Saddle Up for Science: Exploring the Wild Wonders of Mystery Science & Pivot Interactives

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Presenters

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Partner Success Manager

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How do you spark curiosity in your classrooms?

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Enhances Curiosity and Understanding

Hands-on activities allow students to experience scientific concepts firsthand. They can touch, see, and manipulate materials, which can lead to a deeper understanding of complex topics.

This helps ignite students' curiosity to motivate them to explore further.

Increases Collaboration and Confidence

Many hands-on activities involve group work, which fosters teamwork and communication skills. These skills are essential in scientific research and in the workplace.

Boosts students' self-esteem which can have a positive impact on their overall attitude toward science.

Three-Dimensional Learning

Provides opportunities for students to demonstrate the integration of content TEKS (what?), scientific and engineering practices (SEPs), and recurring themes and concepts (RTCs)

DISCOVER how

EASY it is to

LOVE Science

Discovery EDUCATION

mystery science
By Discovery Education

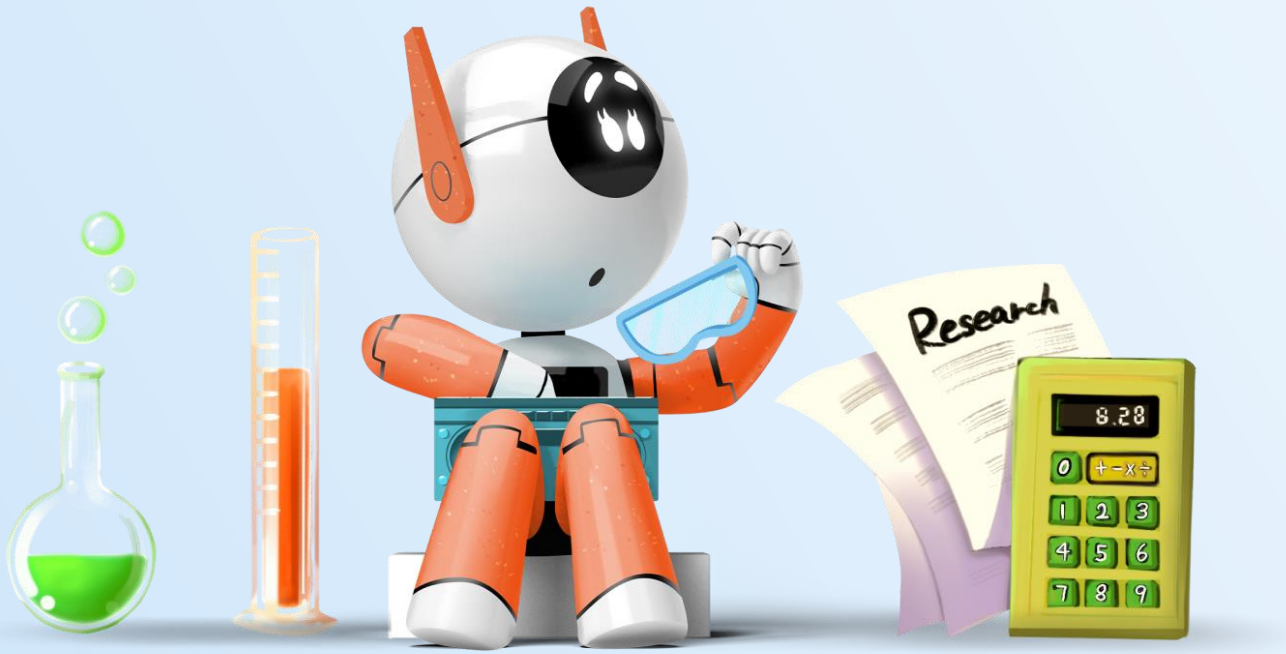
Developed by teachers, Mystery Science is a TEKS-aligned resource that helps students find the wow in the world around them. Kids learn best by building, observing, sharing, and writing about what they learn with the goal to help keep kids curious.

pivot interactives
By Discovery Education

Created by science teachers with active learning in mind, Pivot Interactives puts educators in control of giving their students control of interactive learning labs and allows students to explore scientific phenomena first-hand so you can ignite their passion for science and your love for teaching.

Let’s Saddle Up & Dig In!

4th Grade



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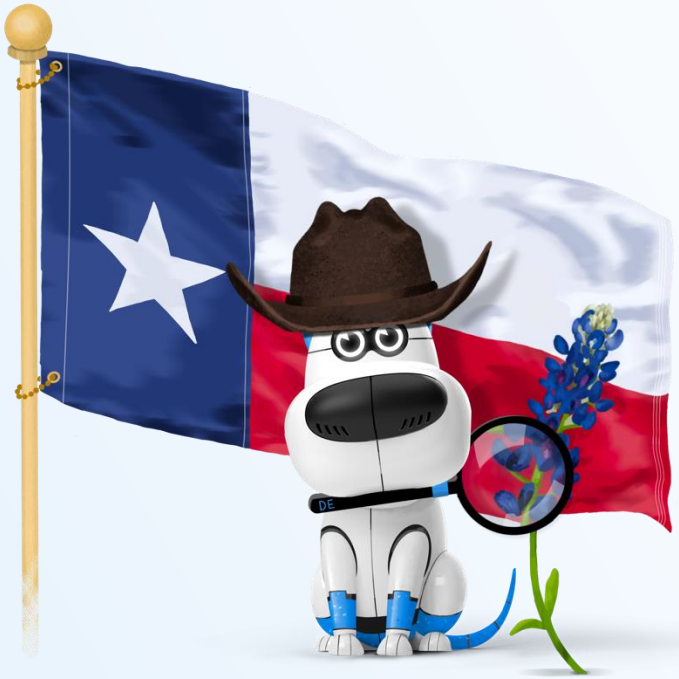


TEKS: 4.10B- MODEL AND DESCRIBE SLOW CHANGES TO EARTH'S SURFACE CAUSED BY WEATHERING, EROSION, AND DEPOSITION FROM WATER, WIND, AND ICE.

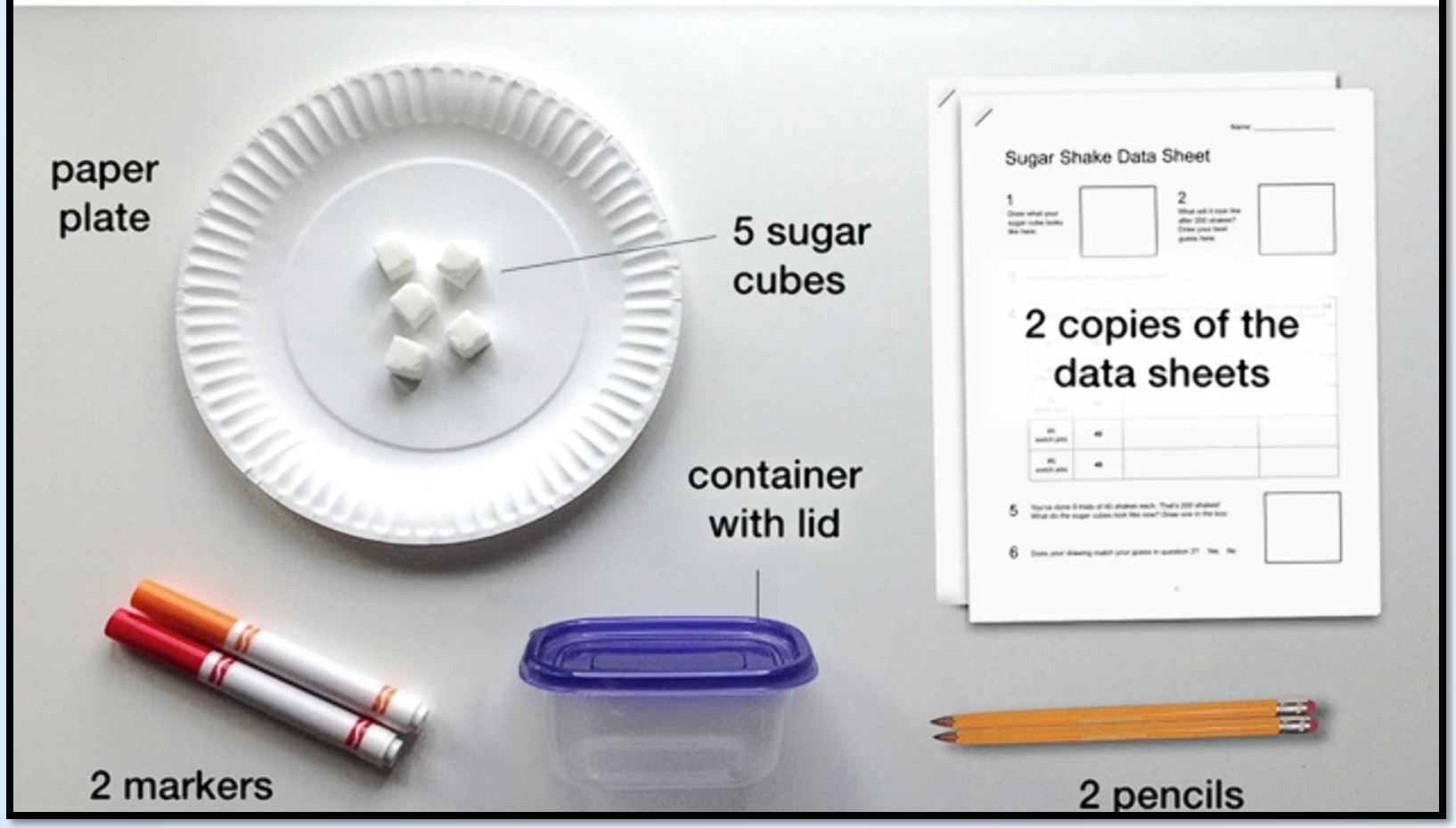
Making Connections

What happens to a rock when it breaks off a cliff and tumbles downhill?

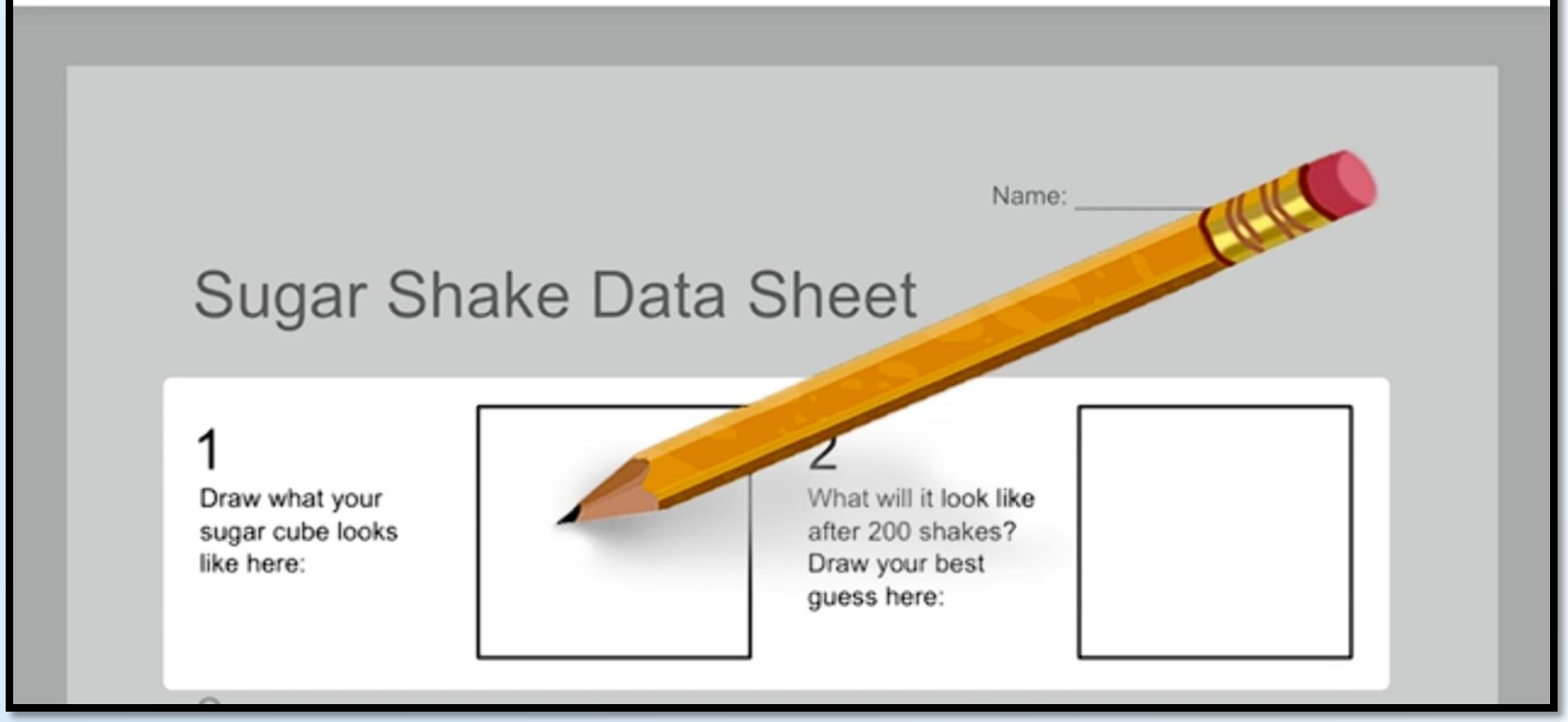
Mount Everest

Step 2 of 14

Get your supplies. Each group needs these:



Step 3 of 14 **Take a sugar cube and complete questions #1 and #2.** (You can draw the whole cube or just one side.)

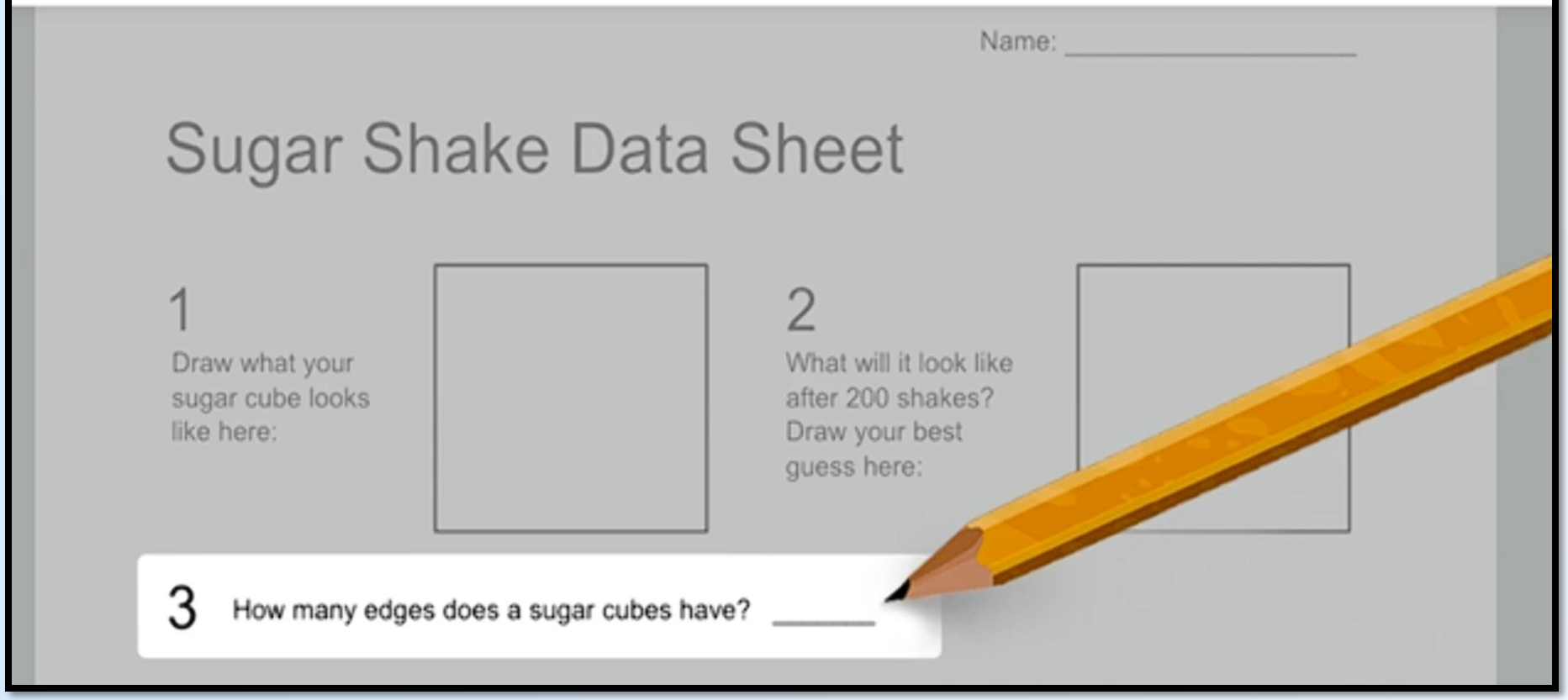


Step 4 of 14

Each of you choose one sugar cube and color the edges.

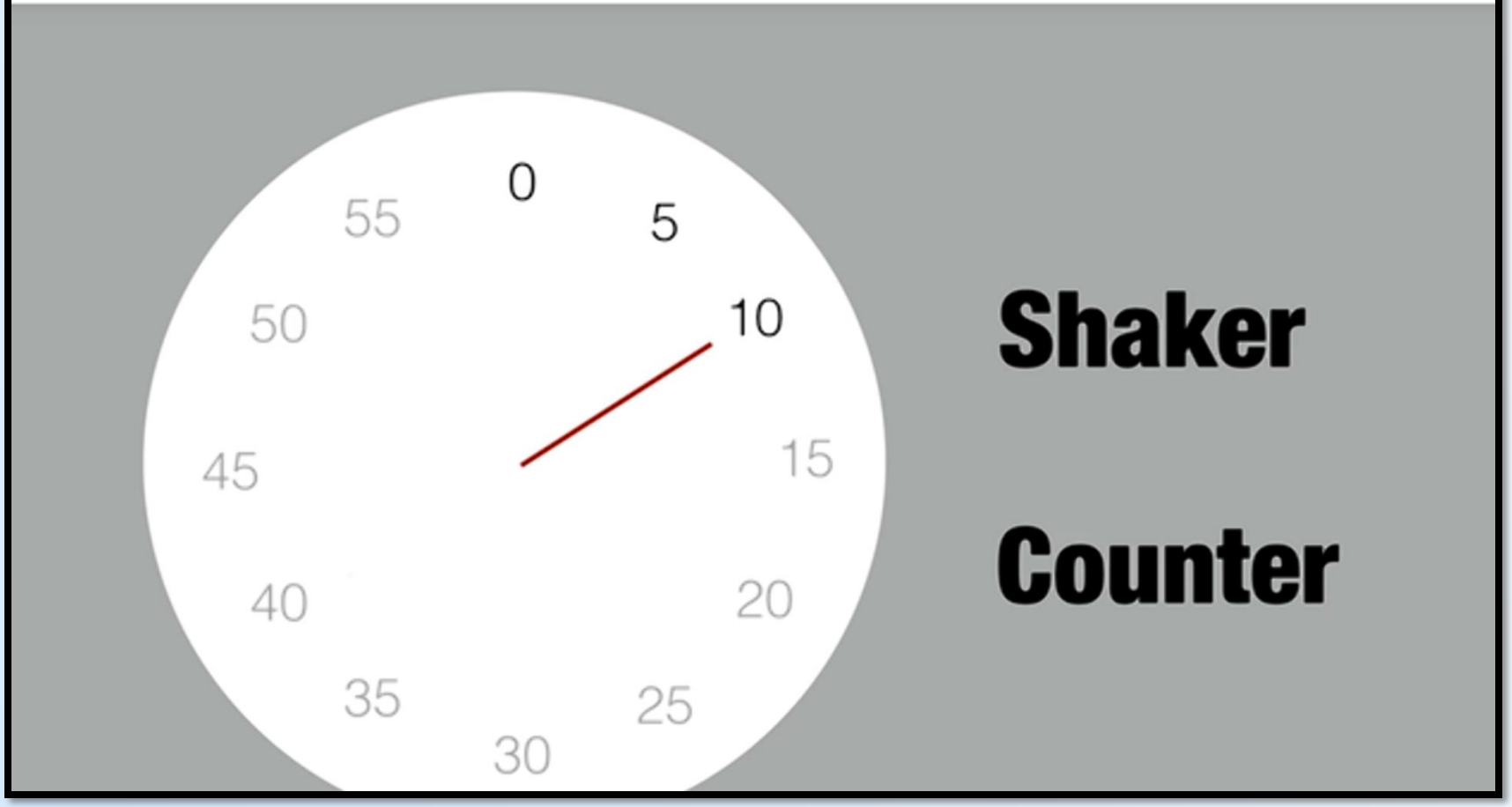
Step 5 of 14

Count how many edges a sugar cube has. Write the answer in question #3.



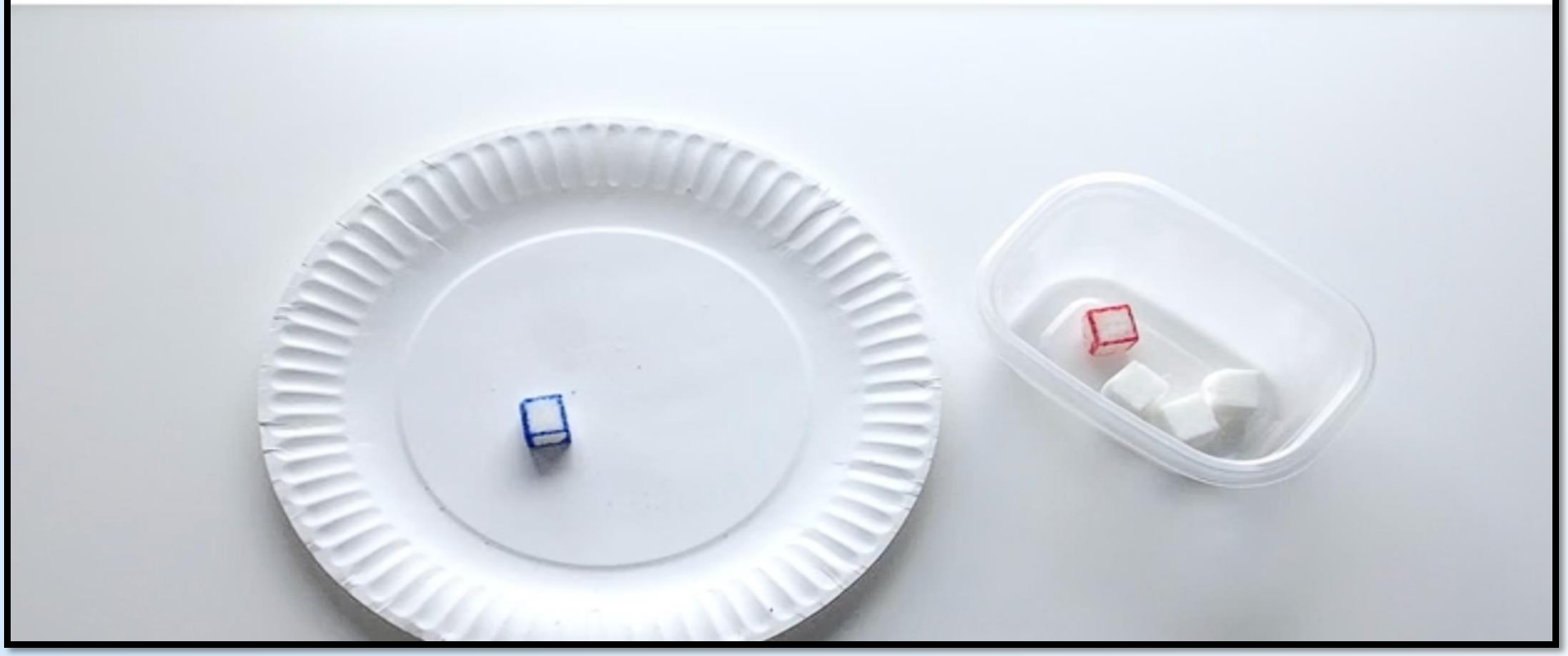
Step 6 of 14

Decide who'll be the **Shaker** and who'll be **Counter** for the first trial.



Step 7 of 14

Shaker: Put 1 colored cube and all of the plain cubes in the container. (Leave 1 colored cube on the plate.)



Step 8 of 14

Do the 1st trial now.

Shaker: Shake the container **40** times, counting out loud.

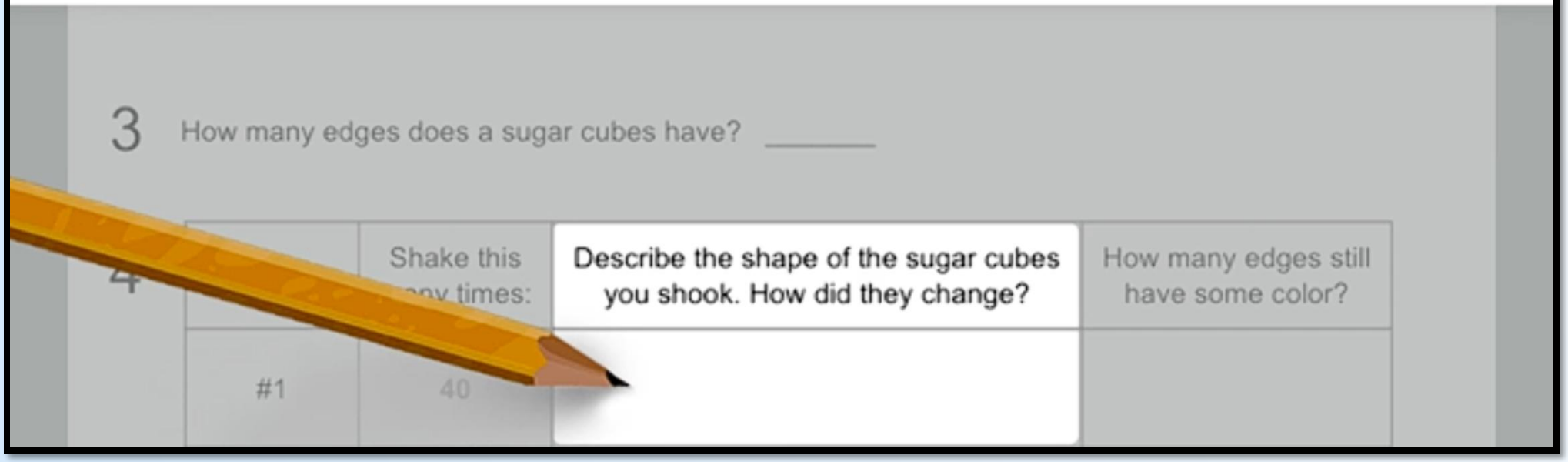
3 How many edges does a sugar cubes have? _____

4

Trial #	Shake this many times:	Describe the shape of the sugar cubes you shook. How did they change?	How many edges still have some color?
#1	40		

Step 9 of 14

Shaker: Open the container & put the cubes on the plate. **Both of you:** Write down how the cubes have changed.



3 How many edges does a sugar cubes have? _____

4

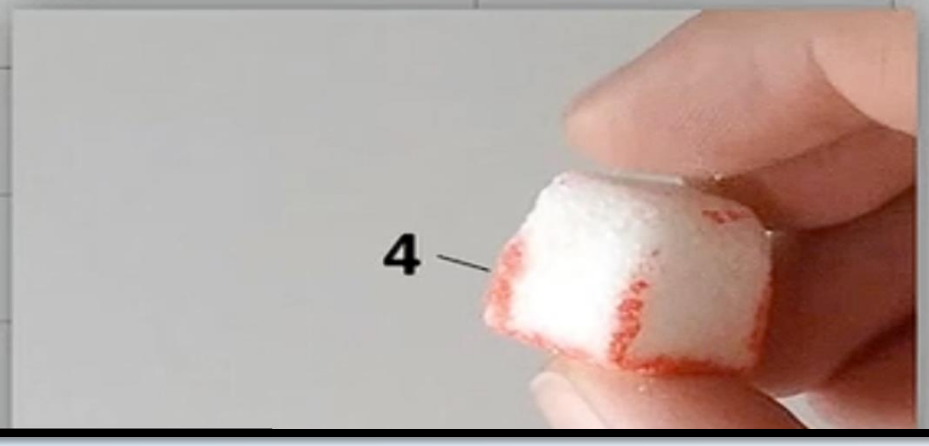
	Shake this ... times:	Describe the shape of the sugar cubes you shook. How did they change?	How many edges still have some color?
#1	40		

Step 10 of 14

Counter: On the colored cube you shook, count how many edges have any color left.
Both of you: Write down the result.

4

Trial #	Shake the … many times:	… the shape of the sugar cubes … they change?	How many edges still have some color?
#1	40		
#2 switch jobs	40		
#3 switch jobs	40		
#4 switch jobs	40		
#5 switch jobs	40		



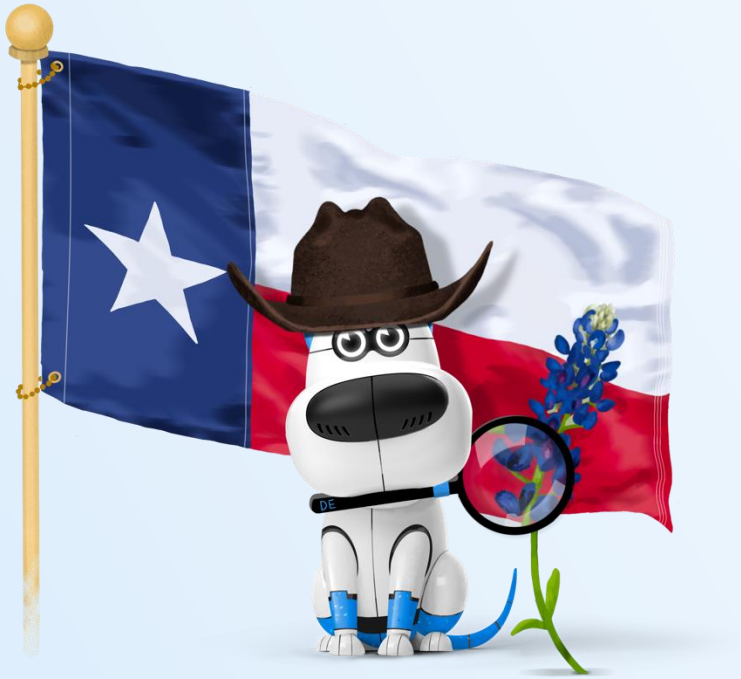
Class Discussion

Rocks at the top of mountains are jagged, like this:

Rocks at the bottom of mountains are more rounded, like this:

Why do you think the rocks look different? What happened?

Explore the Wild Wonders!



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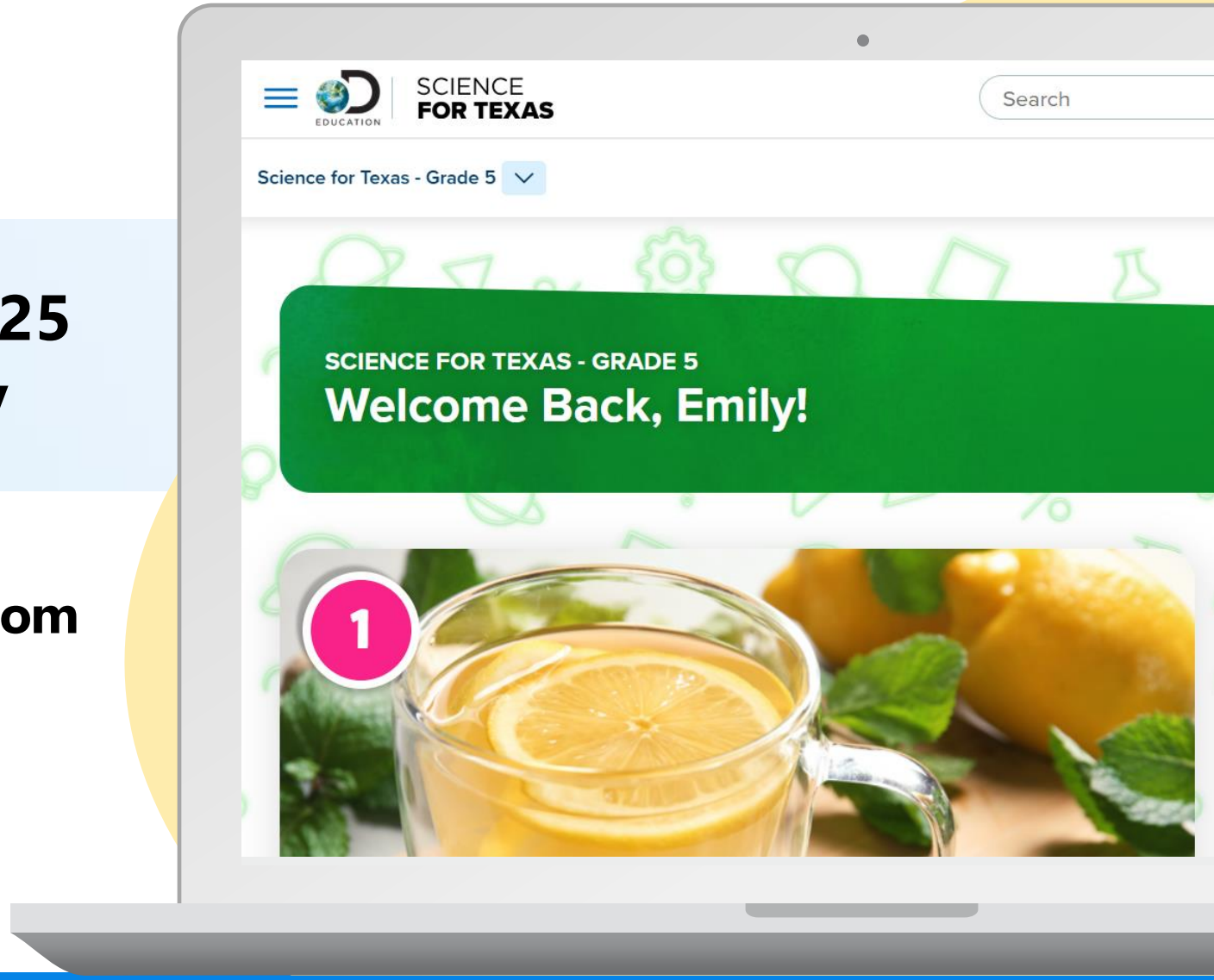



Pivot!

pivot interactives

By Discovery Education

What kind of science instruction is best for student learning?

Active Engagement

Unrestricted Exploration of Phenomena

Embedded Science and Engineering Practices

Continuous, Personalized Feedback

Effective for Face-to-Face, Adaptable for Remote

Let's Feed the Worms!

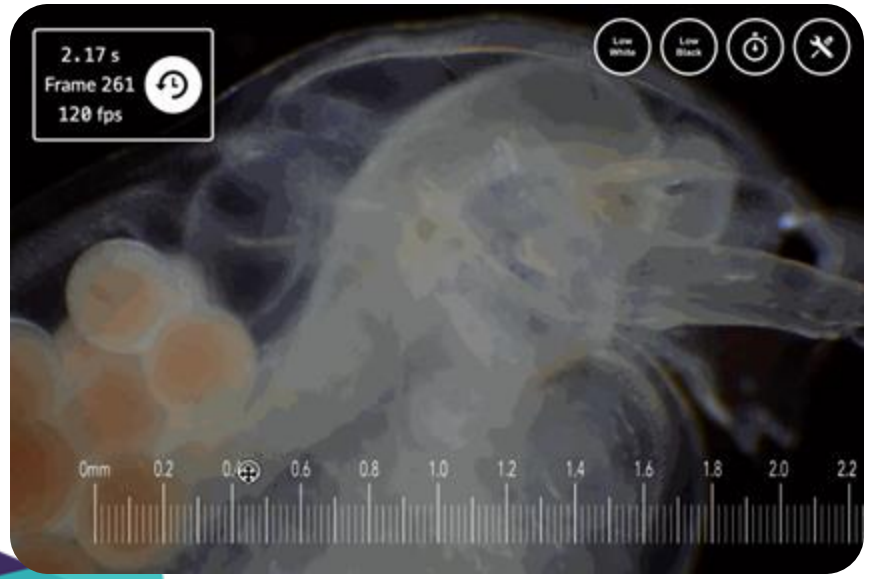
- Turn on the scale and make sure it is a 0.0 grams
- Place the red tray on the scale and zero it out again.
- Place the peach in the tray and record the mass of the peach.
- Remove the peach & place the worms in the tray and record the mass of worms.
- Place the peach slice in the tray and record the mass of worms and peach.
- Observe the interaction.

How long do you think it will take for the worms to devour this peach?

Can you see the energy transfer from the Peach to the Worms?

Pivot Interactives is an online curriculum supplement that transforms science education.

We empower educators to provide effective science instruction through interactive, phenomena-based activities.



Unrestricted Exploration of Phenomena

Provide students unrestricted exploration of phenomena **without expensive equipment, special training, safety concerns, time constraints, or practical limitations** and give them an active role in their learning.

With our interactive measurement tools, students measure data for themselves and learn from thousands of trials of previously inaccessible phenomena.

With pivot interactives
By Discovery Education

easily go from...	to...
Passive Learning	Active Engagement
Restricted by Practical Constraints	Unrestricted Exploration of Phenomena
Neglected Science and Engineering Practices	Embedded Science and Engineering Practices
Limited, Generic Feedback	Continuous, Personalized Feedback
Vulnerable to Disruption	Effective for Face-to-Face, Adaptable for Remote

Deliver phenomena-based, active learning

pivot interactives
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Successful Students

Engaged, Active Learning

Efficient and Effective

Transform science instruction with:

- 500+ standards-aligned, research based **Interactive Video Activities** enhance student engagement & learning
- **Ready-to-use lessons** seamlessly blend real-world phenomena & science practices into everyday instruction
- **Deep randomization** to avoid unproductive shortcuts
- **Immediate feedback and scaffolding** motivate student persistence and confidence
- **Assignment Scores Insights** with real-time analytics

Log In Now!

Teacher Demo:
u: **TCEA25_teacher@pivot.com**
p: **PivotDemo1!**

Student Demo:
u: **TCEA25_student@pivot.com**
p: **PivotDemo1!**

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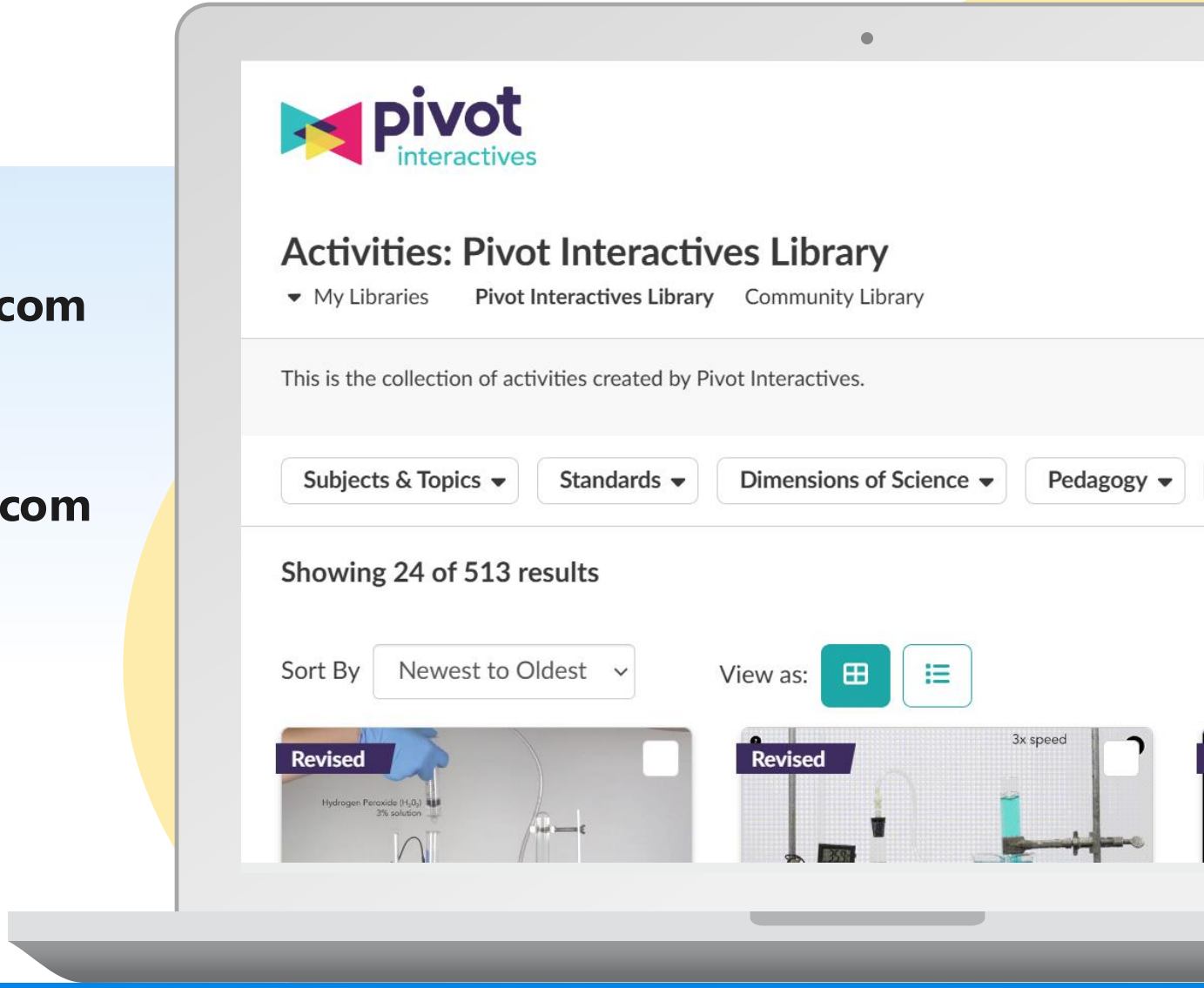
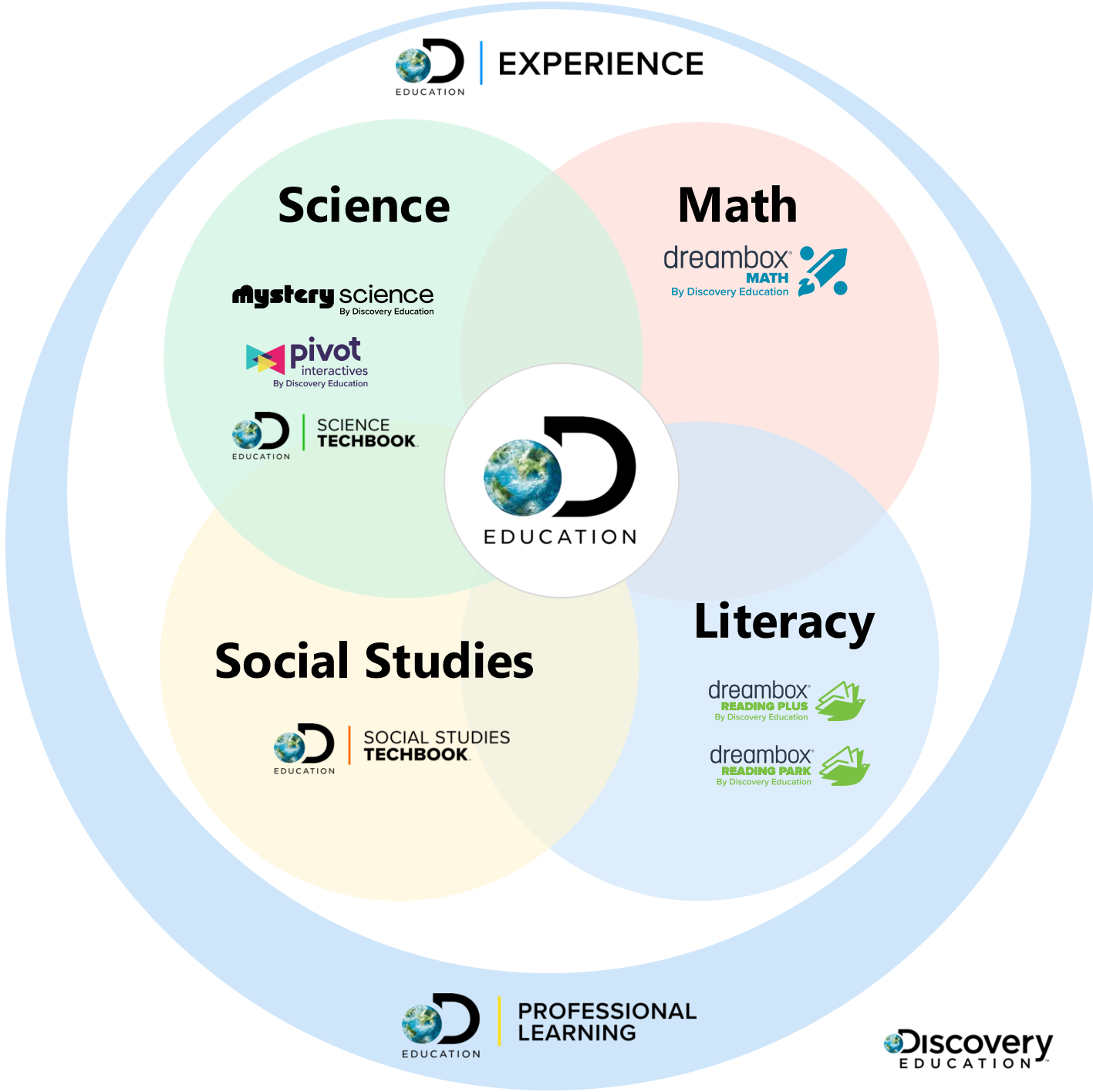


Cross-Curricular Teaching & Learning for K-12

Deliver connected learning experiences with purpose-built digital resources.



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Thank You

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