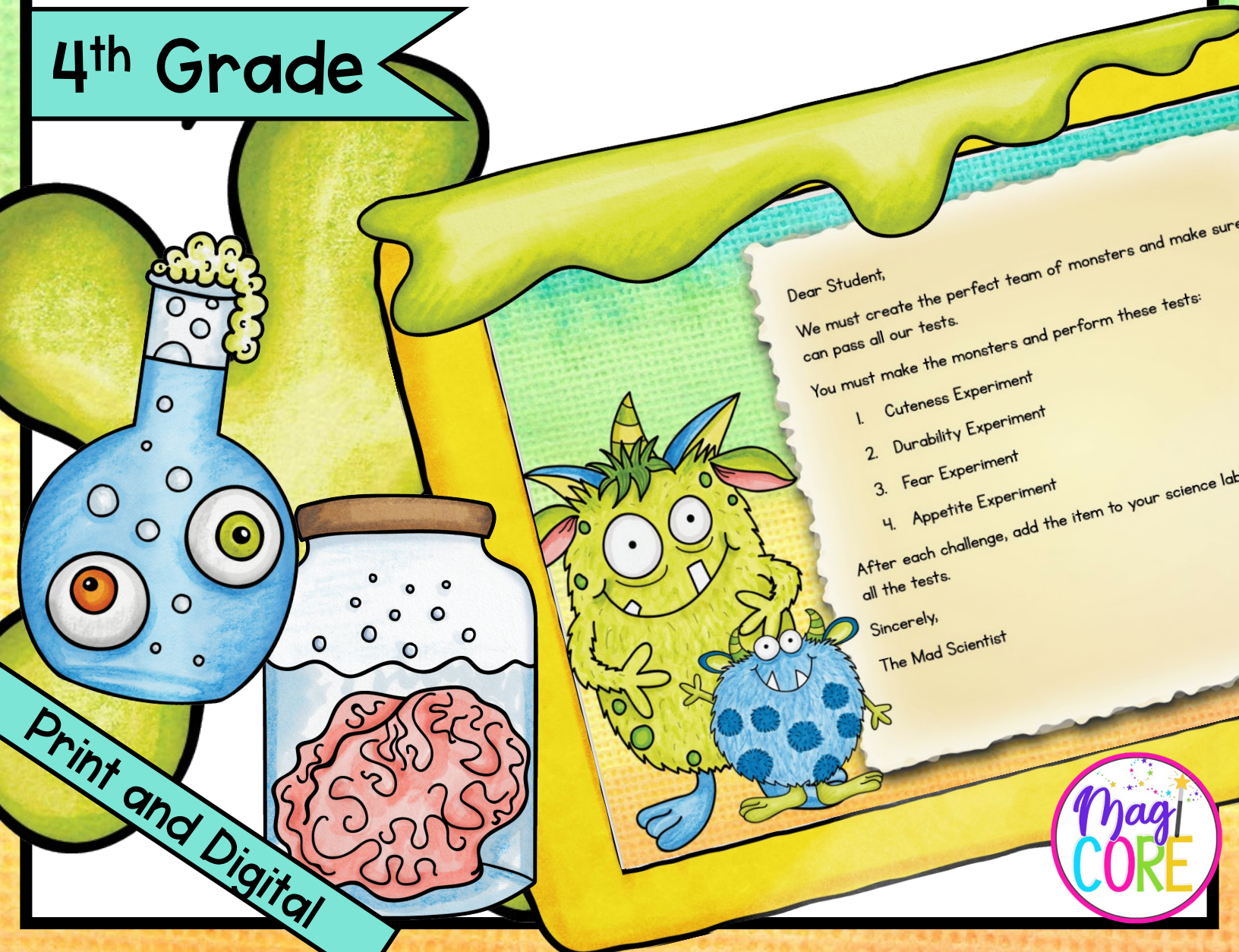
Finding Factors

Monster Science Lab Escape Room

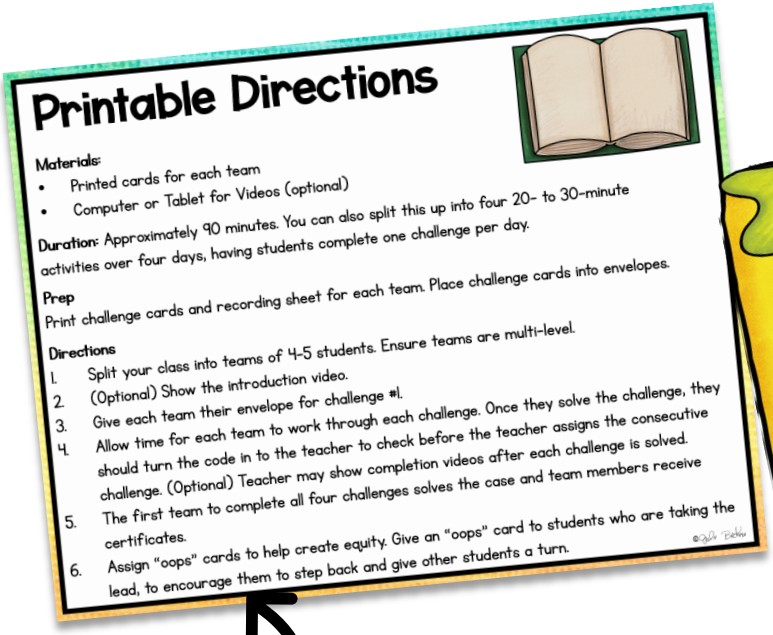
4th Grade



Print and Digital

Magi CORE

Print & Digital Options



Printable Directions

Materials:

- Printed cards for each team
- Computer or Tablet for Videos (optional)

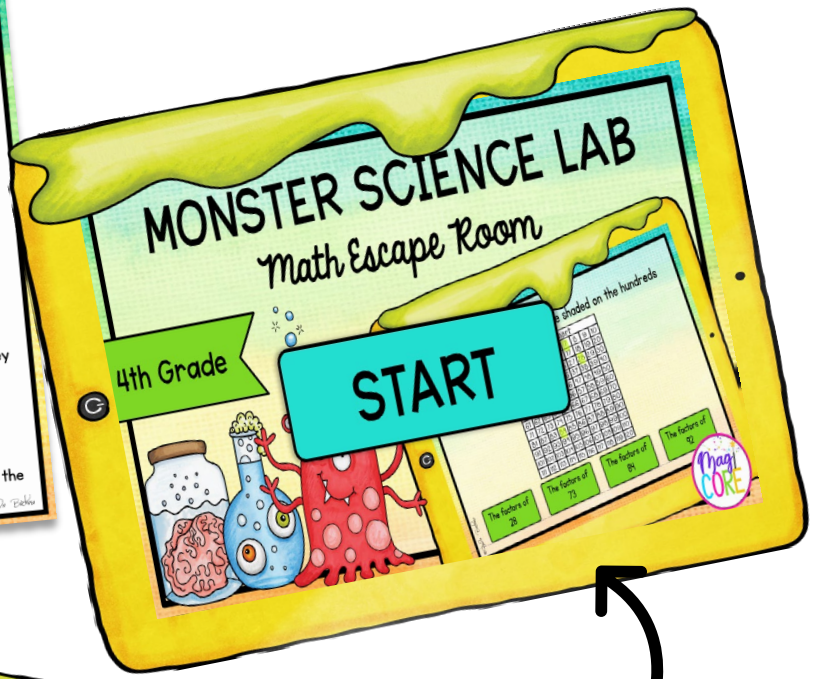
Duration: Approximately 90 minutes. You can also split this up into four 20- to 30-minute activities over four days, having students complete one challenge per day.

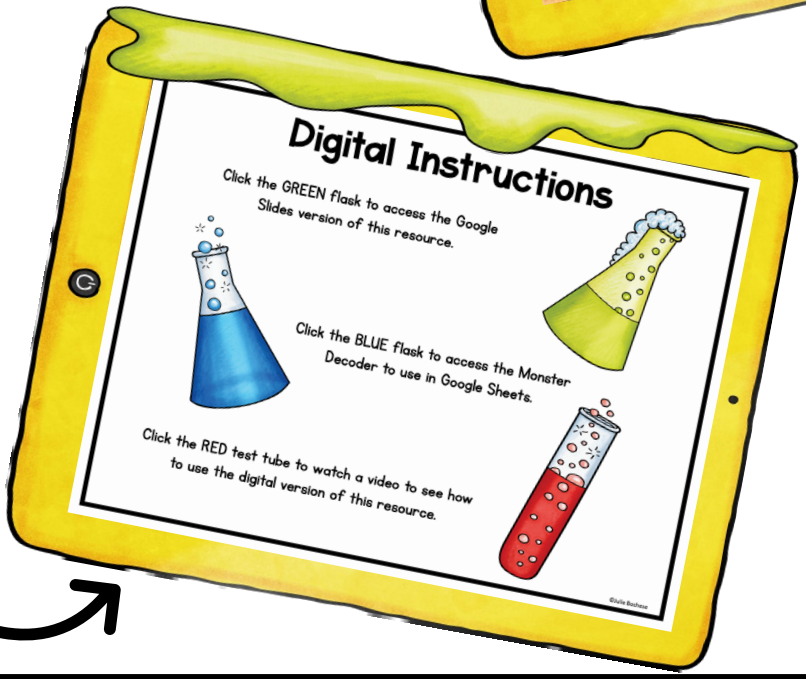
Prep

Print challenge cards and recording sheet for each team. Place challenge cards into envelopes.

Directions

1. Split your class into teams of 4-5 students. Ensure teams are multi-level.
2. (Optional) Show the introduction video.
3. Give each team their envelope for challenge #1.
4. Allow time for each team to work through each challenge. Once they solve the challenge, they should turn the code in to the teacher to check before the teacher assigns the consecutive challenge. (Optional) Teacher may show completion videos after each challenge is solved.
5. The first team to complete all four challenges solves the case and team members receive certificates.
6. Assign "oops" cards to help create equity. Give an "oops" card to students who are taking the lead, to encourage them to step back and give other students a turn.





Digital Instructions

Click the GREEN flask to access the Google Slides version of this resource.

Click the BLUE flask to access the Monster Decoder to use in Google Sheets.

Click the RED test tube to watch a video to see how to use the digital version of this resource.

Print

- Low prep
- Student collaboration
- Can eliminate technology

Google Slides

- Decoder included for self correcting
- Videos

Webscape

- Self correcting
- Easy to follow
- Animation
- Videos
- Audio

Print Friendly Version

Challenge #1

1. Solve each "find the factors" problem.
2. Record answers on your brochure.
3. Check your answers in the Monster Decoder.
4. Add the baby bottle to your science lab.
5. Scan the QR code in the corner of the next page.
6. Move on to the challenge #2.

1. Which choice lists all the factors of 10?
   a. 1, 9, 7, 3, 8, 2
   b. 1, 10, 5, 2
   c. 5, 2, 7, 3, 9, 1
   d. 1, 10, 2, 8

2. Which choice lists all the factors of 12?
   a. 1, 11, 10, 2, 9, 3
   b. 6, 6, 8, 4
   c. 1, 12, 6, 2, 4, 3
   d. 3, 9, 2, 10

3. Which
   of 81?
   a.
   b.
   c.
   d.

4. Which
   of 27?
   a.
   b.
   c.
   d.

Challenge #4

1. Solve each factor word problem.
2. Record answers on your brochure.
3. Check your answers in the Monster Decoder.
4. Add the dog bowl to your science lab.
5. Scan the QR code in the corner of the third page.
6. Complete the experiments to make the monsters!

1. Asia has 32 marbles. She wants to put her marbles in bags, so each bag has the same number of marbles, and no marbles are left over. What number is missing from the table?

Number of Bags	Marbles
1	32
2	16
4	?

   a. 4
   b. 6
   c. 8
   d. 9

2. A rectangle has an area of 18 square centimeters. Which of the following could be the dimensions of the rectangle?
   a. 4 cm and 5 cm
   b. 2 cm and 7 cm
   c. 3 cm and 6 cm
   d. 1 cm and 8 cm

3. Ahmad has 36 toy cars and wants to put every car in a toy bin. He wants each bin to have the same number of cars. What number is missing from the table?

Bins	Number of Cars
2	18
4	9
?	6

   a. 4
   b. 9
   c. 8
   d. 6

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Videos Tell the Story

Four Standards-Based Math Challenges

Monster Science Lab Escape Room

1. Challenge #1: Solve the find the factors problems to perform the Cuteness Experiment.
2. Challenge #2: Solve the find the factors problems to perform the Durability Experiment.
3. Challenge #3: Solve the hundreds chart factor problems to perform the Fear Experiment.
4. Challenge #4: Solve the factor word problems to perform the Appetite Experiment.

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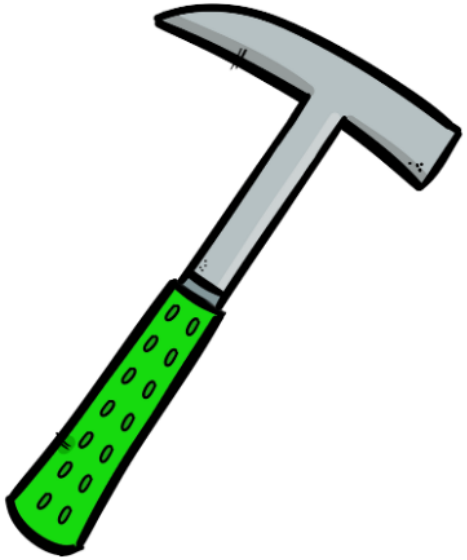
Challenges Asses Various Skills

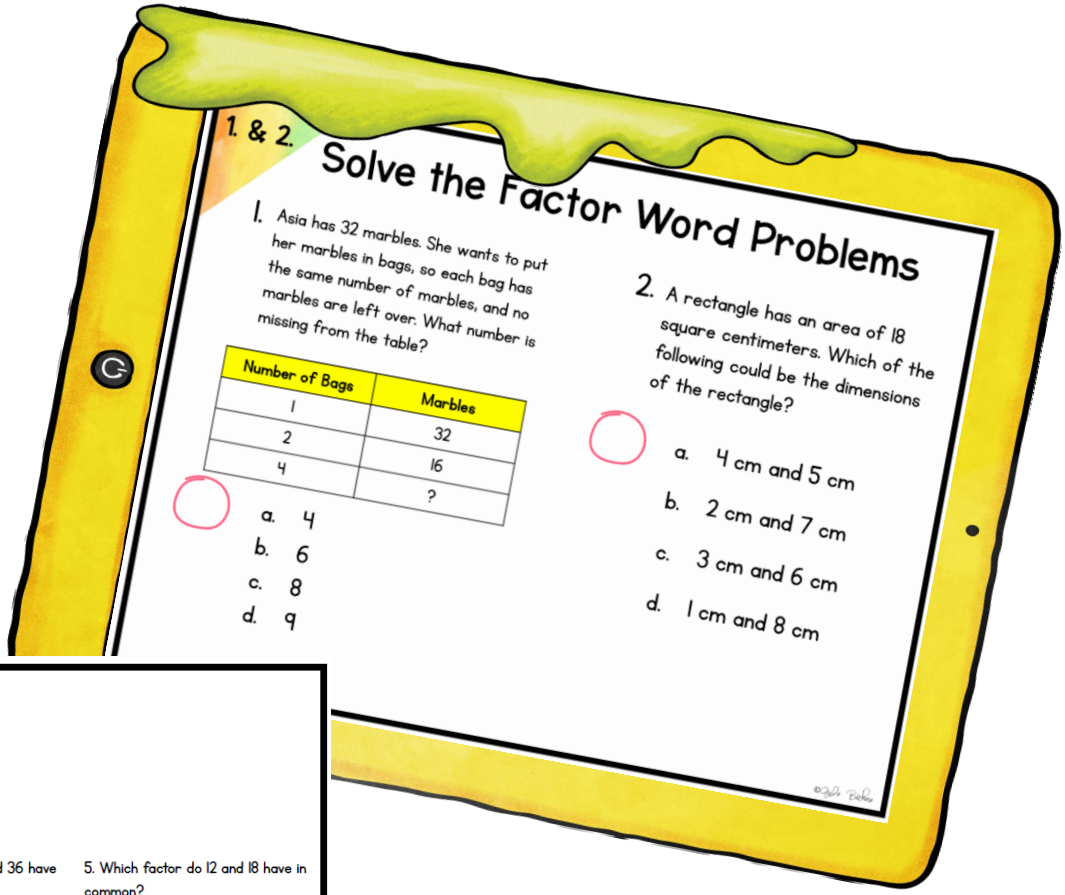
Challenge #2

1. Solve each of the find the factors problems.
2. Use your answers to perform the Durability Experiment.
3. Collect the hammer to move on to the next challenge.



Interactive

Challenges are Quick



1. & 2.

Solve the Factor Word Problems

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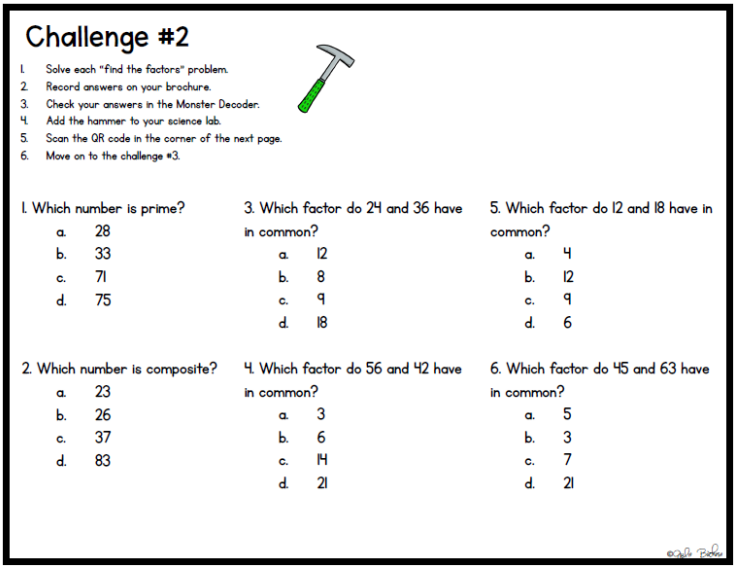


Challenge #2

1. Solve each "find the factors" problem.
2. Record answers on your brochure.
3. Check your answers in the Monster Decoder.
4. Add the hammer to your science lab.
5. Scan the QR code in the corner of the next page.
6. Move on to the challenge #3.

1. Which number is prime?
   a. 28
   b. 33
   c. 71
   d. 75

2. Which number is composite?
   a. 23
   b. 26
   c. 37
   d. 83

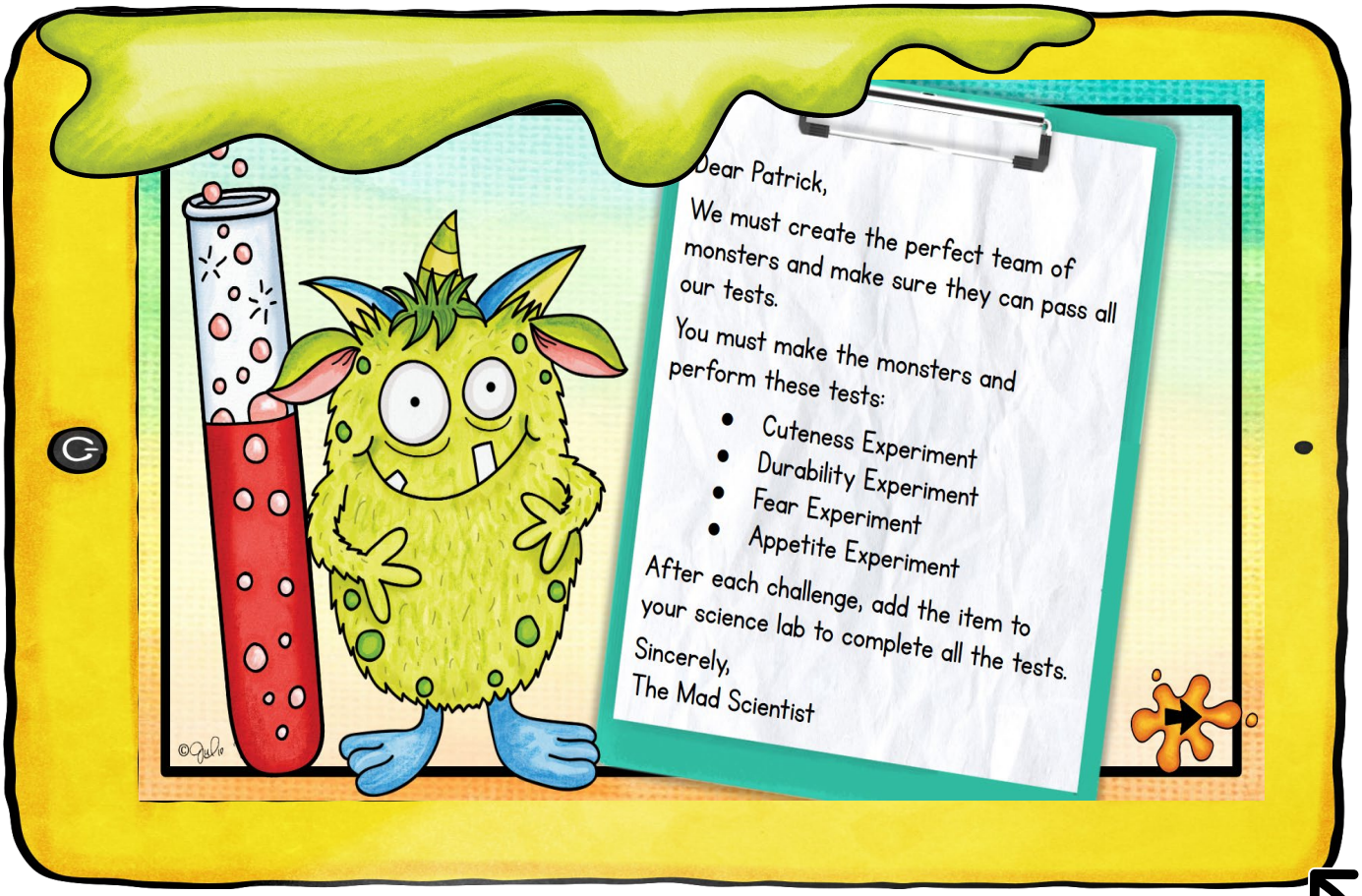
3. Which factor do 24 and 36 have in common?
   a. 12
   b. 8
   c. 9
   d. 18

4. Which factor do 56 and 42 have in common?
   a. 3
   b. 6
   c. 14
   d. 21

5. Which factor do 12 and 18 have in common?
   a. 4
   b. 12
   c. 9
   d. 6

6. Which factor do 45 and 63 have in common?
   a. 5
   b. 3
   c. 7
   d. 21

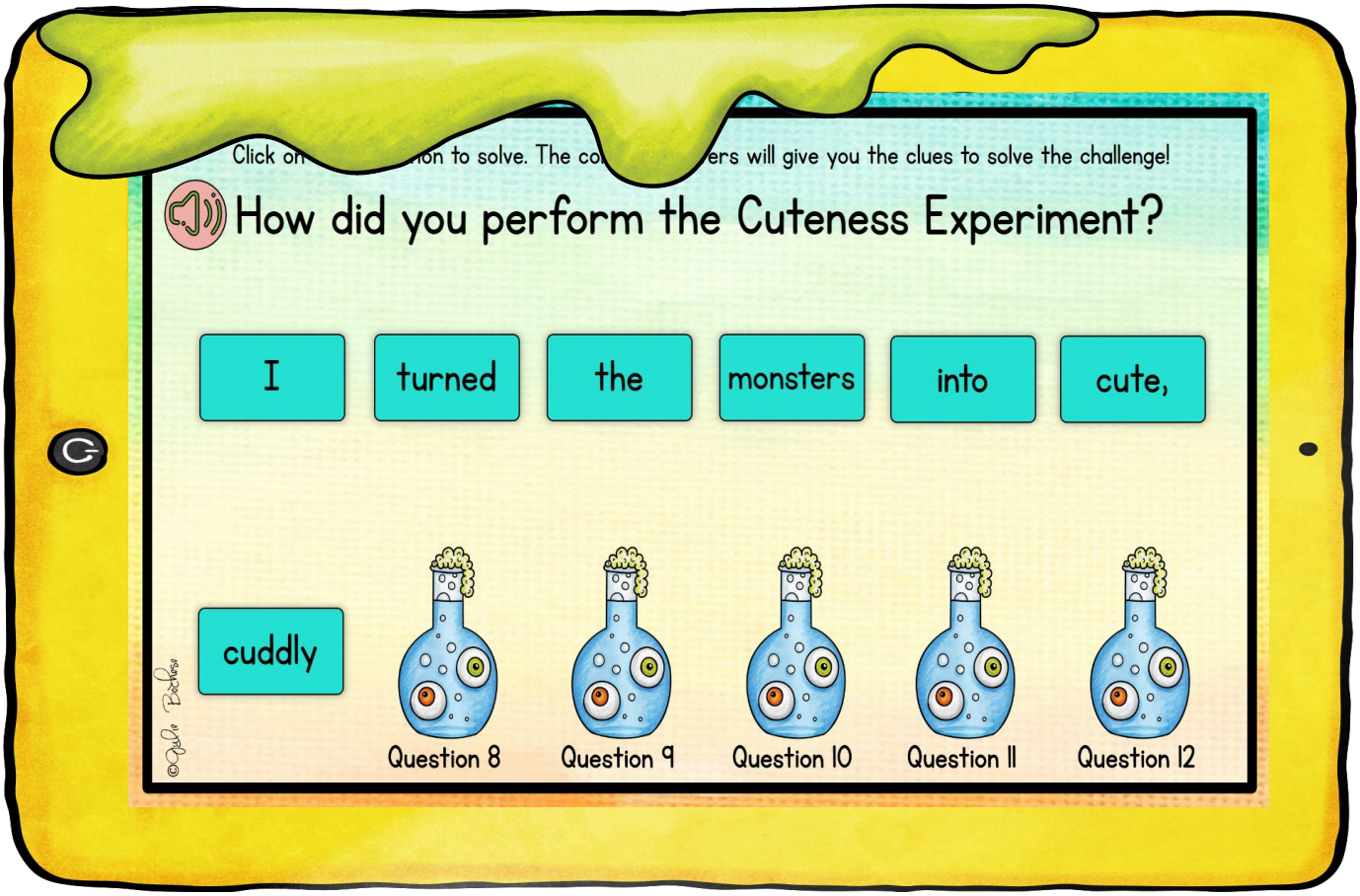
Webscape™



Most immersive and easy-to-follow experience.

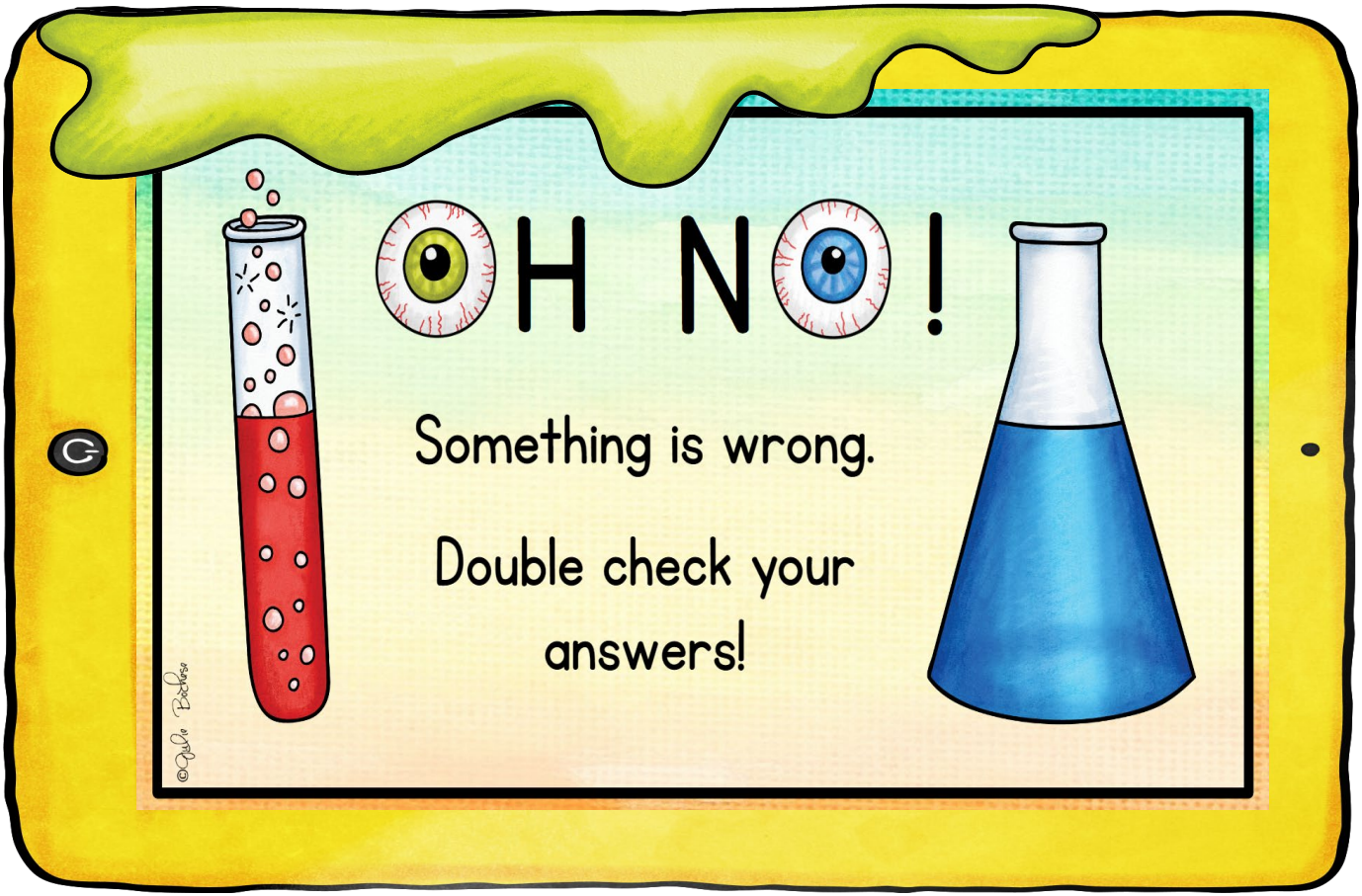
Students follow directions with the click of a button.

Webscape™



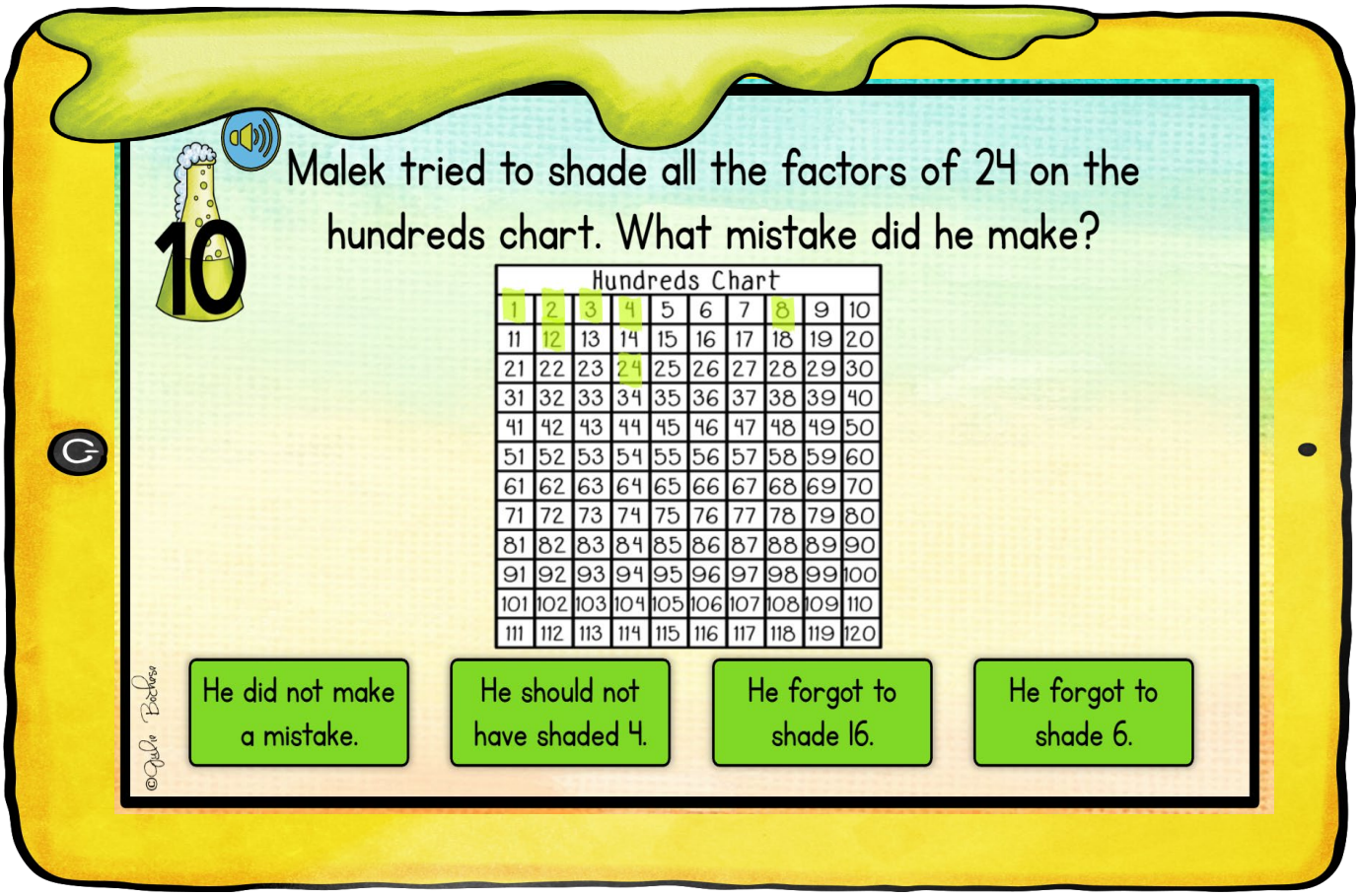
Includes option for audio on directions and questions.

Webscape™



Self-correcting but maintains rigor by ensuring students are not guessing.

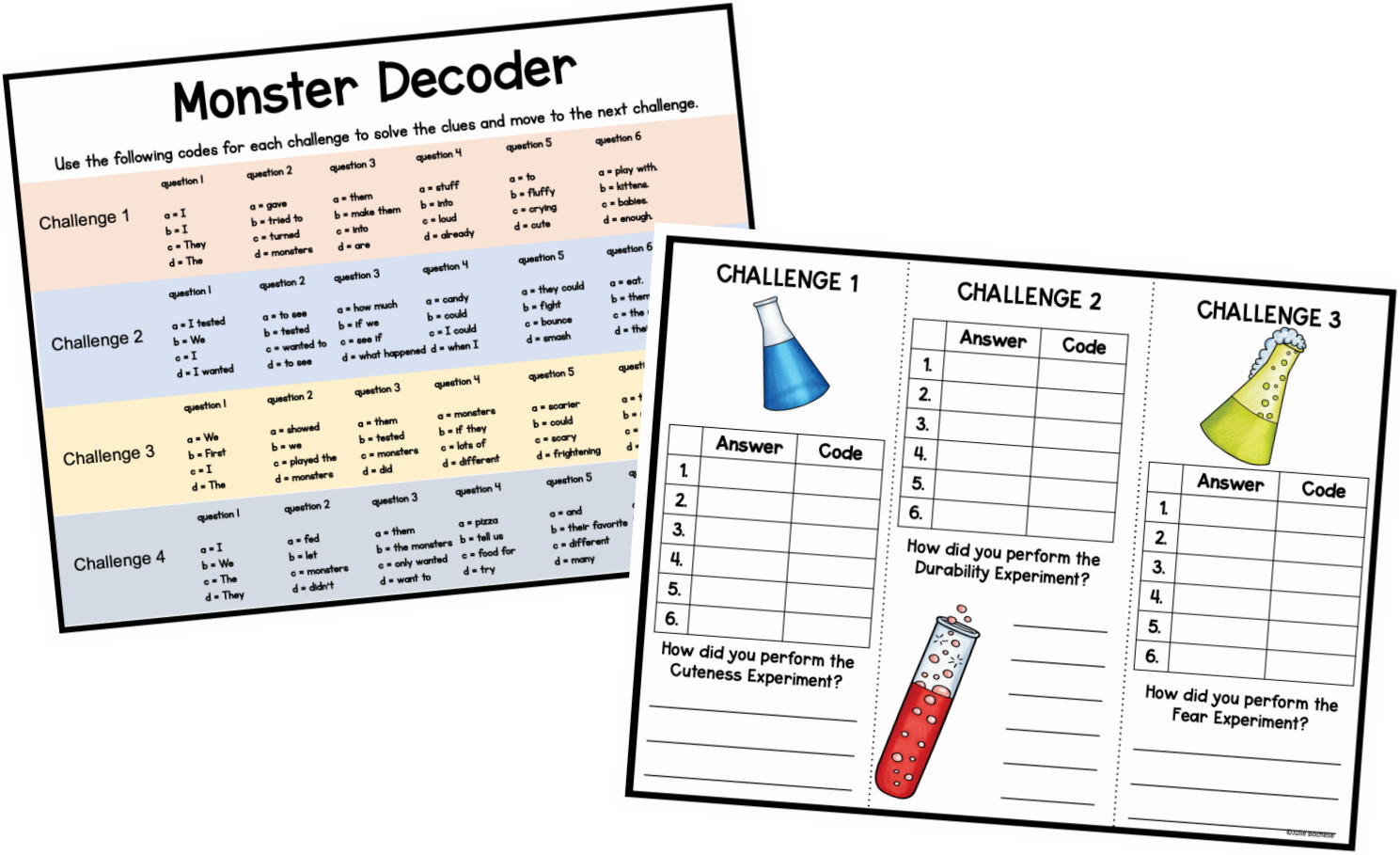
Webscape™



Questions review key 4th grade math skills.

Printable Version Includes "Ooops!" Challenges

Printable Version Includes Recording Brochure & Decoder



Monster Decoder

Use the following codes for each challenge to solve the clues and move to the next challenge.

	question 1	question 2	question 3	question 4	question 5	question 6
Challenge 1	a = I b = I c = They d = The	a = gave b = tried to c = turned d = monsters	a = them b = make them c = into d = are	a = stuff b = into c = loud d = already	a = to b = fluffy c = crying d = cute	a = play with. b = kittens. c = babies. d = enough.
Challenge 2	a = I tested b = We c = I d = I wanted	a = to see b = tested c = wanted to d = to see	a = how much b = if we c = see if d = what happened	a = candy b = could c = I could d = when I	a = they could b = fight c = bounce d = smash	a = eat. b = them c = the d = the
Challenge 3	a = We b = First c = I d = The	a = showed b = we c = played the d = monsters	a = them b = tested c = monsters d = did	a = monsters b = if they c = lots of d = different	a = scarier b = could c = scary d = frightening	a = t b = c = d =
Challenge 4	a = I b = We c = The d = They	a = fed b = let c = monsters d = didn't	a = them b = the monsters c = only wanted d = want to	a = pizza b = tell us c = food for d = try	a = and b = their favorite c = different d = many	

CHALLENGE 1

	Answer	Code
1.		
2.		
3.		
4.		
5.		
6.		

How did you perform the Cuteness Experiment?

CHALLENGE 2

	Answer	Code
1.		
2.		
3.		
4.		
5.		
6.		

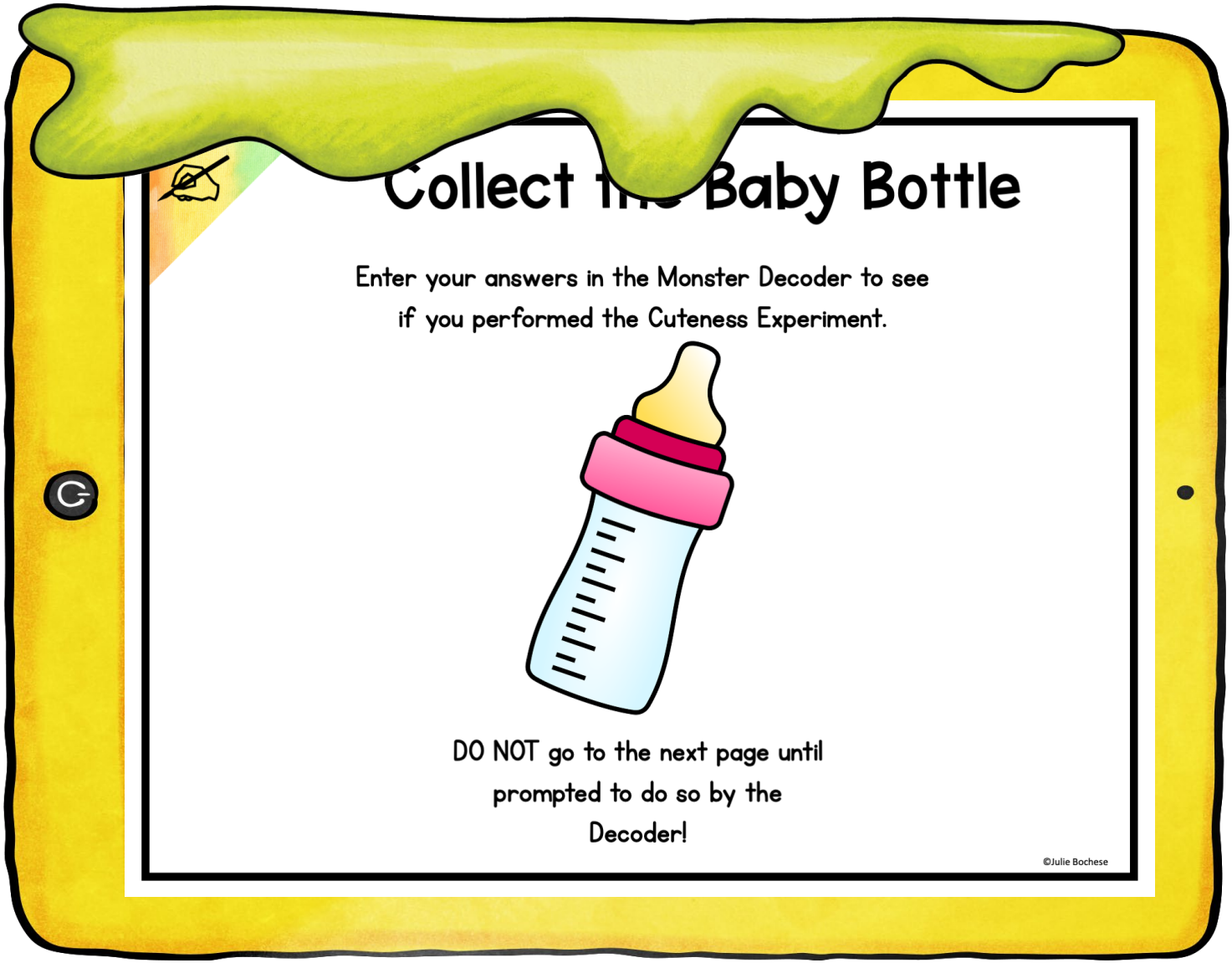
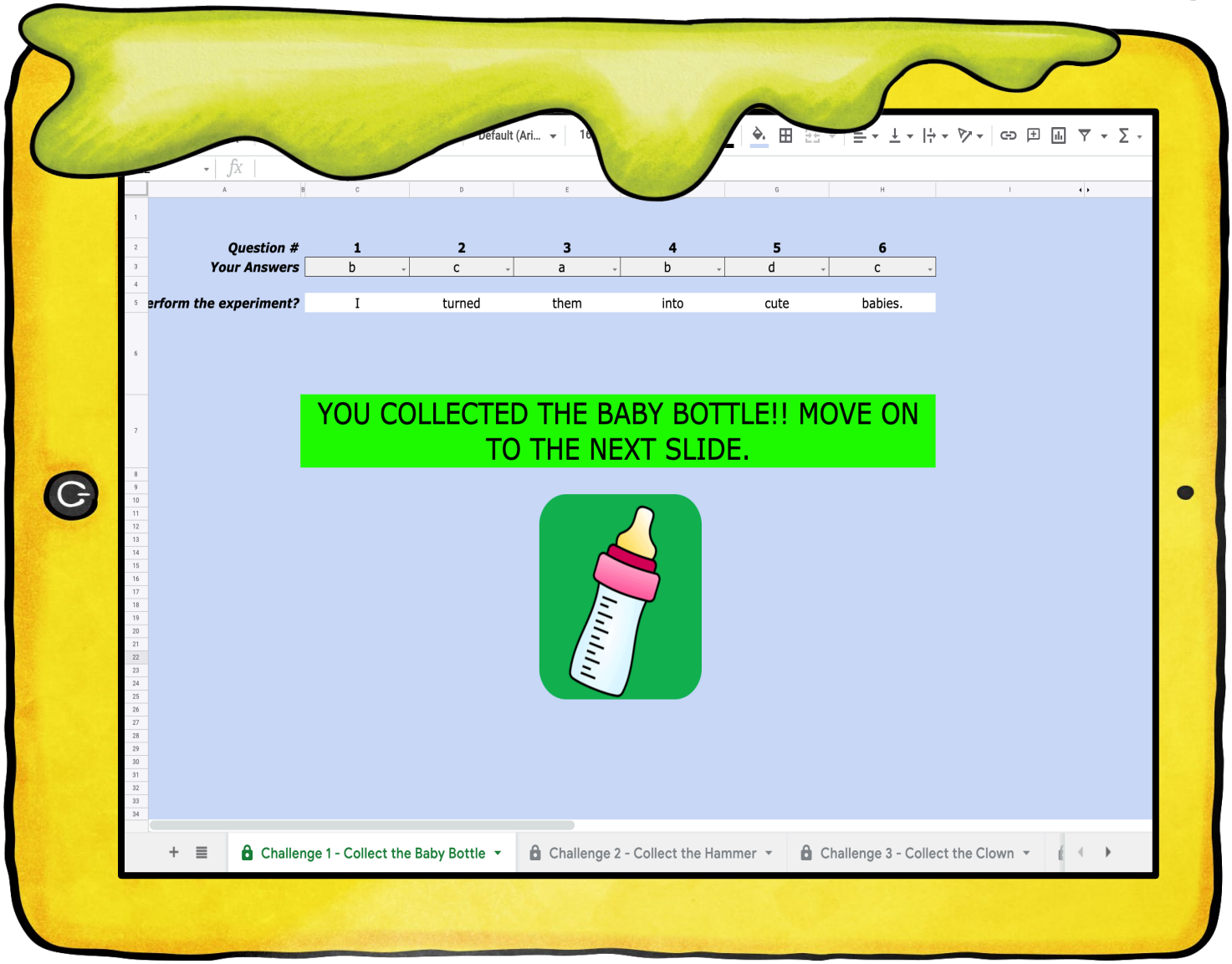
How did you perform the Durability Experiment?

CHALLENGE 3

	Answer	Code
1.		
2.		
3.		
4.		
5.		
6.		

How did you perform the Fear Experiment?

Google Slides Prompt Students to use Decoder



Decoder in Digital Version is Self-Checking