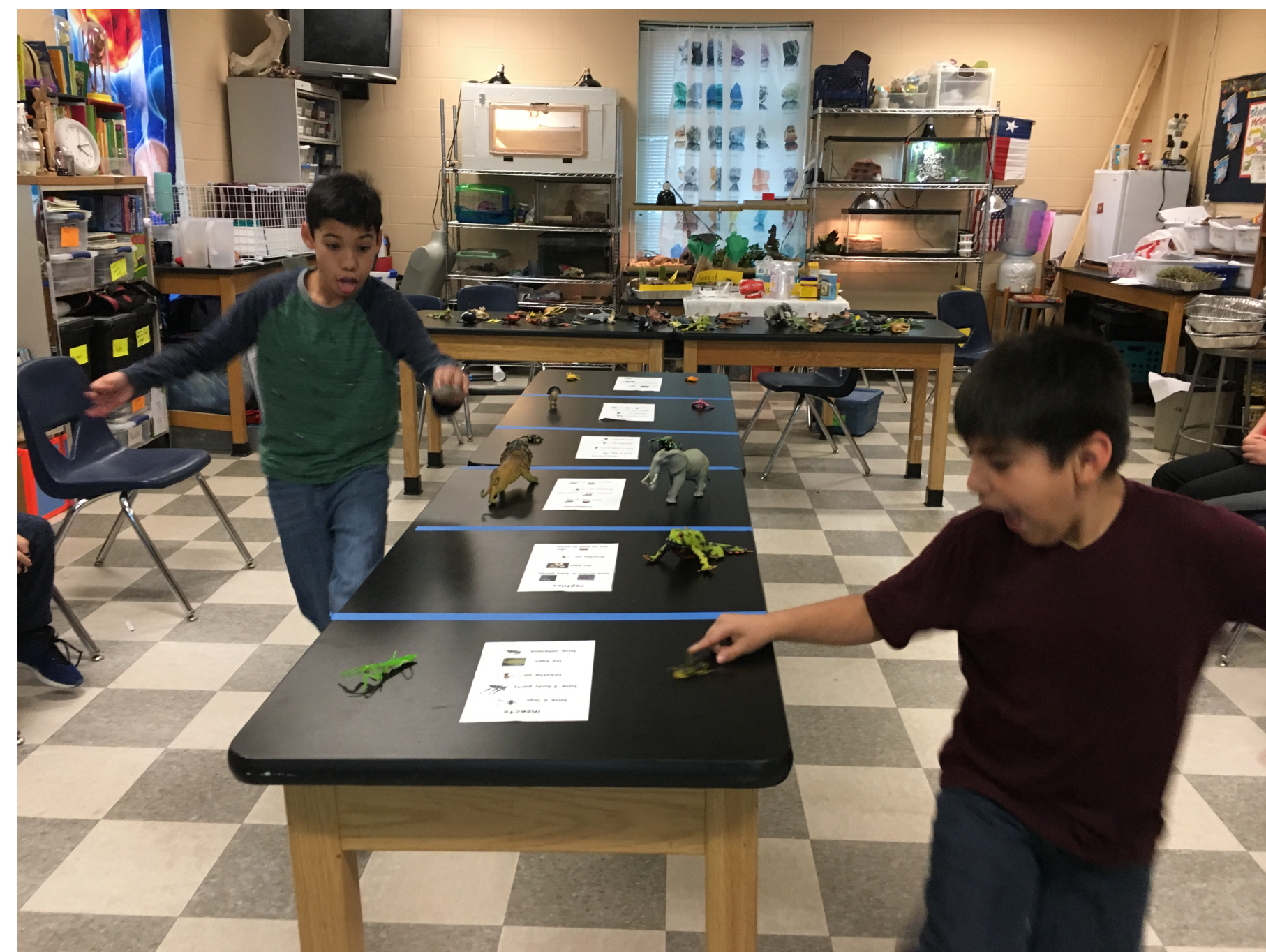


Tailored Teaching

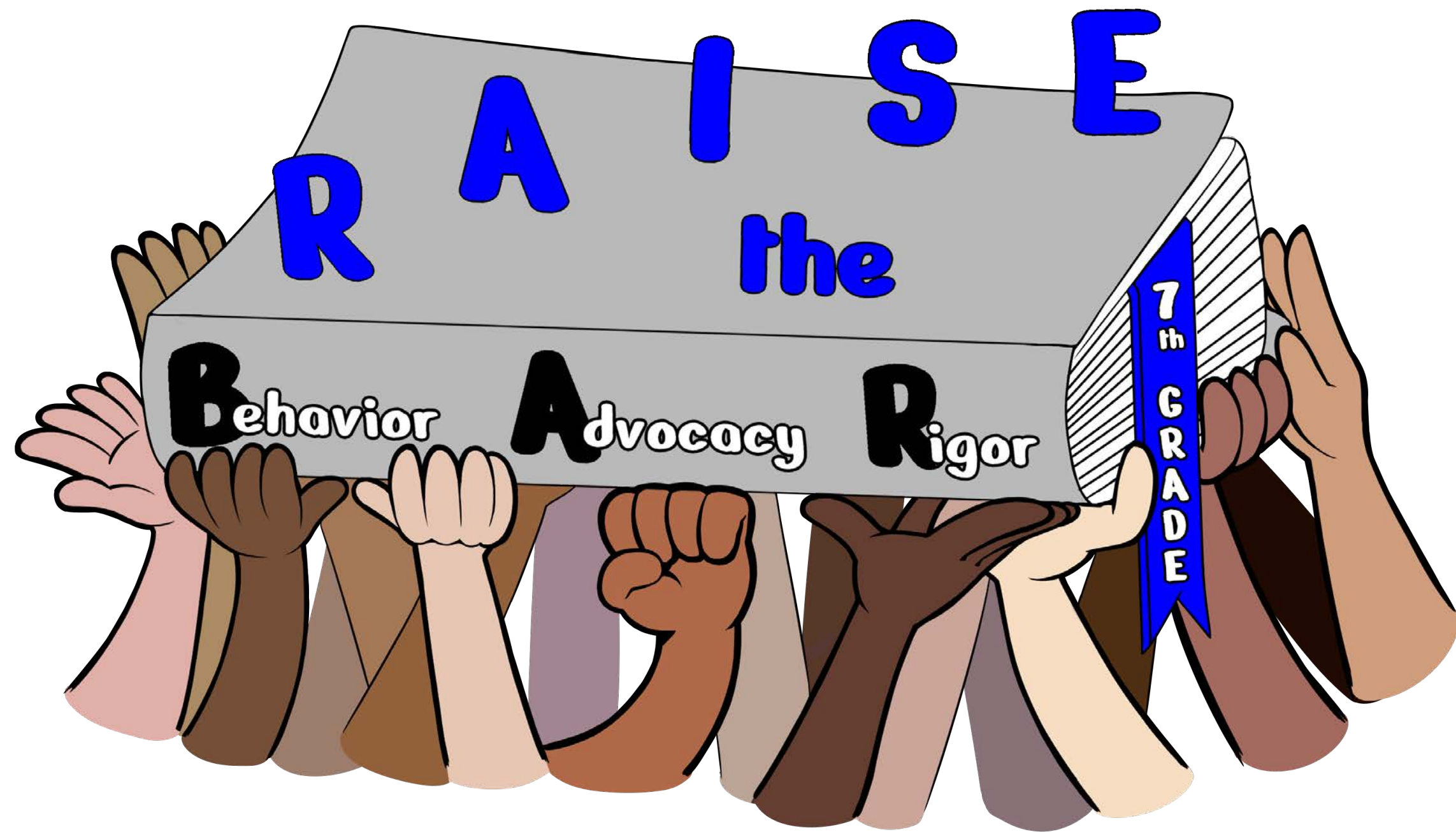
Innovative Differentiation Strategies for Deaf Students
in Science Education



Adopt a “Can Do” Attitude

Our positive assumptions will become a reality.





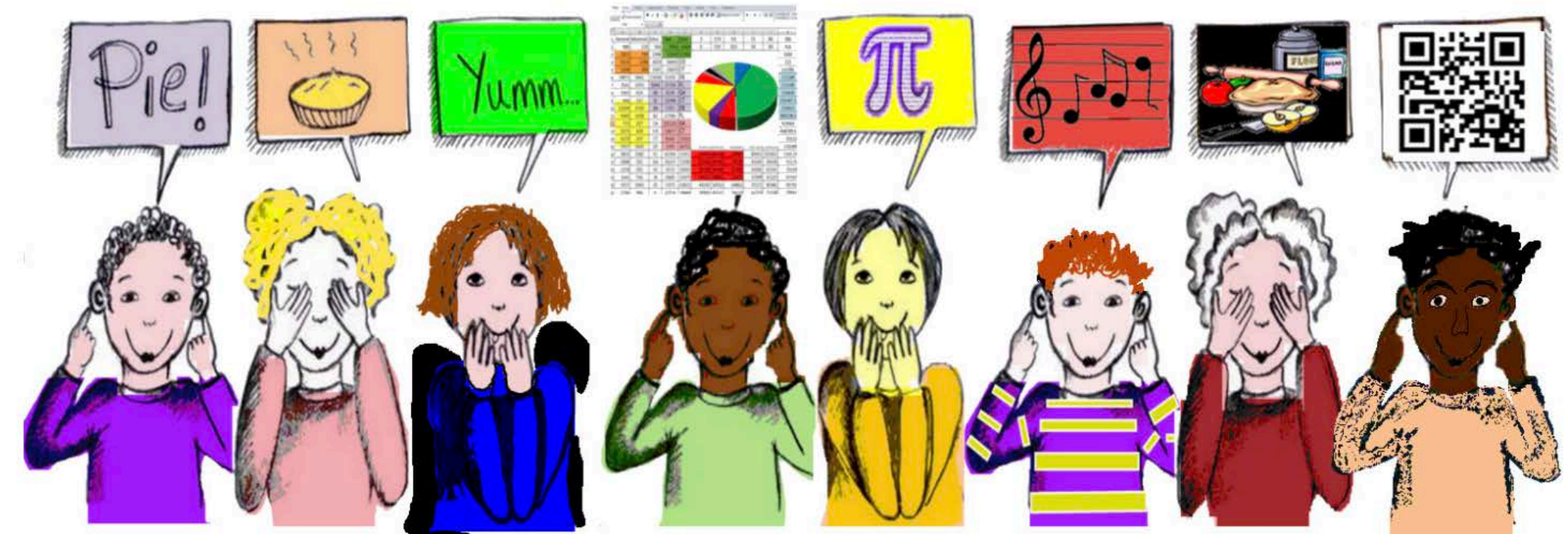
Agenda

- What is Differentiated Instruction?
- A look at the four elements of DI: (content, process, product, and learning environment)
- Examples of each

What is Differentiated Instruction?

Creating lessons that :

- highlight students' needs
 - grow students' interests
 - include students' preferred learning styles
- meet the same learning objectives for all students
 - personalize learning
 - emphasize students' strengths



Differentiation is not only for students with disabilities. It is for all students in all content areas.

Today, however, we will be focusing on how we can differentiate for Deaf students in Science classes.

The 4 Elements of Differentiated Instruction

Content: concepts and standards being taught

Process: HOW TEACHERS will be delivering the information (small groups, with visual supports, written materials, interactive lessons, working in pairs, etc.)

Product: HOW will the STUDENTS demonstrate what they learned (flexible means with clear expectations)

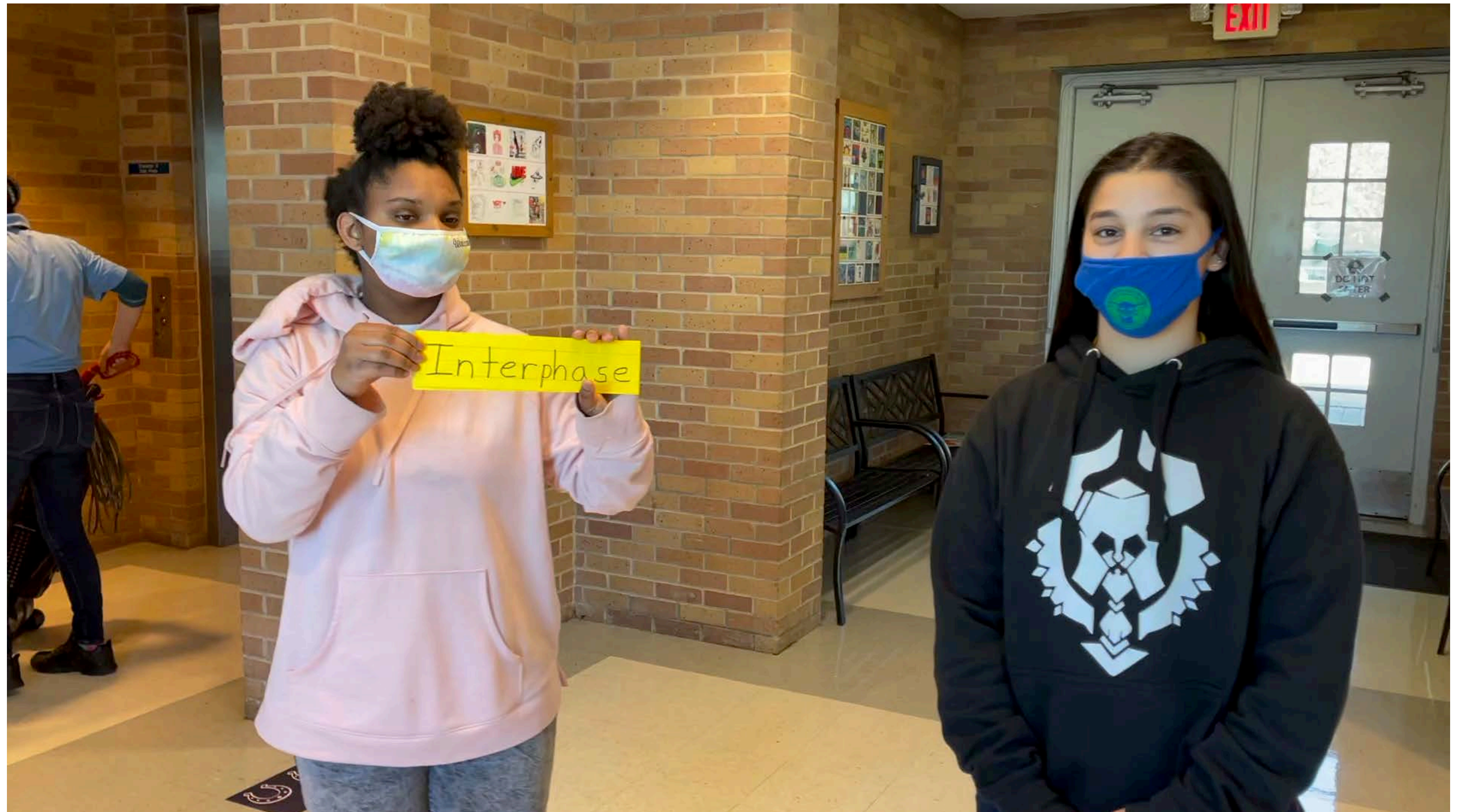
Environment: giving student options within the environment

Differentiating Content

This is the **WHAT** of your teaching. What is the State standard and which prerequisite skills do your students have/need to meet this standard?

Required Instructional Standard

STAAR Reporting Category 1 – Understanding and Analysis Across Genres/TEKS 7.2: Students understand new vocabulary and use it when reading and writing.



Use a standards tool to analyze student baselines and how to build towards grade level mastery.

**STAAR Alternate 2
Prerequisite Skill Guide**

Subject: Reading **Grade:** 7 **Student:** _____

Essence Statement RC1: Identifies new vocabulary words in text using a variety of strategies. (7.2)

STAAR Reporting Category 1 – Understanding and Analysis Across Genres/TEKS
7.2: Students understand new vocabulary and use it when reading and writing.

Directions: Begin at the bottom of each focus and check off the prerequisite skills the student has mastered. Begin instruction at the next highest prerequisite skill not yet mastered. Work on skills in each focus area (as appropriate) in order to instruct the depth and breadth of the Curriculum Framework. (Note: Essence statements may have more than one focus.)

Focus: Reading/Vocabulary Development			Date:
More Complex	Grade	Prerequisite Skills:	Mastered/M Targeted/T
↑	6	explain the meaning of foreign words and phrases commonly used in written English (e.g., <i>RSVP, que sera</i>)	
	6	complete analogies that describe part to whole or whole to part (e.g., ink:pen as page: _____ or pen:ink as book: _____)	
	6	use context (e.g., cause and effect or compare and contrast organizational text structures) to determine or clarify the meaning of unfamiliar or multiple meaning words	
	5-8	use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine the meanings, syllabication, pronunciations, alternate word choices, and parts of speech of words	
	3	identify the meaning of common prefixes (e.g., in-, dis-) and suffixes (e.g., -full, -less), and know how they change the meaning of roots	
	2	alphabetize a series of words and use a dictionary or a glossary to find words	
	2	identify and use common words that are opposite (antonyms) or similar (synonyms) in meaning	
	2	use context to determine the relevant meaning of unfamiliar words or multiple-meaning words	
	2	use prefixes and suffixes to determine the meaning of words (e.g., allow/disallow)	
	1	alphabetize a series of words to the first or second letter and use a dictionary to find words	
	1	identify and sort words into conceptual categories (e.g., opposites, living things)	
	1	determine what words mean from how they are used in a sentence, either heard or read	
	1	determine the meaning of compound words using knowledge of the meaning of their individual component words (e.g., lunchtime)	
	1	identify words that name actions (verbs) and words that name persons, places, or things (nouns)	
	1	use a picture dictionary to find words	
	1	identify and sort pictures of objects into conceptual categories (e.g., colors, shapes, textures)	
	K	recognize that compound words are made up of shorter words	

From this standards example: Provide tools for students to use when confronting new Science vocabulary.

Prefix & Suffix Reference Sheet

Prefix/Suffix	Meaning
a-	Lacking; none
ana-	Apart
auto-	Self
bi-	Two; twice; double
bio-	Life; living
carb-	Carbon
cell-	Chamber
chlor-	Green
chrom-	Color
co-	With, together
cyt-	Cell
di-	Two; double
en- / endo-	In
exo-	out
extra-	Outside, beyond
gene-	Origin; birth
hetero-	Different
homo-	Same; alike
hydr-	Water
hypo-	Beneath; under; less
hyper-	Above; over
intra-	Inside
iso-	Same
lip-	Fat
-logy	Study
-lys, -lyt, -lyst	Split, dissolve

Prefix/Suffix	Meaning
macro-	Large
meta-	Along, middle
micro-	Small
mono-	Single
multi-	Many
non-	Not
oo- / ov-	egg
phag-	Eat
-philic	Love, attraction
-phobic	Fear of
photo-	Light
-phyll	Leaf
poly-	Many
plasm-	Form
pre-	Before; ahead of time
pro-	Forward, before
-sacchar-	Sugar
scope	Look; observe
sperm-	Seed
-synthesis	Put together, make
telo-	End
trans-	Across
tri-	Three
-troph	Nourishment, food
uni-	One



The sun gives us light to see everything.



The sun keeps us warm. It warms up the ground,



animals, and water.

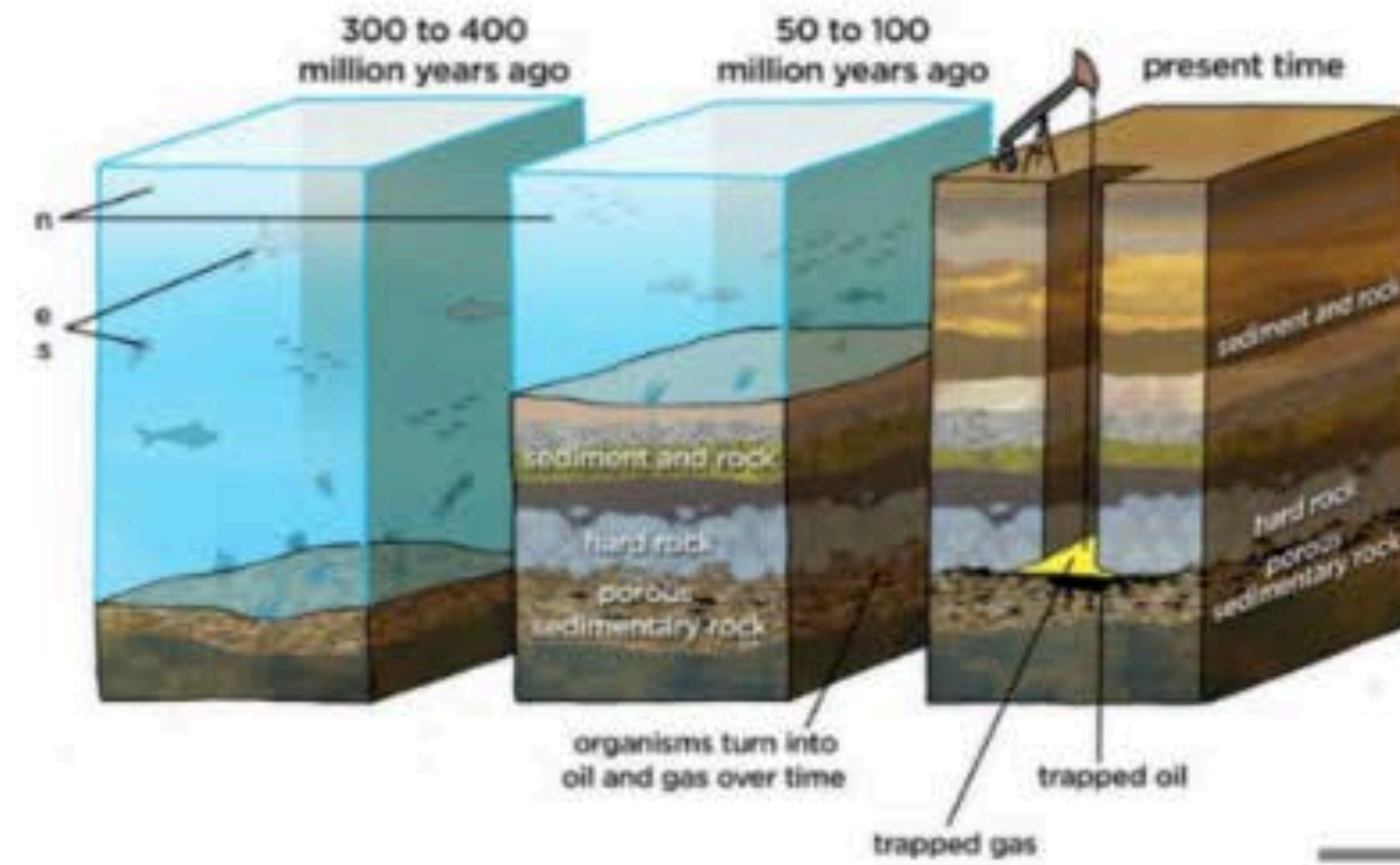


The sun is renewable because it's there all the time and won't



run out for a long, long time.

Oil



Oil takes millions of years to make.



Oil is made of dead animals and plants.



We will run out of oil before making more.



We should drive gas cars less.

Make learning objectives clear.



state objective #1

Identify the functions of the human body systems.

- integumentary
- skeletal
- muscular
- circulatory
- respiratory
- digestive
- excretory
- nervous
- immune

Make learning objectives clear.



I can **identify** and **define** parts of the integumentary system and **explain** its functions.


Make learning objectives clear.








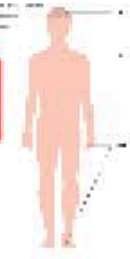

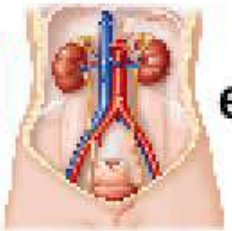






Why do I need to know this?

It's important to learn about the system that protects everything inside me!


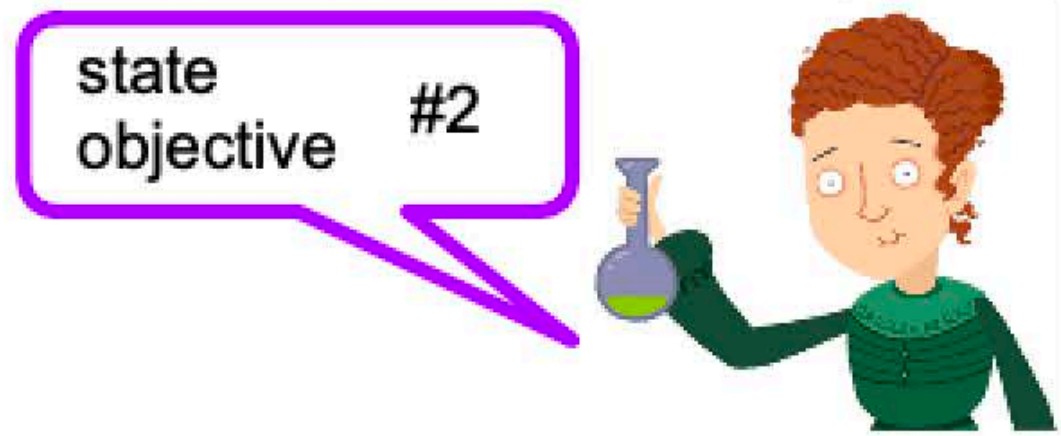
Make learning objectives clear.

 **state objective #1**

  
Identify function of the human
 
body systems .


<input type="checkbox"/>  integumentary	<input type="checkbox"/>  circulatory	<input type="checkbox"/>  excretory
<input type="checkbox"/>  skeletal	<input type="checkbox"/>  respiratory	<input type="checkbox"/>  nervous
<input type="checkbox"/>  muscular	<input type="checkbox"/>  digestive	<input type="checkbox"/>  immune

Make learning objectives clear.



Today's objective

I can identify and define parts of the integumentary system and explain its function.



Make learning objectives clear.



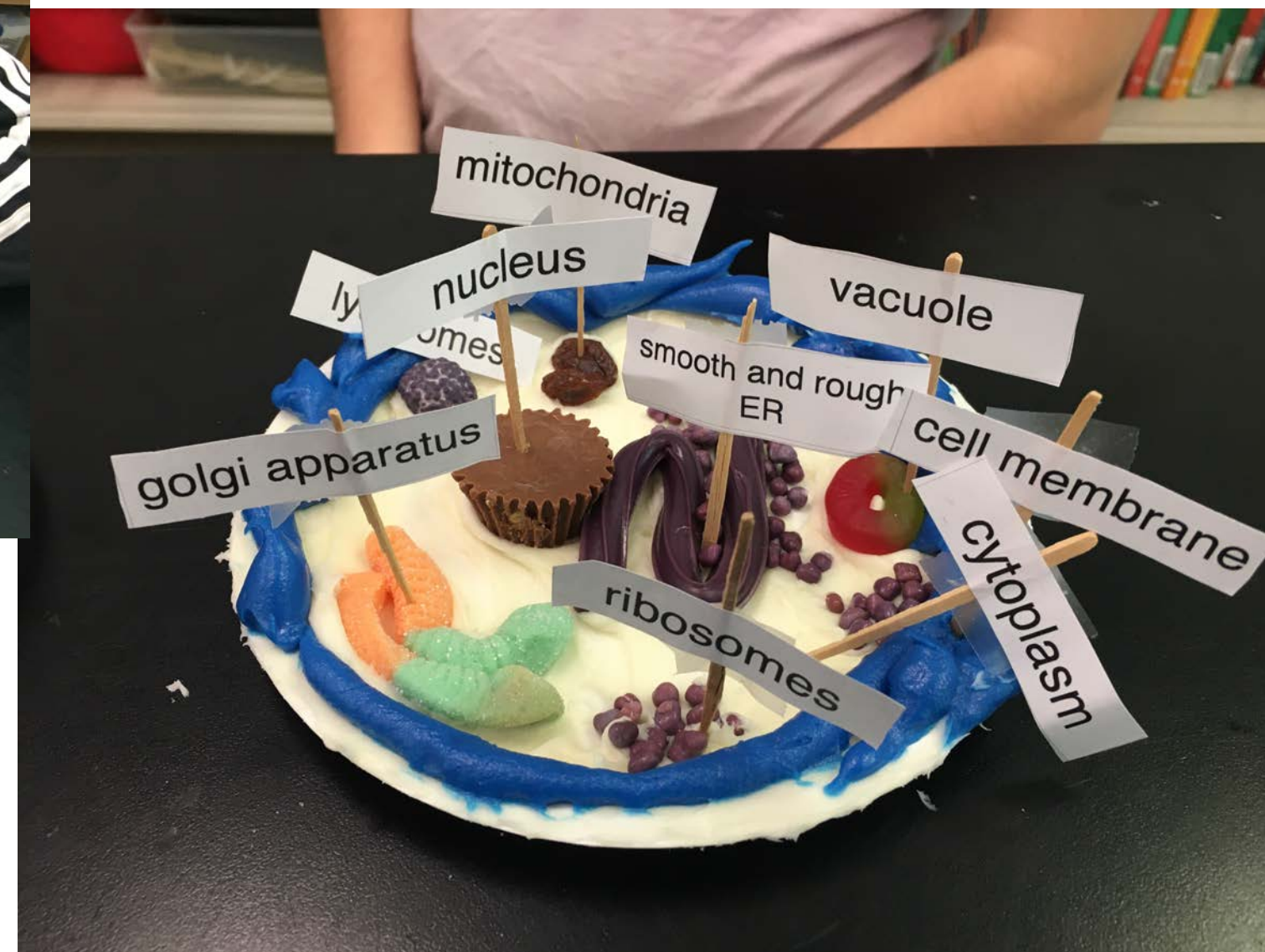
Why do I need to know this?

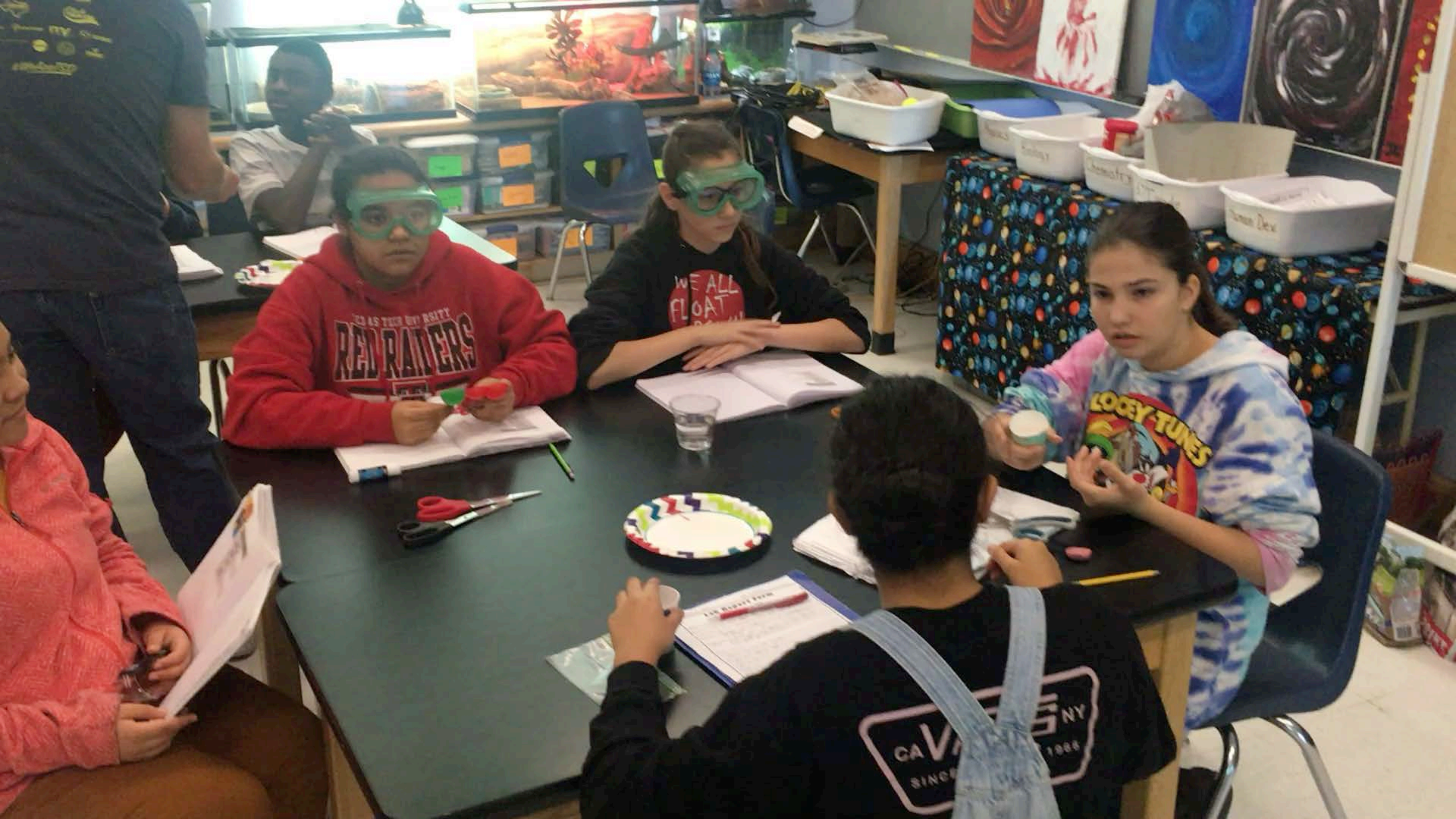
It's important to learn about the system that protects everything inside me!

How do you currently differentiate content in your Science lessons?

Differentiate the Process

This is about teaching students different ways to learn the material. Provide them with multiple inputs to touch on different learning preferences.



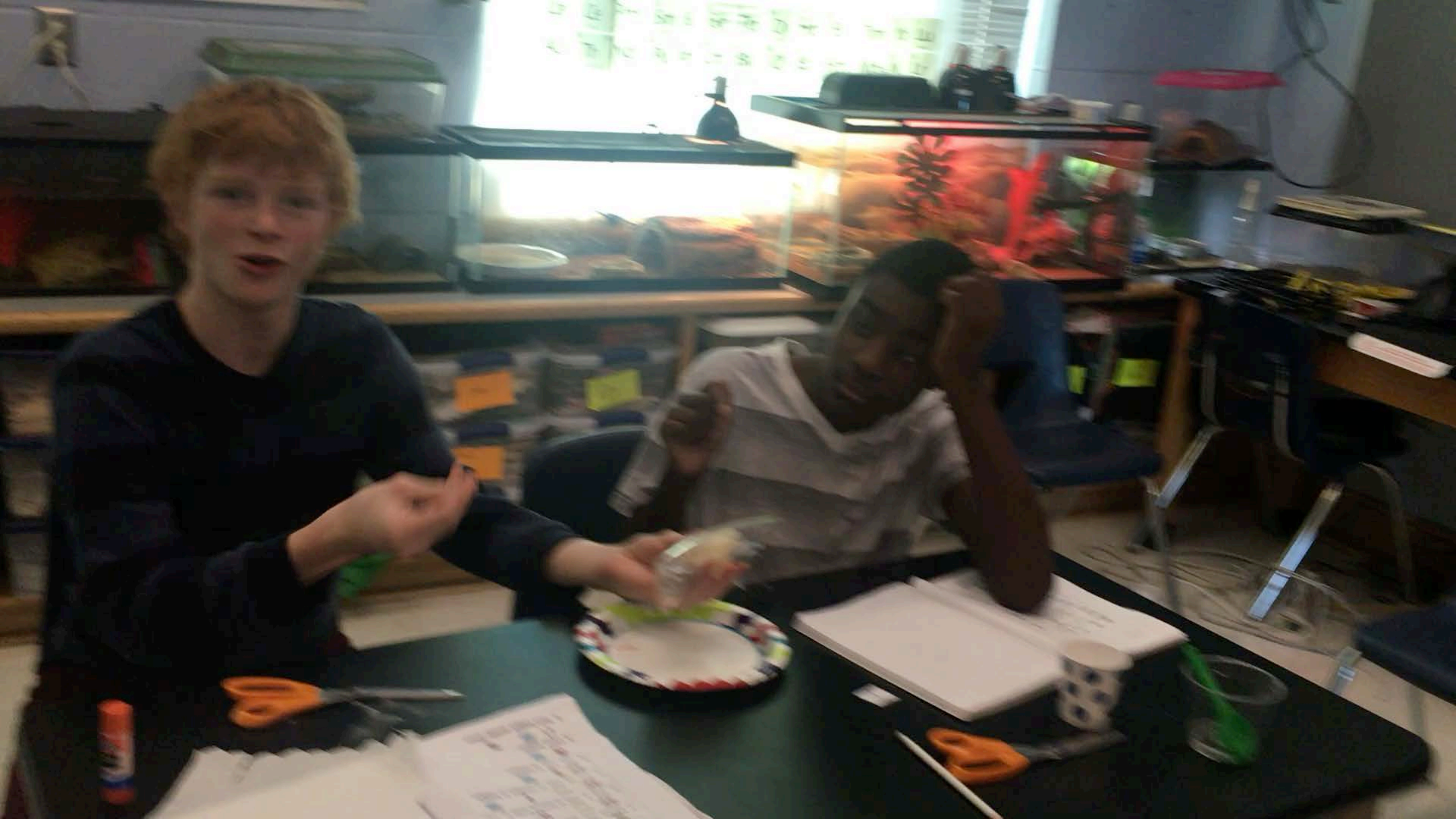


TEXAS TECH UNIVERSITY
RED RAINBOWS

WE ALL
FLOAT

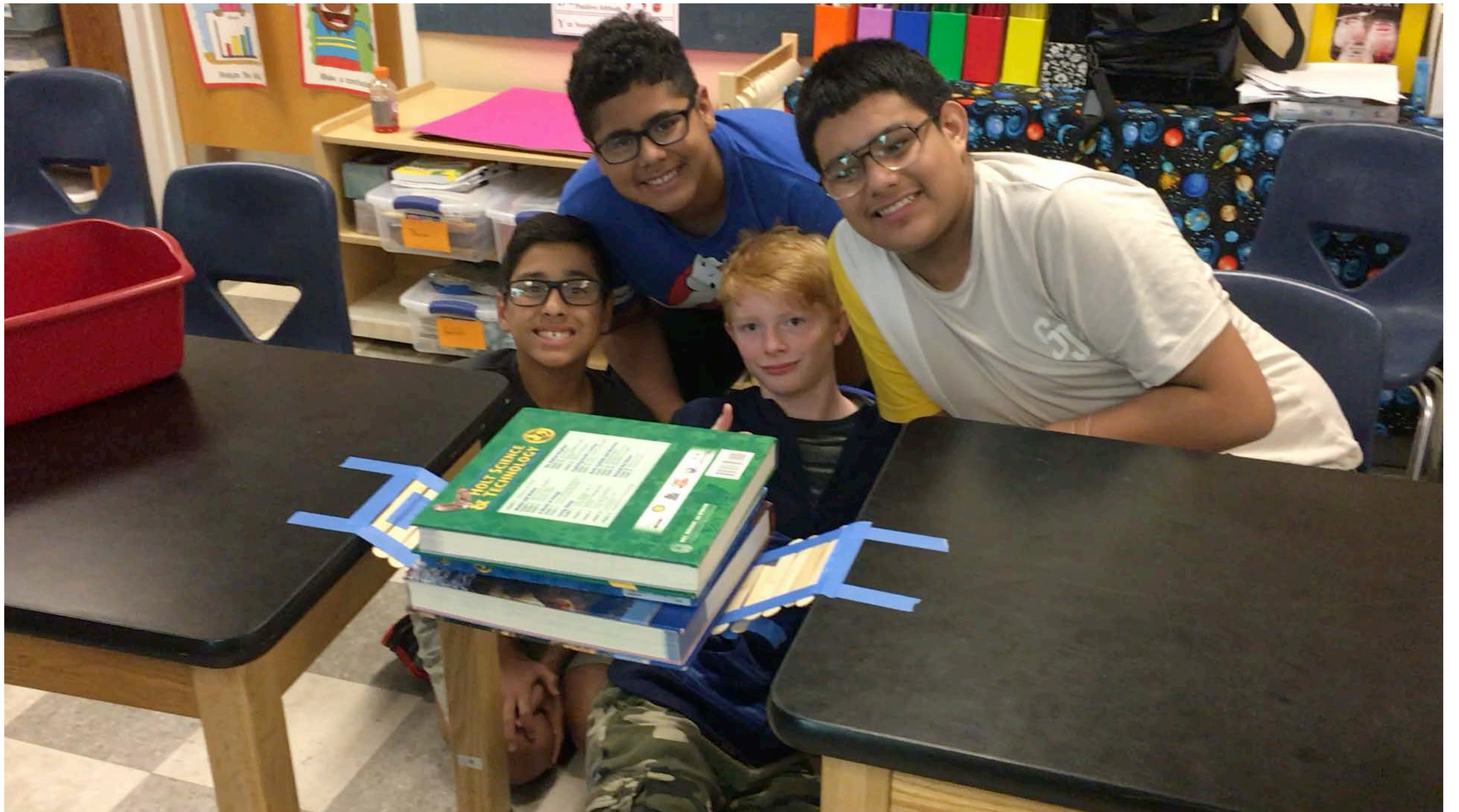
LOONEY TUNES

CAV
SINCE
1986



Digestive System

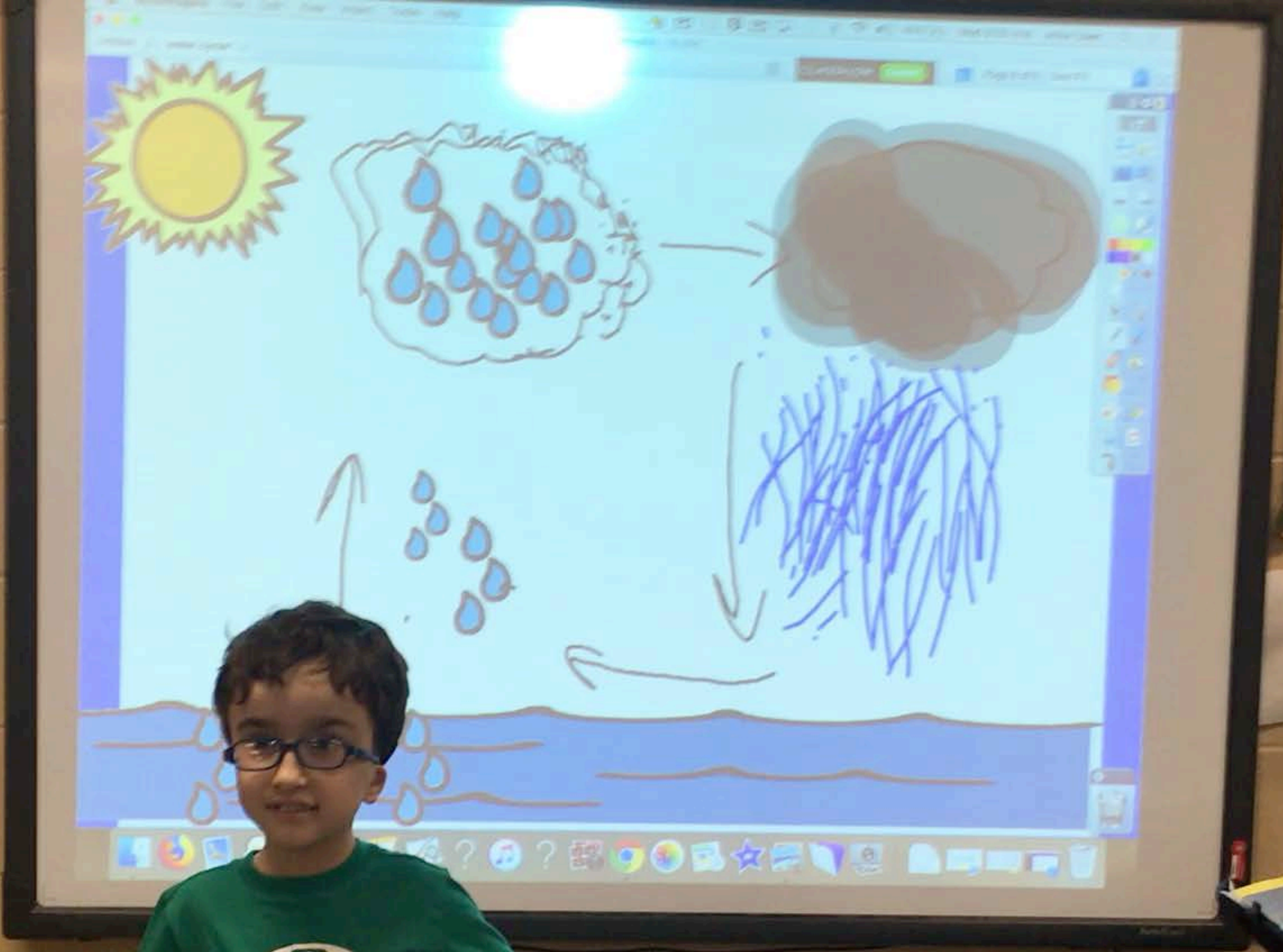


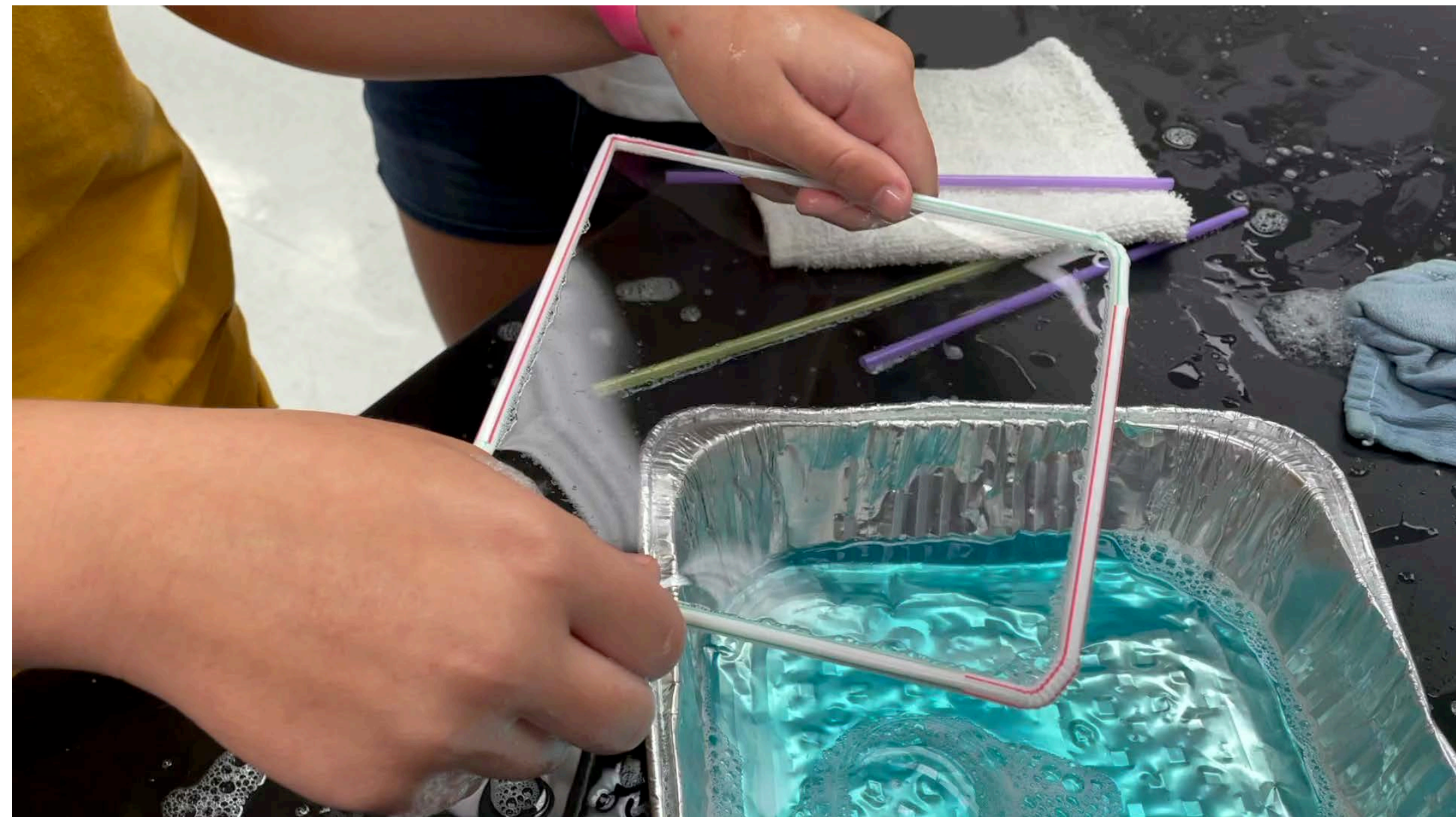


Guidelines for Success

- Respect
- Effective Communication
- Act Responsibly
- Demonstrate a Positive Attitude
- Yearn to Learn

Did You Know About Science





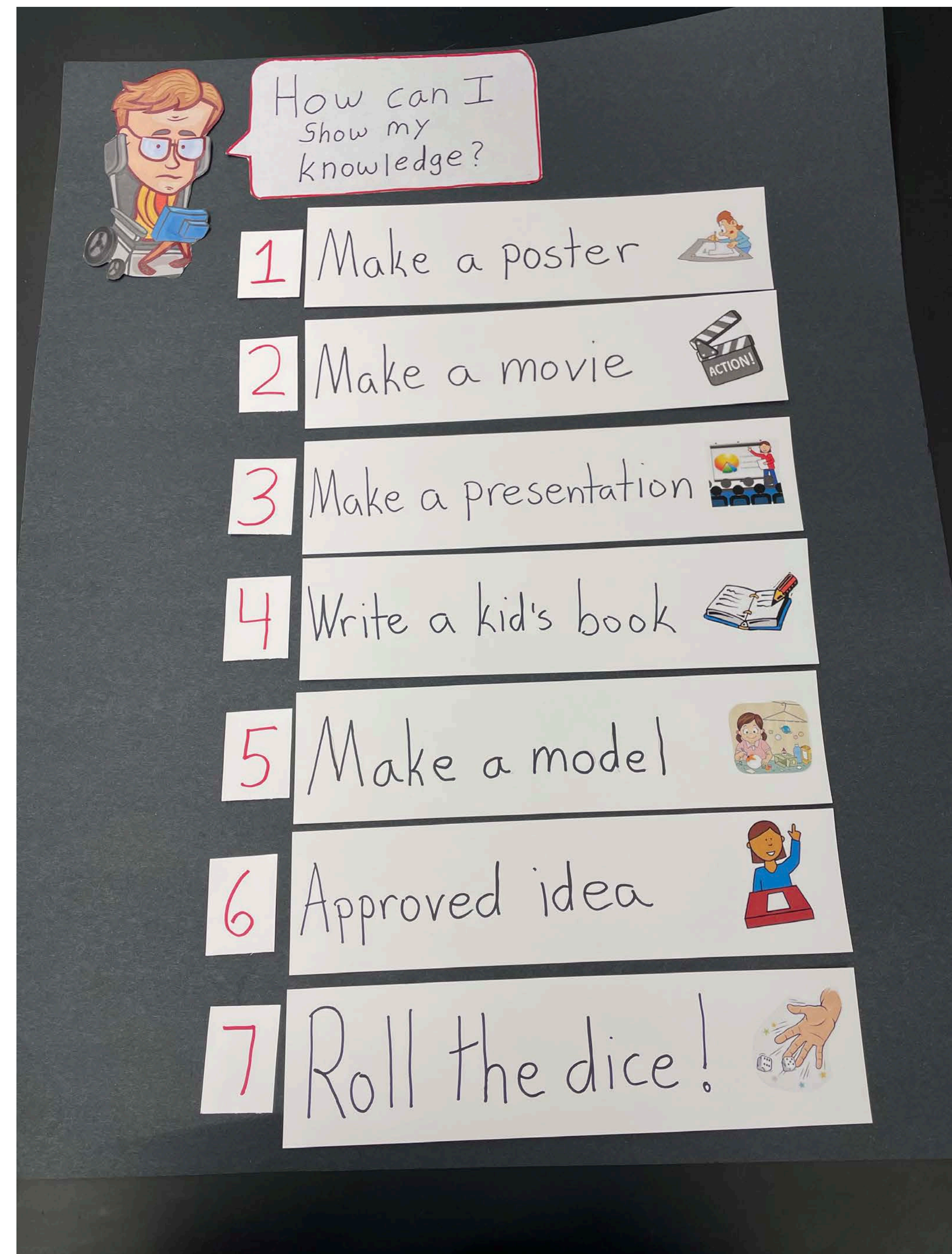
How do you currently differentiate the process in your Science lessons?

Differentiating the Product








There are many different ways students can show what they have learned instead of just giving them a quiz, test, or have them write what they know.

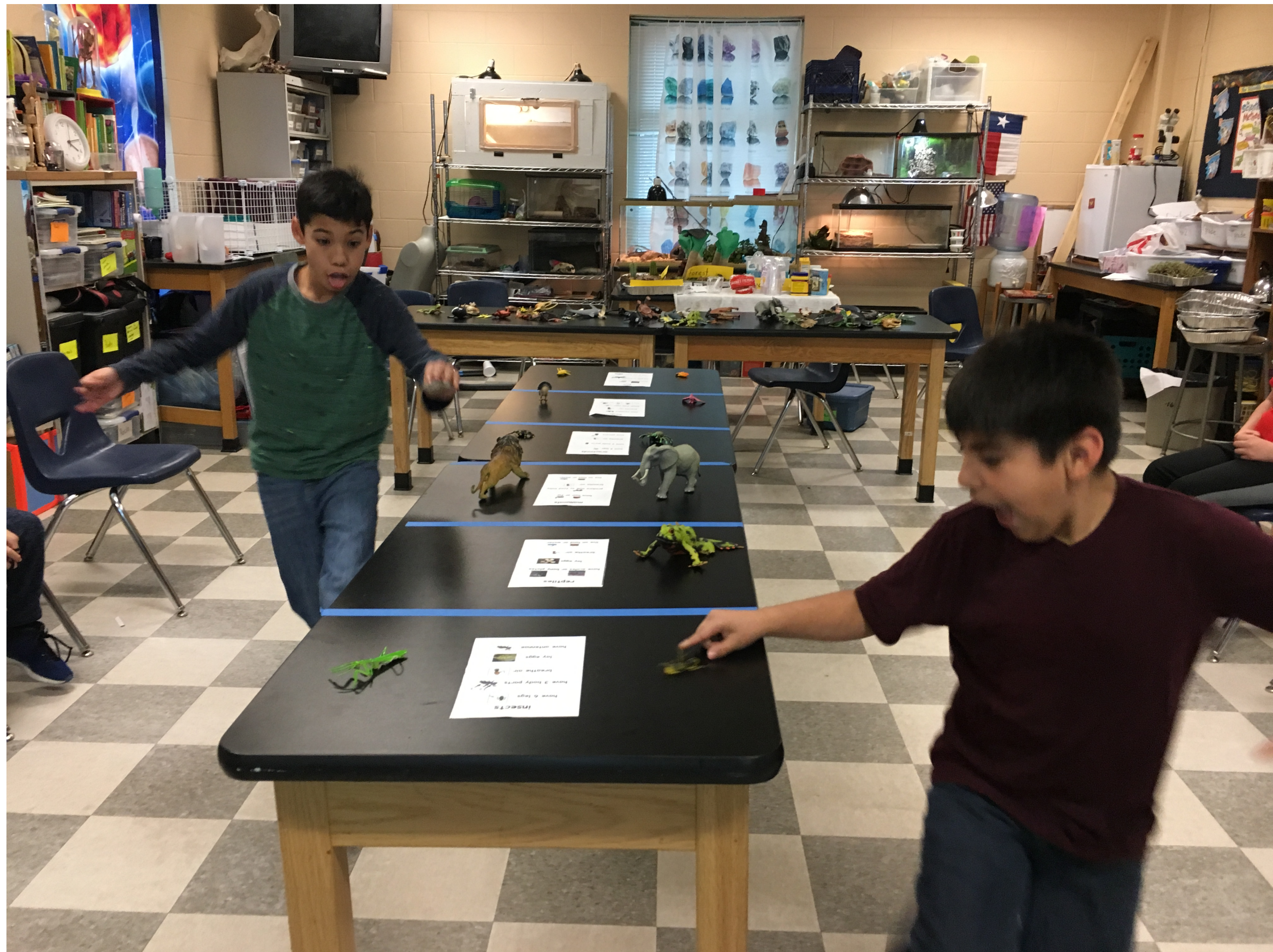
Give them a choice of how they want to show their learning. This helps highlight student needs, strengths, and preferred learning styles.

If a student is good at acting things out, what are some things they can do? A good artist?



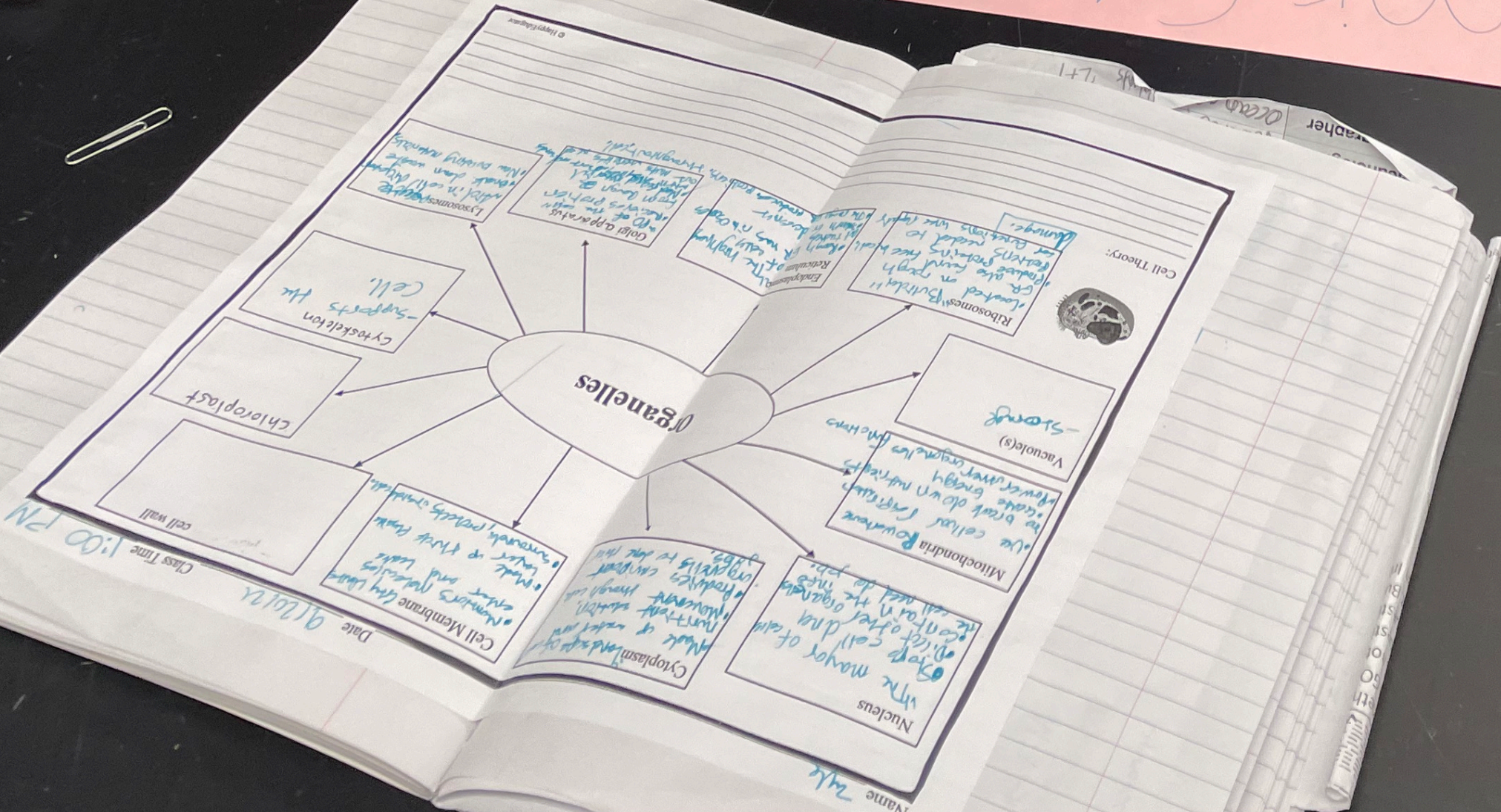
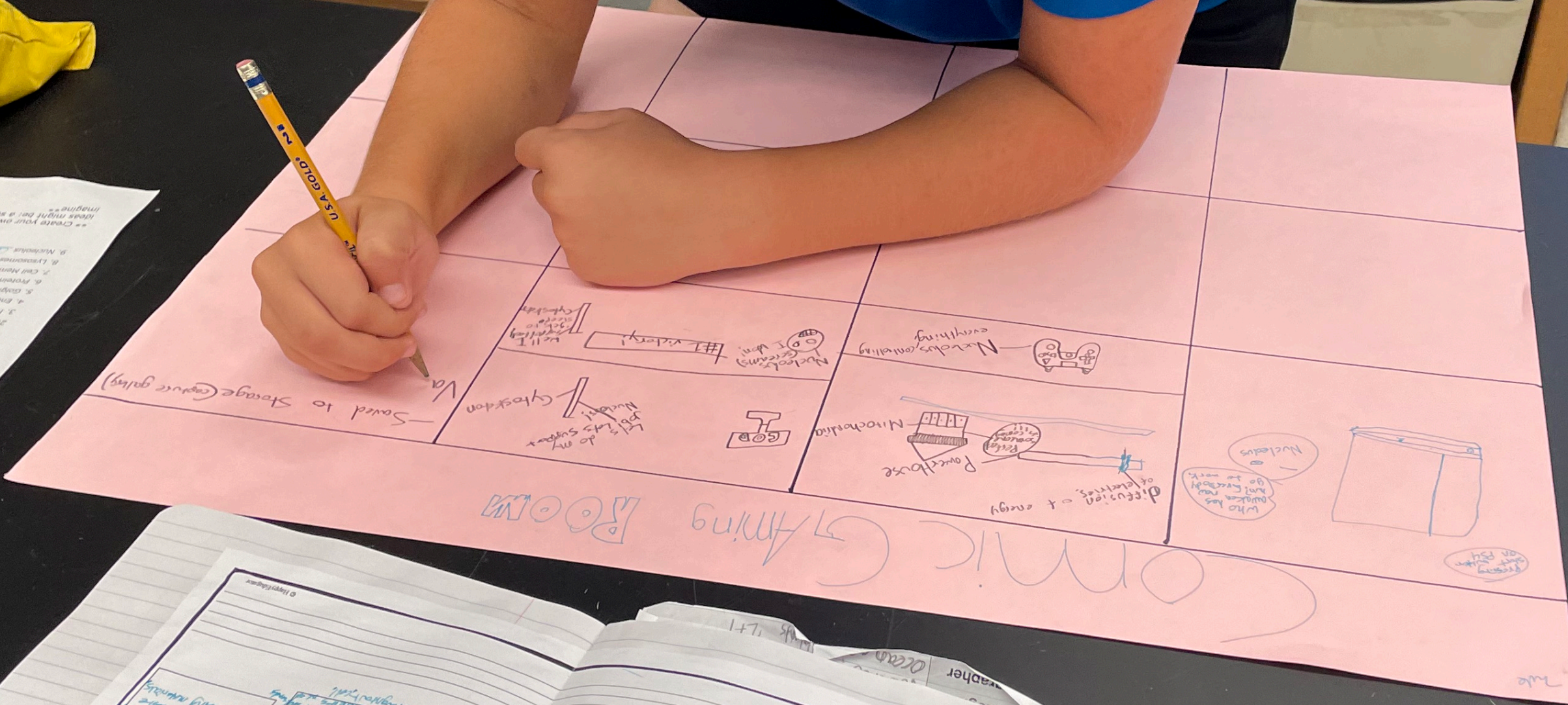
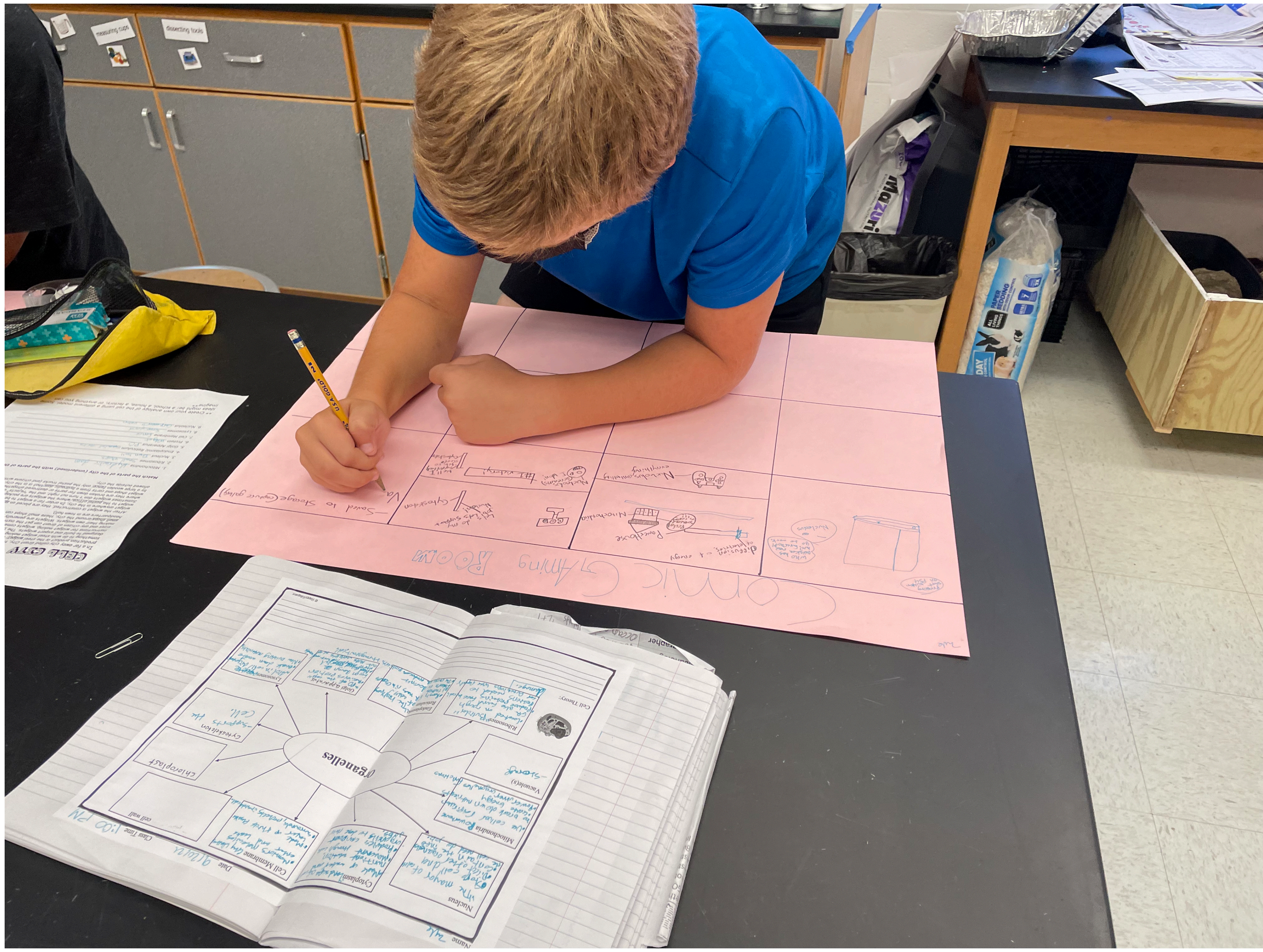
How can I show my knowledge?

- 1 Make a poster 
- 2 Make a movie 
- 3 Make a presentation 
- 4 Write a kid's book 
- 5 Make a model 
- 6 Approved idea 
- 7 Roll the dice! 



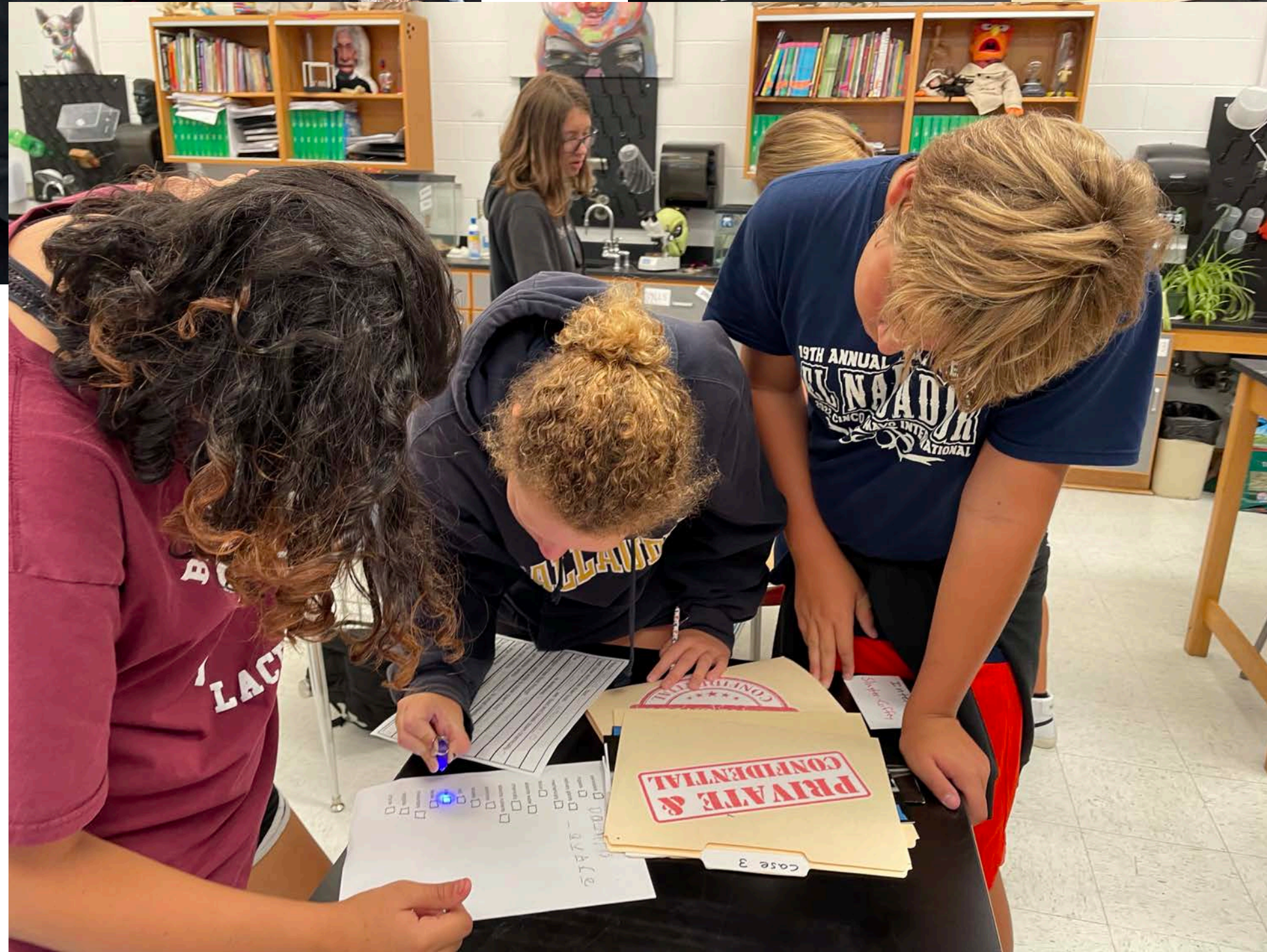
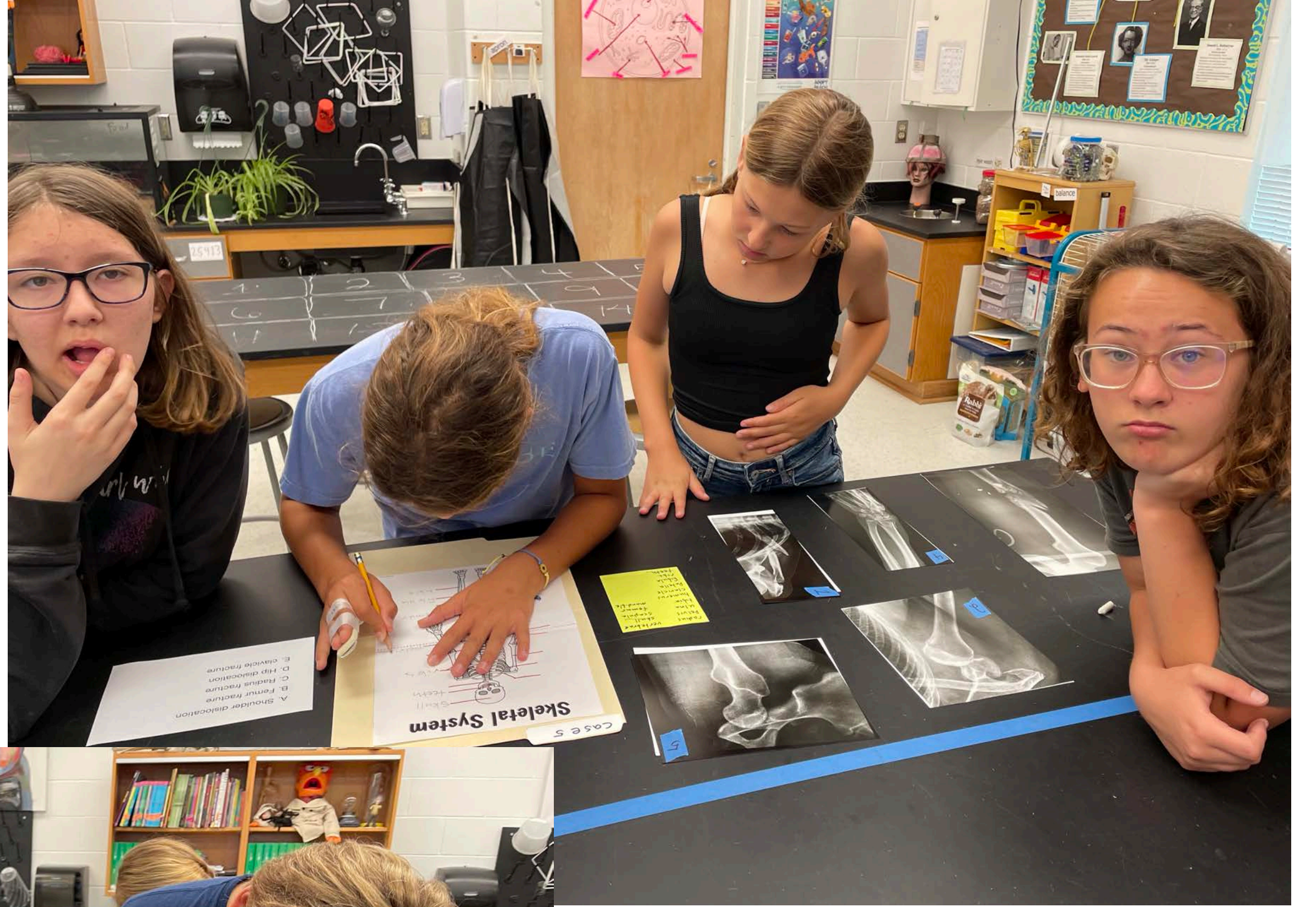






Match the parts of the city (understand) with the parts of the cell.

1. Nucleus - City Hall
2. Mitochondria - Powerhouse
3. Golgi apparatus - Post Office
4. Cytoplasm - Cytosol
5. Vacuole - Storage





How do you currently differentiate product in your Science classroom?

Differentiate the Environment

This refers to allowing students/classes to have input in their environment including preferential seating, routines, and movement:

- desk, separate table, hallway, floor, other?;
- entering classroom routines (types of greeting, special handshakes, vocabulary word of the day, etc.);
- routines for leaving classroom for break or restroom; and
- types and frequency of movement breaks (individual, group, ...).



How do you currently differentiate your Science classroom environment?