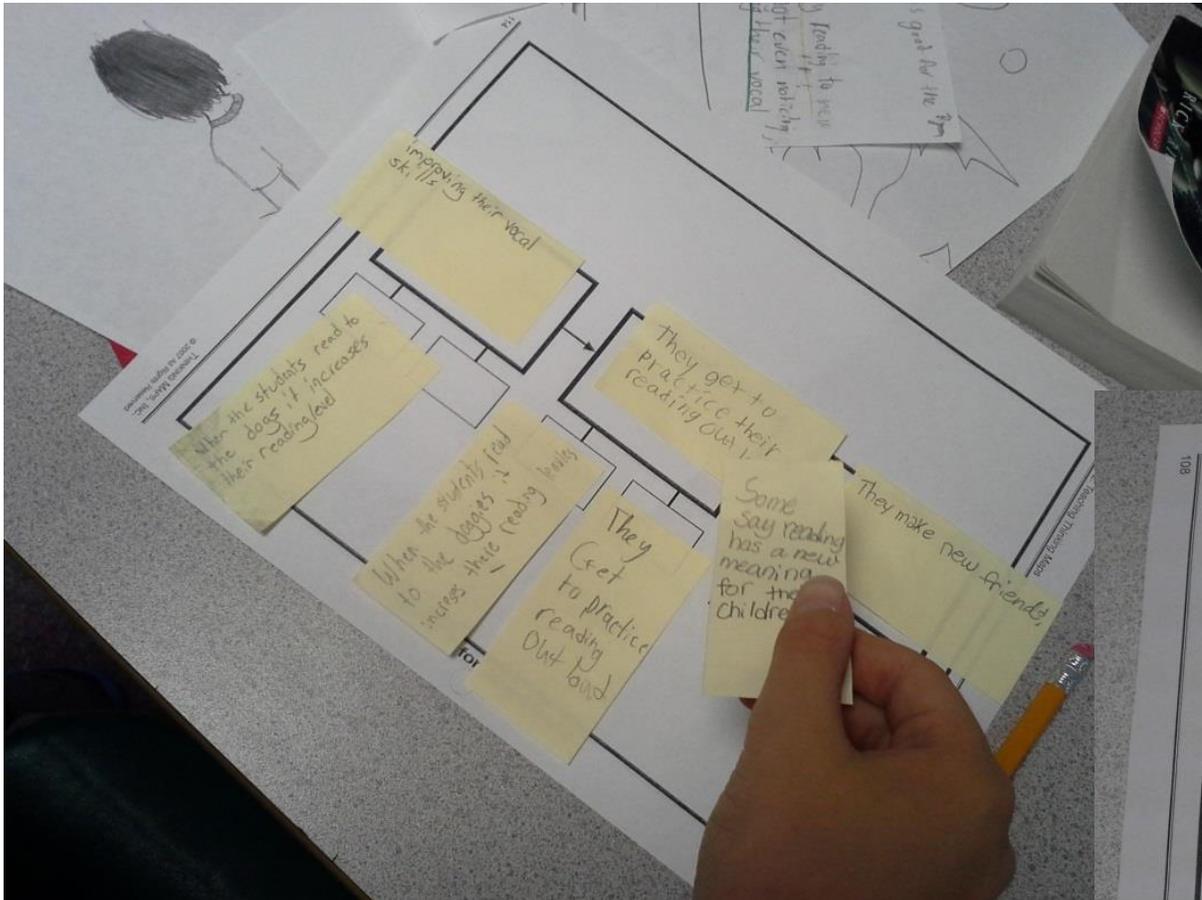
Insert picture here ....

What can we do?

Don't Write it More than Once.







**One study installed a program on college students' laptops that took a screen shot every 5 seconds. The study found that these college students switched tasks every 19 seconds and that 75% plus computer windows were open for less than one minute.**

--iGen by Jean M. Twenge

**Books are not fast enough.**



# Three ways to analyze a video:

- **Video Analysis Tool**
- **Round Table with Icons**
- **Metaphors Tool**

# KIDVIDTHINK DAILY



## Action League Now – Sinkhole of Doom

<https://www.youtube.com/watch?v=9P0w85Yb434>

1. How is the Action League team like a typical group of superheroes?
2. How are they unlike a typical group of superheroes?
3. Learn about IRONY. How is irony used to create humor in Action League Now?

Answers are Better When You Can Tell us WHY

### Challenges and Extension Ideas:

- Meltman is a silly sort of superhero. Create more just like him, and draw a picture of your new not-so-super heroes.
- Photograph some of your old action figures in interesting and creative situations around your house.



# What if Mozart were born in Mongolia?



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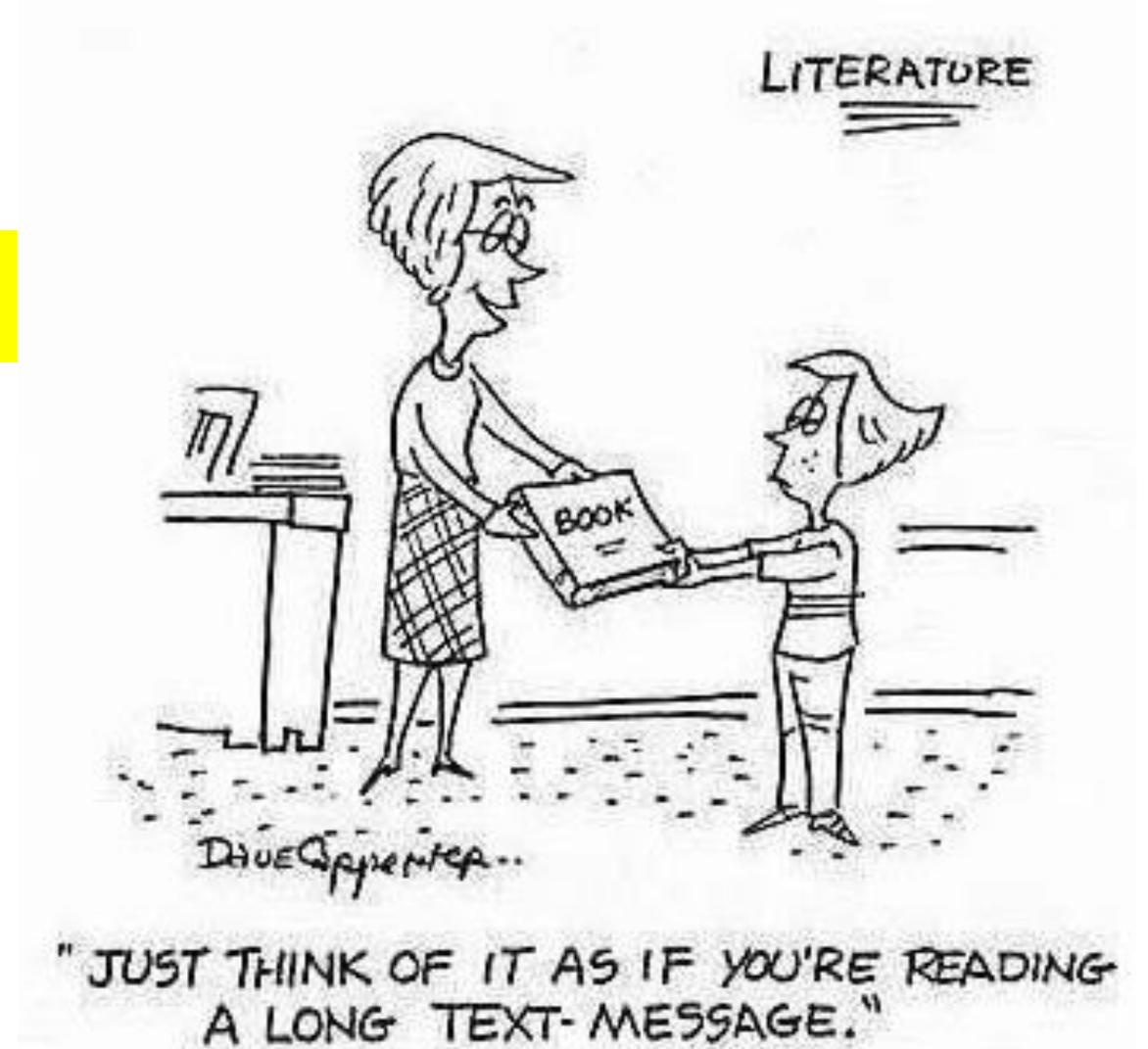




# **Renzulli's Three Rings – Modified Model**

Think about it . . .

**There is no such thing as an unmotivated student—only students in motivated states.**



**Do we see an  
adversary, or do  
we see  
potential?**

**Is it an ability or  
an inability?**

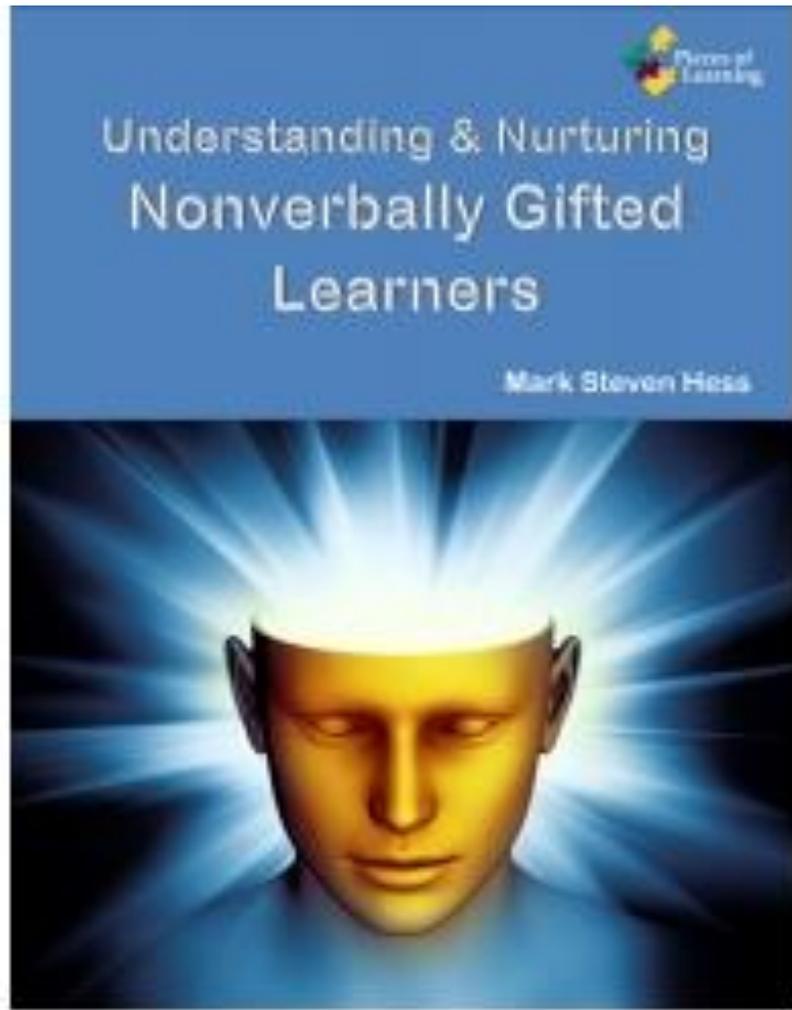
# Visual Tools for Reaching, Teaching, Engaging and Challenging Generation Z



[www.giftedlearners.org](http://www.giftedlearners.org)

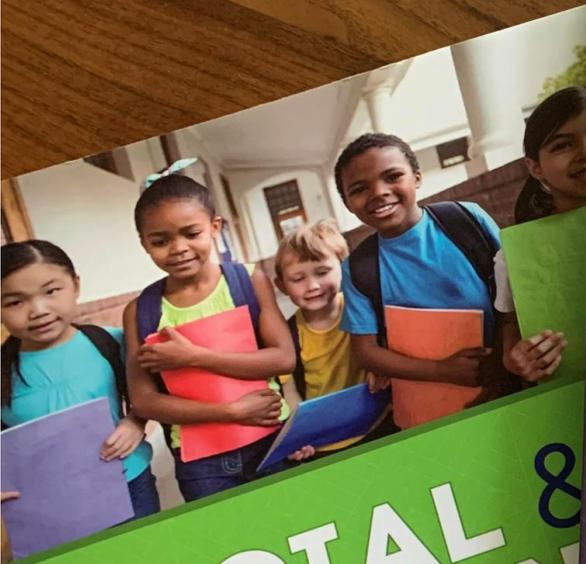
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[www.piecesoflearning.org](http://www.piecesoflearning.org)

- **Understanding and Nurturing Nonverbally Gifted Learners**



# SOCIAL & EMOTIONAL CURRICULUM FOR GIFTED STUDENTS

Project-Based Learning Lessons That Build Critical Thinking, Emotional Intelligence, and Social Skills

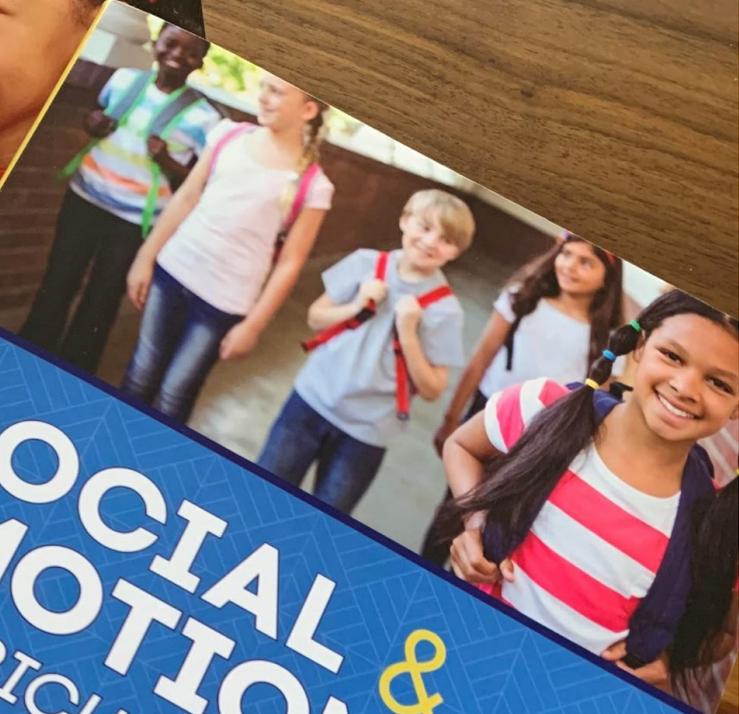
Mark Hess



# SOCIAL & EMOTIONAL CURRICULUM FOR GIFTED STUDENTS

Project-Based Learning Lessons That Build Critical Thinking, Emotional Intelligence, and Social Skills

Mark Hess



# SOCIAL & EMOTIONAL CURRICULUM FOR GIFTED STUDENTS

Project-Based Learning Lessons That Build Critical Thinking, Emotional Intelligence, and Social Skills

Grade 5

Mark Hess



- **Making Literacy Hands-on**

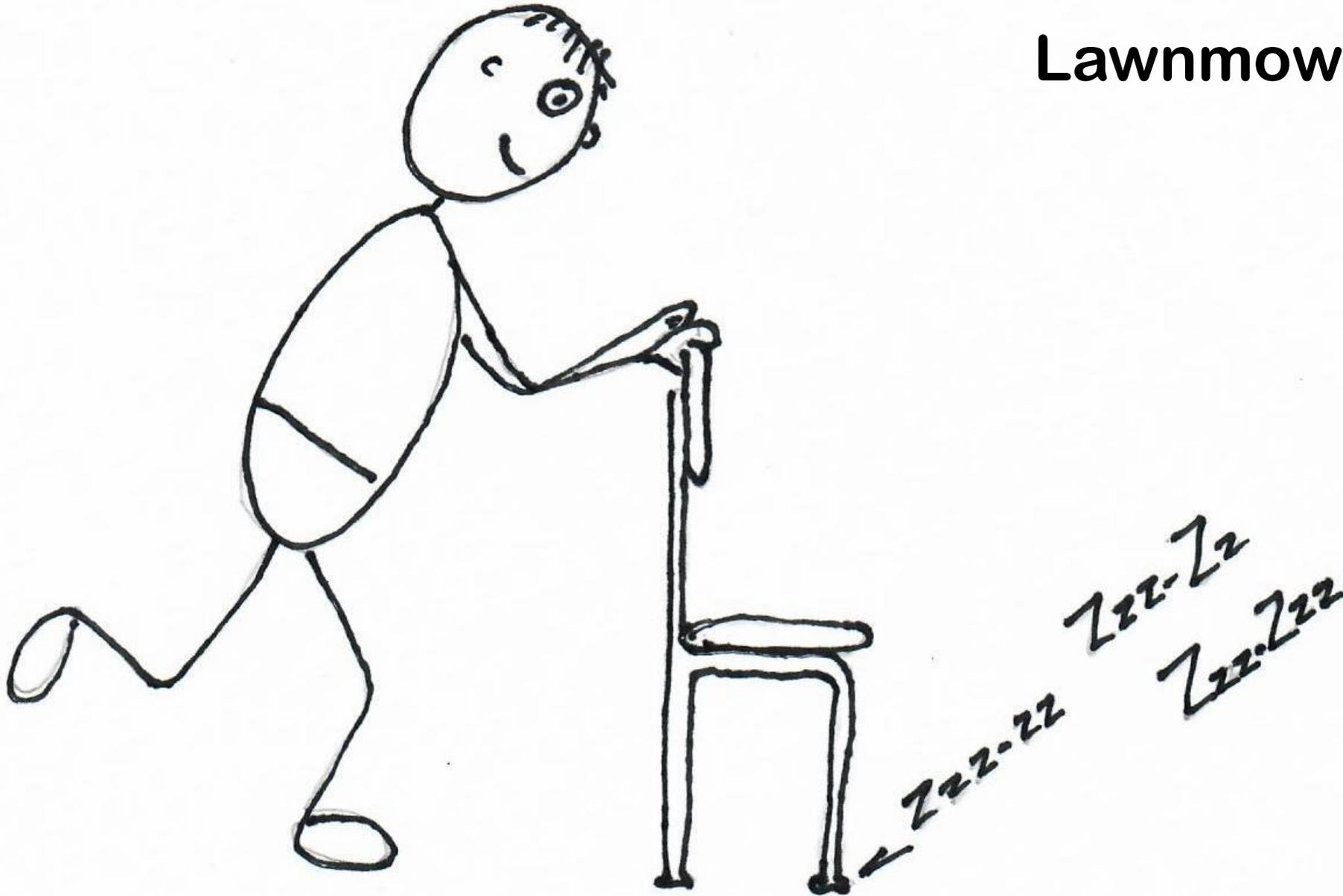


- **Zoom in On Metaphors for Critical Thinking**

**There is one group of students that appears to underachieve more than might be expected, namely gifted students (Kim, 2008; Reis & McCoach, 2002).**

**Another group that is reported to underachieve are the visual-spatial learners (Gohm, Humphreys, & Yao, 1998; Mann, 2005; Silverman, 2005).**

# Lawnmower Boy





**Positive  
Relationships have  
an effect size of  
0.74 for Learning**

# Join me for a Campfire Chat

See your TAGT schedule of events for details.

Contact:

[portablegiftedandtalented@gmail.com](mailto:portablegiftedandtalented@gmail.com)

[\*\*www.giftedlearners.org\*\*](http://www.giftedlearners.org)

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*Don't Let the Pigeon Drive the Bus* by Mo Willems

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*Understanding and Nurturing Nonverbally Gifted Learners* by Mark Steven Hess: [https://www.amazon.com/Understanding-Nurturing-Nonverbally-Gifted-Learners/dp/1937113914/ref=sr\\_1\\_1?dchild=1&keywords=understanding+and+nurturing+nonverbally+gifted+learners&qid=1591285336&sr=8-1](https://www.amazon.com/Understanding-Nurturing-Nonverbally-Gifted-Learners/dp/1937113914/ref=sr_1_1?dchild=1&keywords=understanding+and+nurturing+nonverbally+gifted+learners&qid=1591285336&sr=8-1)

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