

4th Grade

# MEASUREMENT CONVERSIONS



PRINTABLE • GOOGLE • WEBSCAPE™



# Print & Digital Options



## Printable Directions

### Materials:

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

Mat

es link for each student  
s link for each student

ately 80 minutes. You can also split this up into  
ions, having students complete one challenge per



Google Slides and Google Sheets Digital Escape  
work through each challenge in the slides.  
into the Google Sheet to self-check their  
will prompt students to check their work or  
challenge. Complete all four challenges to  
ificate.

# Print Friendly Version

## Challenge #2



1. Solve each place value problem.
2. Record answers on your brochure.
3. Check your answers in the Escape the Zoo Decoder.
4. Put the photo of the elephant into your zoo album.
5. Scan the QR code in the corner of the next page.
6. Move on to challenge #3.

2. Elton the elephant's weight is shown below. Which statement correctly describes the relationship between the outlined digits below?

12,696

- a. The 6 in the rectangle is 10 times greater than

1. The two largest numbers are 12 and 9. The two smallest numbers are 6 and 6. The two numbers that correctly compare their values are 12 > 9 and 6 = 6.

12,696

Elton's weight  
(in pounds)

- a. <
- b. >
- c. =
- d. +

## Challenge #3



1. Solve each measurement problem.
2. Record answers on your brochure.
3. Check your answers in the Escape the Zoo Decoder.
4. Put the photo of the monkey into your zoo album.
5. Scan the QR code in the corner of the next page.
6. Move on to challenge #4.

1. A baby proboscis monkey weighs 3 pounds. How many ounces is this?

- a. 36 ounces
- b. 45 ounces
- c. 54 ounces
- d. 48 ounces

2. Marvin the monkey loves to sleep in his hammock. Today, he slept in his hammock for  $4\frac{1}{2}$  hours. How many minutes did Marvin spend in his hammock today?

- a. 240 minutes
- b. 244 minutes
- c. 270 minutes
- d. 180 minutes

3. The table below shows the lengths of different monkeys' tails in meters and centimeters. Which measurement belongs in the empty space in the table?

Monkey type	Tail length (m)	Tail length (cm)
Howler	0.73	73
Macaque	0.85	85
Baboon		61
Chimpanzee	0.53	53

- a. 61
- b. 0.61
- c. 0.061
- d. 61.0

# Video Tell the Story





# Four 4<sup>th</sup> Grade Math Skills & Challenges

## Zoo Escape Room

1. Challenge #1: Solve the multiplication problems to hear the bears' question.
2. Challenge #2: Solve the place value problems to hear the elephants' question.
3. Challenge #3: Solve the measurement problems to hear the monkeys' question.
4. Challenge #4: Solve the problems with fractions to hear the camels' question.

**SOLVE THE PROBLEM**

When a black bear stands on its hind legs, it can be as tall as 70 inches. The multiplication area model below could be used to find how tall a black bear is standing on top of one another would be. What number should go inside the circle?

☐ 140     ☐ 12  
☐ 700     ☐ 30

**SOLVE THE PROBLEM**

The zookeepers feed the elephants in the exhibit a diet of grass, leaves, fruit and tree bark. The amount of each type of food the elephants are fed is one day is shown in the table below. What number in the correct hundred, what two foods are fed to the elephants in equal amounts?

Food Type	Grass	Leaves	Fruit	Bark
Amount	1,200 lbs.	1,000 lbs.	2,000 lbs.	1,800 lbs.

☐ Grass and Fruit  
☐ Grass and Leaves  
☐ Bark and Fruit  
☐ Grass and Bark

**SOLVE THE PROBLEM**

The diagram below shows the dimensions of the equilateral triangle exhibit at the zoo in feet. What is the perimeter of the exhibit in inches?

☐ 720 inches     ☐ 1,920 inches  
☐ 240 inches     ☐ 76 inches

**SOLVE THE PROBLEM**

A Redwing cardinal weighs  $\frac{1}{2}$  of a ton. A downy woodpecker weighs  $\frac{1}{4}$  of a ton. Choose the correct symbol to complete the number comparison below.

☐ >  
☐ <  
☐ =  
☐ -

# Challenges are Quick



## Solve the Problem

Each bear in the bear exhibit eats 16 pounds of food per day. If there are 8 bears in the exhibit, how much food do the bears eat in total in one week?

- a. 962 pounds
- b. 788 pounds
- c. 896 pounds
- d. 874 pounds

Drag to circle  
your answer



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# Standards - Based Questions



## Solve the Problem

The zookeepers feed the elephants in the exhibit a diet of grass, leaves, fruit, and tree bark. The amount of each type of food the elephants are fed in one month is shown in the table below. When rounded to the nearest hundred, which two foods are fed to the elephants in equal amounts?

Food type	Grass	Leaves	Fruit	Bark
Amount	2,019 lbs.	1,954 lbs.	2,063 lbs.	2,180 lbs.

Grass and Fruit

Leaves

Fruit

Bark

Drag to circle your answer

## Challenge #1



1. Solve each multiplication problem.
2. Record answers on your brochure.
3. Check your answers in the Escape the Zoo Decoder.
4. Put the photo of the bear into your zoo album.
5. Scan the QR code in the corner of the next page.
6. Move on to challenge #2.

1. Each bear in the bear exhibit eats 16 pounds of food per day. If there are 8 bears in the exhibit, how much food do the bears eat in total in one week?

- a. 962 pounds
- b. 788 pounds
- c. 896 pounds
- d. 874 pounds

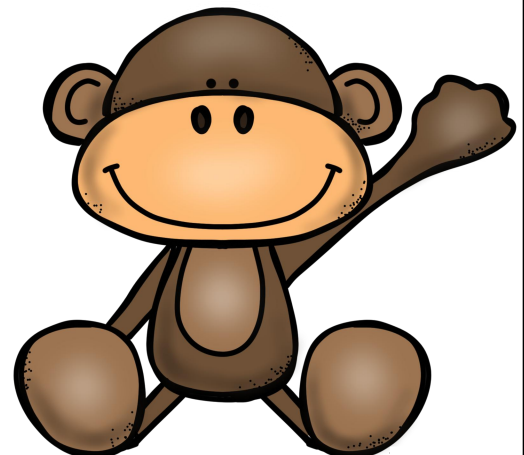
2. There are 4 bear cubs in the exhibit. Each bear cub weighs approximately 65 pounds. What is the total weight of the bear cubs?

- a. 260 pounds
- b. 320 pounds
- c. 300 pounds
- d. 280 pounds

3. When a black bear stands on its hind legs, it can be as tall as 72 inches. The multiplication area model below could be used to find how tall 12 black bears standing on top of one another would be. Which number should go inside the circle?

	70	2
10	700	<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div>
2	140	4

- a. 140
- b. 720
- c. 12
- d. 20



# Standards - Based Questions



## Solve the Problem

The table below shows the lengths of different monkeys' tails in meters and centimeters. Which measurement belongs in the empty space in the table?

Monkey type	Tail length (m)	Tail length (cm)
Howler	0.73	73
Macaque	0.85	85
Baboon		61
Chimpanzee	0.53	53

a. 6.1

c. 0.061

b. 0.61

d. 61.0

Drag to circle  
your answer

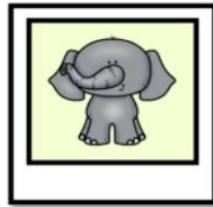




# Google Slides Prompt Students to use Decoder

**WELL DONE!**

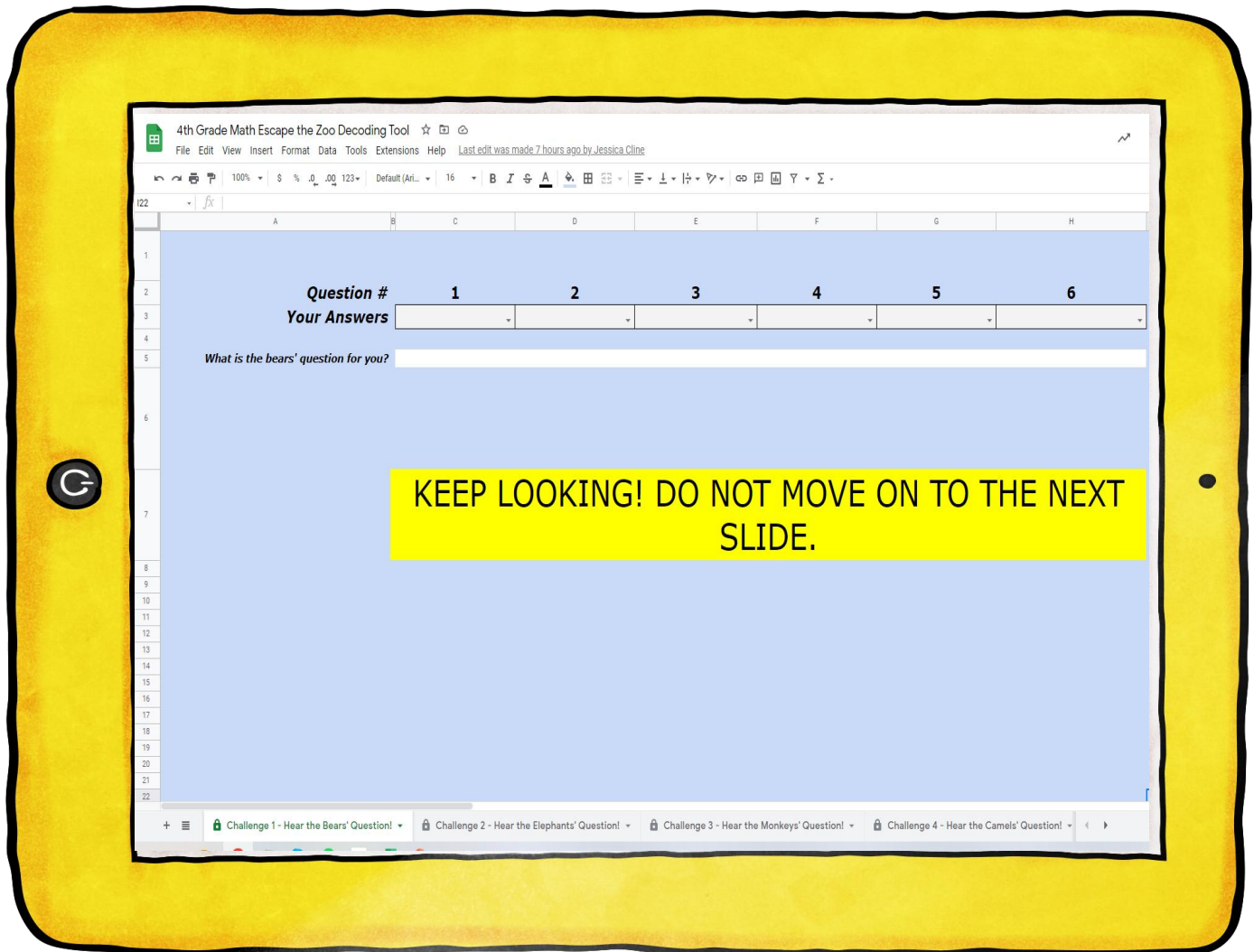
Your answer has satisfied the elephants' curiosity!



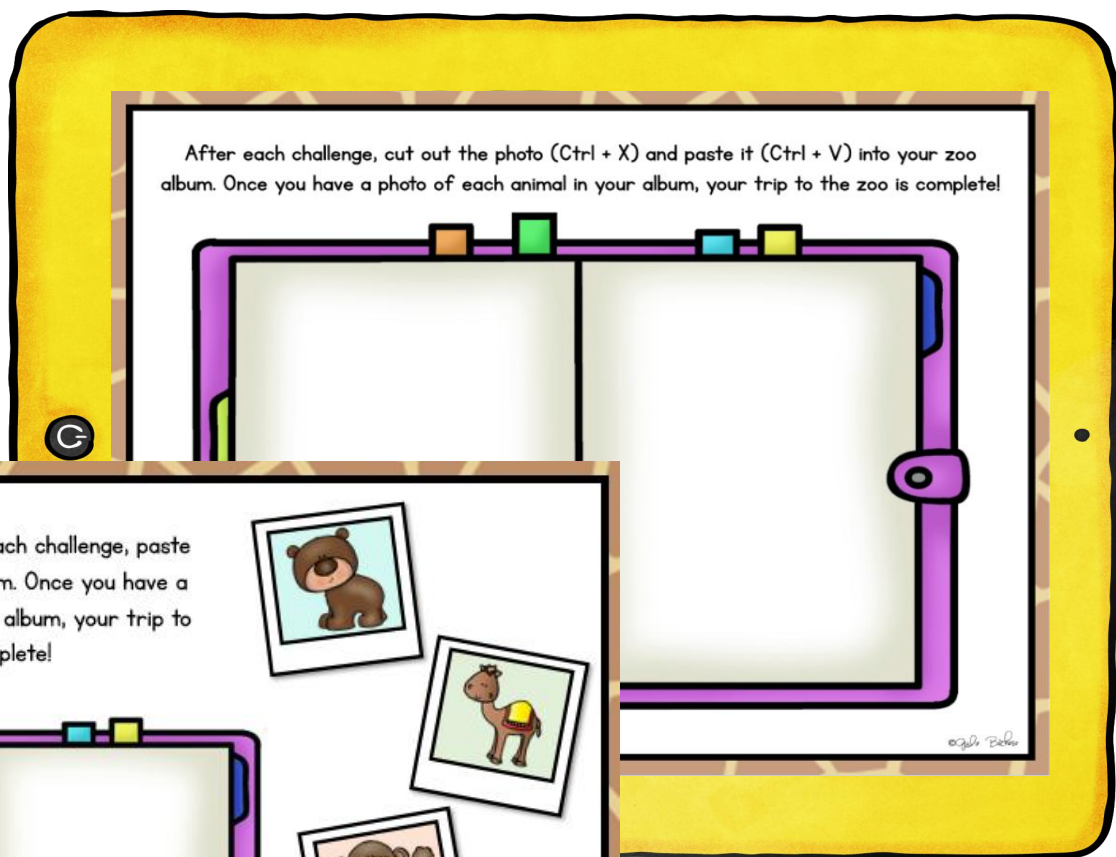
Cut (Ctrl + X) and paste (Ctrl + V) the photo of the elephant into your album. Then, continue on to the next challenge.

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# Decoder in Digital Version is Self-Checking



# Interactive Elements





# Printable Version Includes "Ooops!" Challenges

**OOPS!**

You're stuck in a long  
concessions line!



YOU MUST STAY  
MINUTES. NO

**OOPS!**

The sun is shining in your eyes,  
and you can't see!



YOU MUST BE BLINDFOLDED FOR 5  
MINUTES. NO USING YOUR EYES  
DURING THIS TIME!

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# Printable Version Includes Recording Brochure & Decoder


## ESCAPE THE ZOO

Use the following codes for each challenge to solve

	question 1	question 2	question 3
Challenge 1	a = Does	a = humans	a = near
	b = Why	b = bears	b = because
	c = Do	c = eat	c = cube
	d = How	d = zoo	d = really
Challenge 2	a = How	a = goes	a = trunk
	b = When	b = did	b = since
	c = Did	c = has	c = the exhibit
	d = Where	d = was	d = the elephant

	question 1	question 2	question 3	question 4	question 5	question 6
Challenge 3	a = Why	a = can	a = hanging	a = monkey	a = scratch	a = self?
	b = Who	b = in the	b = a	b = around	b = full	b = around?
	c = When	c = does	c = because	c = chasing	c = chimpanzee	c = eat?
	d = What	d = bananas	d = until	d = into	d = business	d = watching?
Challenge 4	a = Where was	a = one	a = hump	a = afterwards	a = the camel's	a = back?
	b = How did	b = the	b = exhibit	b = can	b = without	b = straw?
	c = Why would	c = next	c = straw	c = since	c = on top of	c = ride?
	d = Who says	d = going back	d = collect	d = brook	d = running	d = animals?

### CHALLENGE 1



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

What is the bears' question for you?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### CHALLENGE 2


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

What question do the elephants want to ask?


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



### CHALLENGE 3



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

What question do the monkeys have for you?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_