

Build A Zoo

Project Based Learning

1st Grade Print & Google Slides

FEEDING TIME

It is mealtime at the zoo! Your animals are hungry. You want to make sure that what they might eat in the wild. Use the resources below to research what to on what you learn.

Animal's diet is the same as
...ents. Take notes

ANIMAL HABITATS

You have \$100 to decorate the animal exhibits. Below are the different features you can purchase. You can of each feature. Think about what you learned about the animals' natural habitats, how in exhibit, and the budget. Drag an animal icon to each feature you would like in their st of features to purchase. You will also calculate the cost.



4 plants



Sand
\$6



Bush



Oak trees

BUILDING THE EXHIBITS

3. Which exhibit has the longest length measurement?
4. Put exhibits A, B, and C in order from the shorter
5. You want to build a fence along two sides of E side. How many tape measure lengths of fence diagram to show your thinking.

BUILDING THE EXHIBITS

Use the blueprint you created of your zoo to measure the exhibits. Drag the tape measure to see how many tape measures wide each exhibit is. Then, rotate the tape measure to measure how many tape measures long it is. On the blueprint, width is measured side to side. Length is measured up and down.

Exhibit	Animal	Exhibit Width (in tape measures)	Exhibit Length (in tape measures)
A			
B			
C			
D			

1. Which two exhibits have the same width?

Print & Digital Versions

CHALLENGE #3: PRIMATE CLASSES

The primate classes are so popular that you decide to offer classes about other types of animals, too. Under each class name, you see the time it begins. Drag each class to the clock that shows the correct start time.



ANIMAL HABITATS

You have \$1,000 to decorate the animal exhibits. Below are the different features you can purchase. You can purchase more than one of each feature. Consider what you learned about habitats, how much space is within each exhibit, and the budget. Drag an animal icon to each like in their exhibit. On the following slide, you will make a list of features to purchase.



Watering hole
\$120



Colorful plants



Sand
\$50



Tree
\$100



Climbing rocks
\$80



Tall grass
\$60



Tree
\$100



Short grass

Drag me



CHALLENGE #3: PRIMATE CLASSES

You just built a new primate exhibit and you want to offer classes to your visitors so they can learn about the monkeys, gorillas, and chimpanzees while visiting the zoo. The times each class begins are shown on the clocks below.



All About Apes



Primate Diets



Monkey Habitats

1. Are the times on the clocks shown in AM or PM? How do you know?

2. What time does All About Apes begin?

3. What time does Primate Diets begin?

4. What time does Monkey Habitats begin?

5. Each class is one hour long. What time does each class end?

All About Apes

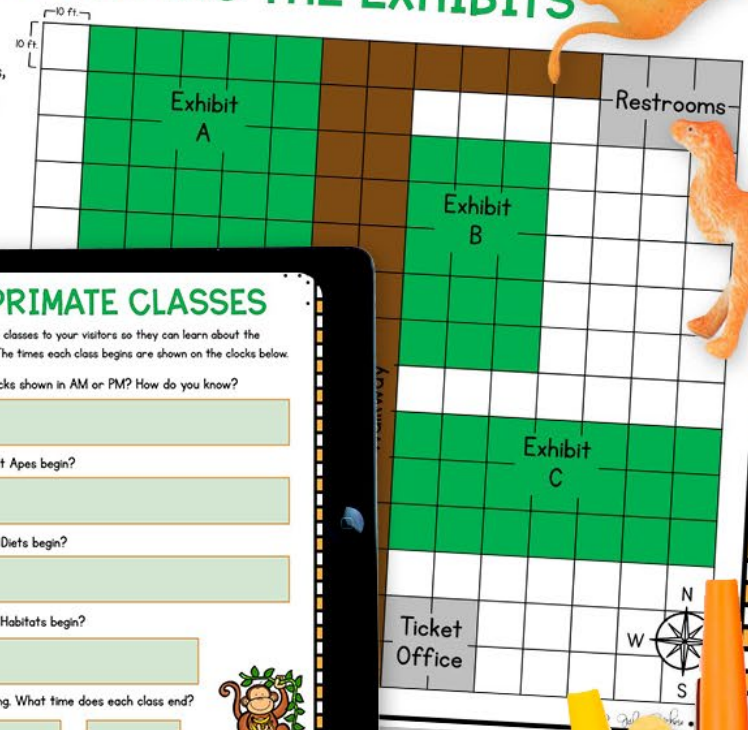
Primate Diets

Monkey Habitats



BUILDING THE EXHIBITS

Now that you've chosen your 4 animals, you must assign them to their exhibits. On this blueprint of the zoo, each square represents an area that is 10 feet long by 10 feet wide.



Aligned to Math Standards

ANIMAL HABITATS

ANIMAL EXHIBIT	FEATURE TYPE	COST	RUNNING TOTAL SPEND

Let's see if you have enough money to purchase all the features you chose for your animal exhibits.

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and
ate the
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ember,
n't go
your
budget of
\$1,000!

ANIMAL HABITATS

You have \$1,000 to decorate the animal exhibits. Below are the different features you can purchase for the exhibits. You can purchase more than one of each feature. Consider what you learned about the animals' natural habitats, how much space is within each exhibit, and the budget. Drag an animal icon to each feature you would like in their exhibit. On the following slide, you will make a list of features to purchase and calculate the cost.



Watering hole
\$120



Colorful plants
\$40



Sand
\$50



Bush
\$60



Tree



Climbing rocks
\$80



Tall grass
\$60



Tree trunk
\$70



Hanging vine
\$30



Short grass



o Drag me



Challenge Activities for Differentiation

ATTENDANCE

...photograph to answer the questions.

FIELD TRIPS AT THE ZOO

MARCH



4. How many more school animals visit...

CHALLENGE #3: PRIMATE CLASSES

You just built a new primate exhibit, and you want to offer classes to your visitors so they can learn about the monkeys, gorillas, and chimpanzees while visiting the zoo. The times each class begins are shown on the clocks below.

1. Are the times on the clocks shown in AM or PM? How do you know?

CHALLENGE #3: PRIMATE CLASSES

The primate classes are so popular that you decide to offer classes about other types of animals, too. Under each class name, you see the time it begins. Drag each class to the clock that shows the correct start time.



Nocturnal Critters
10:35 am

What's it like to be a Zookeeper?
1:15 am

Big Cats
4:55 pm

Our Penguin Pals
1:50 pm

Endangered Animals
3:25 pm

Animals of the Arctic
9:40 am

...es begin?

...ets begin?

...abitats begin?

...ng. What time does each class end?

...imate Diets

Monkey Habitats



TABLE OF CONTENTS

1. Teacher Directions & Standards Addressed
2. Student Directions
3. Choosing Your Animals
4. Building the Exhibits (Measurement)
5. Animal Habitats (Money, Addition)
6. Feeding Time (Word Problems with Addition and Subtraction)
7. Zoo Brochure
8. Zoo Attendance (Word Problems with Addition and Subtraction, Representing and Interpreting Data)
9. Challenge #1: Reptile House (Composite Shapes, Place Value)
10. Challenge #2: Snack Stand (Money, Word Problems with Addition and Subtraction)
11. Self-Reflection and Evaluation
12. Answer Key



THANK YOU FOR
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requires that you make a copy of the
resource to your own Google Drive.

FOR THE TEACHER

BUILD A ZOO is a project-based learning task that involves using first grade math standards to solve problems related to building and maintaining a zoo. It was created for students in first grade. The following standards are addressed:

- I.OA.A.1 Use addition and subtraction within 20 to solve word problems.
- I.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.
- I.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.
- I.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits with the symbols $>$, $=$, and $<$.
- I.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10.
- I.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number.
- I.MD.A.1 Order three objects by length.
- I.MD.A.2 Express the length of an object as a whole number of length units by laying multiple copies of a shorter object (the length unit) end to end.

DIRECTIONS:

1. Assign students to work alone or in small groups.
2. Preview the activity with your students.
3. Allow students class time to complete the activity. This can span several days.
4. Allow students an opportunity to complete extra challenge activities.
5. Allow students to complete the self-evaluation reflection and evaluation rubric.
6. Allow students an opportunity to share their completed projects.
7. Assign extra challenge activities (optional).

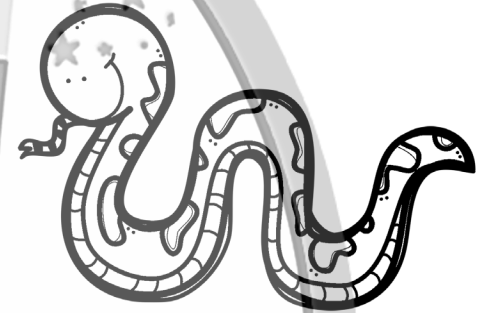


BUILD A ZOO

You have decided to open a zoo! It is your job to choose the animals in your zoo, build and design thoughtful enclosures for your animals to live in, keep your animals happy and healthy, and attract visitors to your zoo!

Here are your tasks:

- Read through the entire packet before beginning.
- Choose the animals for your zoo.
- Create a blueprint of your zoo.
- Calculate the length and width of the animal exhibits.
- Research and learn about your animals' natural habitats.
- Recreate the animal habitats in the exhibits while following a budget.
- Research animal feeding habits in the wild.
- Calculate how much food will be required to feed your animals.
- Write a blurb for a brochure promoting your zoo and persuading people to visit.
- Analyze profits for your zoo based on tickets sold.
- Interpret data about school field trips to the zoo.
- (Optional) Complete the challenge pages.
- Complete the self-reflection and evaluation rubric.



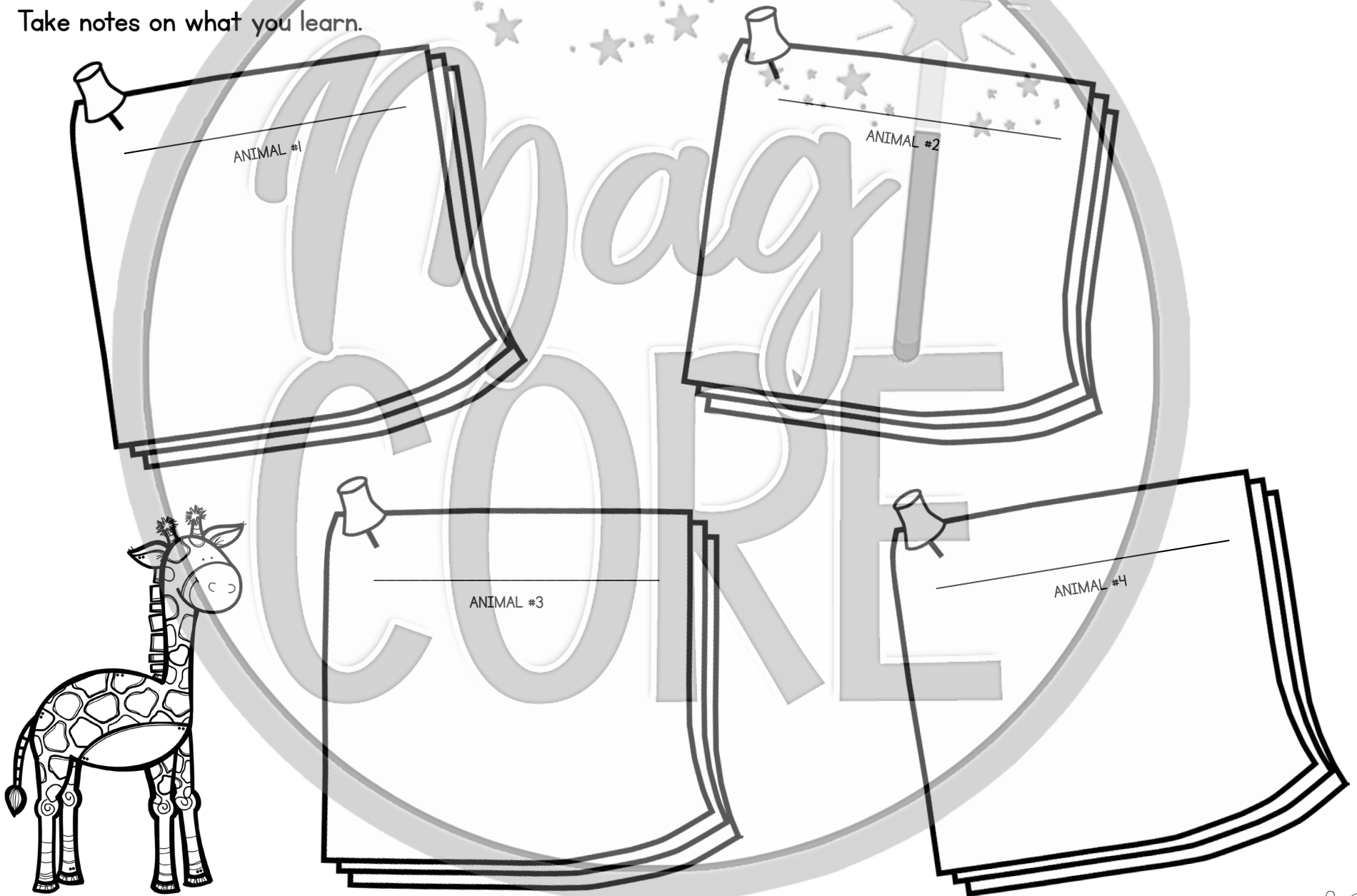
CHOOSING YOUR ANIMALS

Your first step is to choose which animals to feature in your zoo. Below are six animal types you may choose from. Think of pros and cons of including each animal type in your zoo. For example, you might consider if an animal will be exciting to visitors, or how difficult it might be to care for that type of animal. After thinking about your options, choose 4 types of animals for your zoo. Circle the animals you chose.

Animal	Pros	Cons
Gorilla 		
Zebra 		
Giraffe 		
Crocodile 		
Flamingo 		
Lion 		

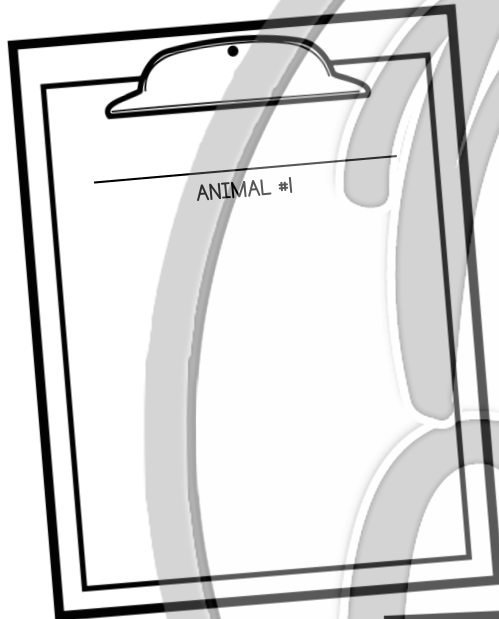
ANIMAL HABITATS

Now that the animal exhibits have been built, it is time to decorate them. You want to make each exhibit resemble the animals' natural habitat as closely as possible. Research in which type of habitat each animal lives in the wild. Take notes on what you learn.

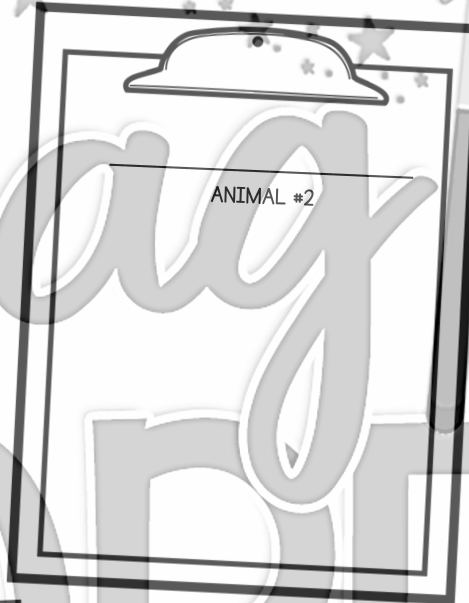


FEEDING TIME

With the animals settled in their new exhibits, it is mealtime at the zoo! You want to ensure that each animal's diet is the same as what they might eat in the wild. Research what each type of animal typically eats so that you know what type of food to buy. Take notes on what you learn.



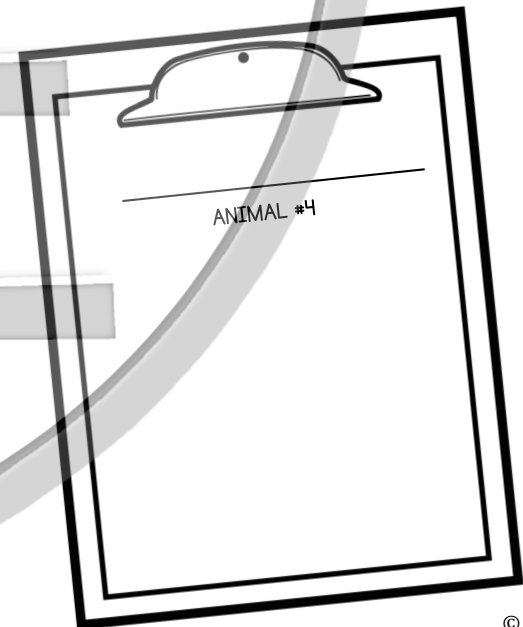
ANIMAL #1



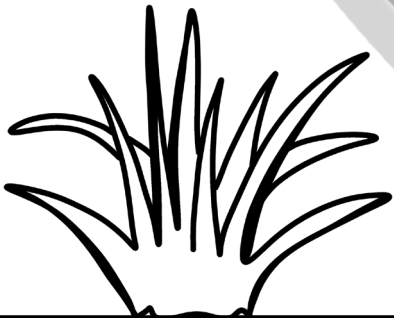
ANIMAL #2



ANIMAL #3



ANIMAL #4



ZOO ATTENDANCE

The table below shows the price of admission to your zoo. Use the information in the table to answer the questions.

TICKET TYPE	Senior Citizen (65+ years)	Adult (18–64 years)	Child (2–17 years)	Baby (0–1 years)
TICKET PRICE	\$6	\$8	\$3	Free

1. The Johansen family goes to the zoo. The family is Grandma (68 years old), Mom (38), Dad (39), Michael (8), Lara (4), and Rowan (1). How much will the Johansens spend on adult tickets?
2. How much will the Johansens spend on child tickets?
3. How much more will the Johansens spend on adult tickets than on child tickets?
4. The Johansens have a coupon for \$2 off a senior citizen ticket. How much will Grandma's ticket cost with the coupon?



CHALLENGE #1: REPTILE HOUSE



Your zoo is a huge success! You expand by building a reptile house. Each reptile exhibit is a composite shape made up of several smaller shapes. Follow the instructions to build a blueprint of the reptile house below. Draw the shapes that make up each composite shape. Label the exhibits with the reptile name.

1. The boa constrictor exhibit is made from these shapes:



2. The two-horned chameleon exhibit is made from these shapes:



3. You have four fire-bellied toads. Each toad needs one of these shapes:

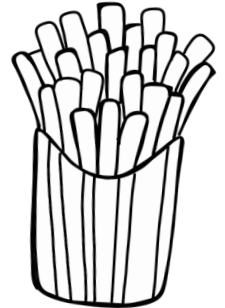


4. The poison dart frog exhibit is in the shape of a rectangle. It is made up of 3 smaller shapes.

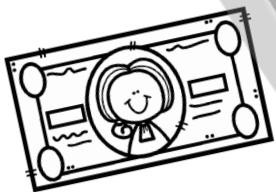


CHALLENGE #2: SNACK STAND

4. You are looking to add a new menu item. You are deciding between French fries and a turkey wrap. It will cost the zoo \$2 to purchase and prepare each order of French fries, and they can be sold for \$3. It will cost the zoo \$4 to purchase and prepare each turkey wrap, but each wrap can be sold for \$6. Which new menu item is the better choice? Explain.



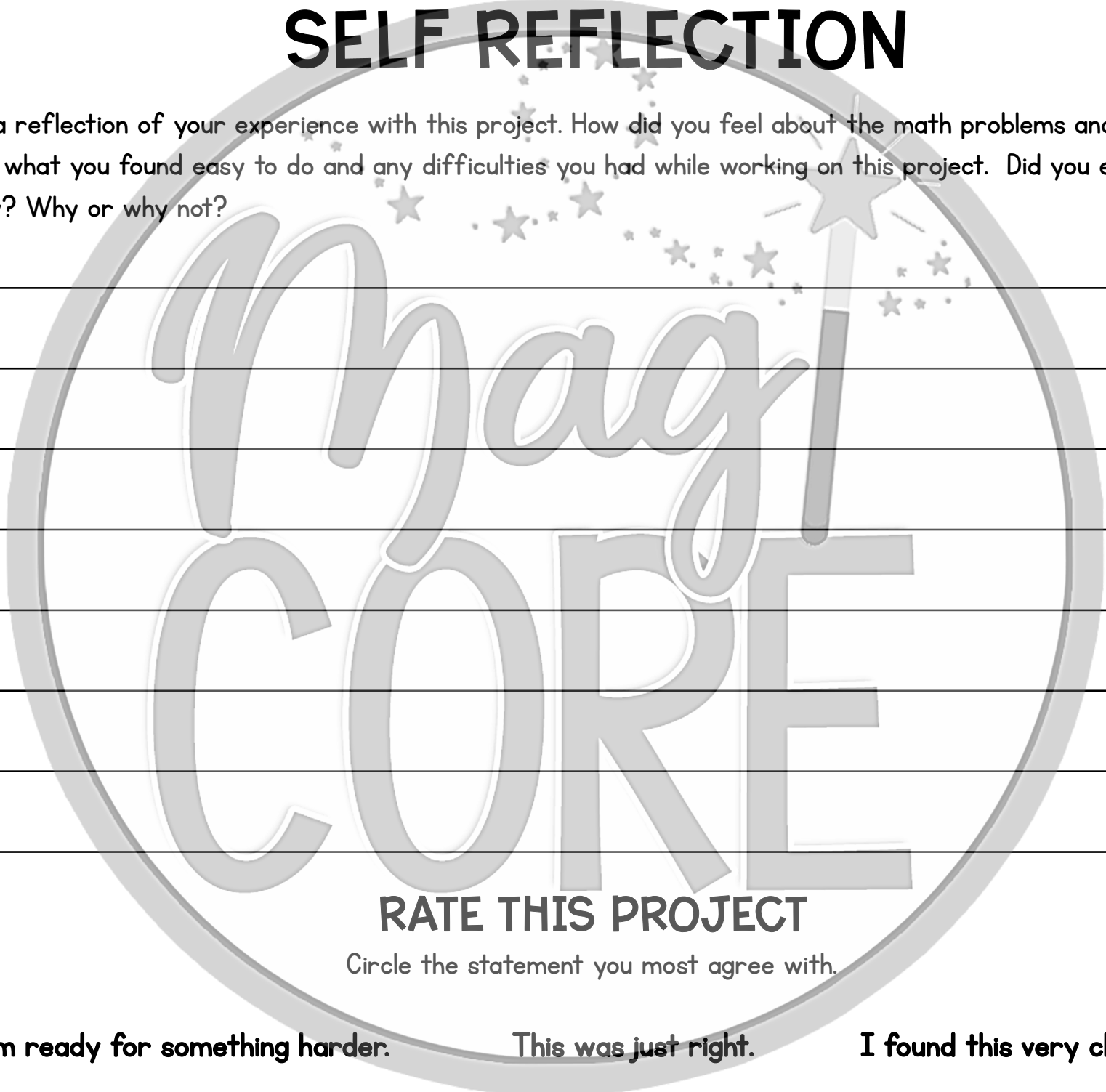
5. Chrystana spent \$12 at the snack stand. Her sister Alice spent \$4 less than Chrystana at the snack stand. How much did Chrystana and Alice spend at the snack stand all together?



6. The zoo's business manager suggests raising all the prices at the snack stand by \$1 to increase profit. Why might this be a good idea? Why might it be a bad idea? Decide whether you will take your business manager's advice.

SELF REFLECTION

Write a reflection of your experience with this project. How did you feel about the math problems and activities? Explain what you found easy to do and any difficulties you had while working on this project. Did you enjoy this activity? Why or why not?



RATE THIS PROJECT

Circle the statement you most agree with.

I am ready for something harder.

This was just right.

I found this very challenging.

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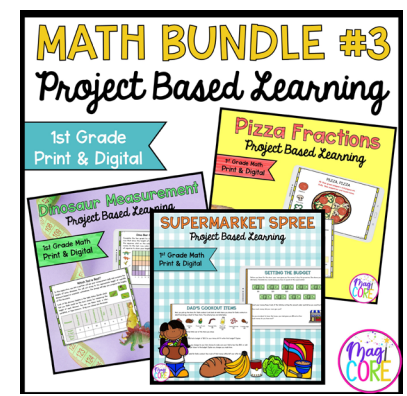
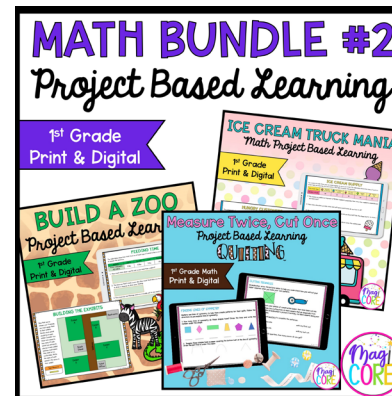
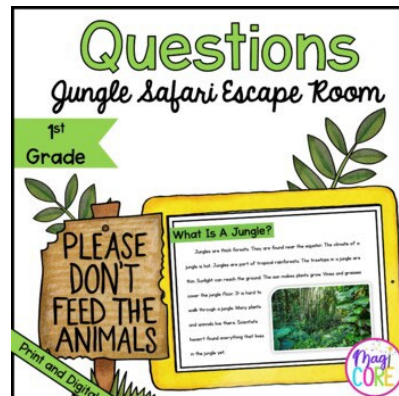
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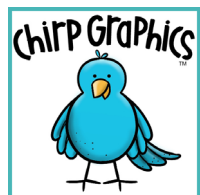


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