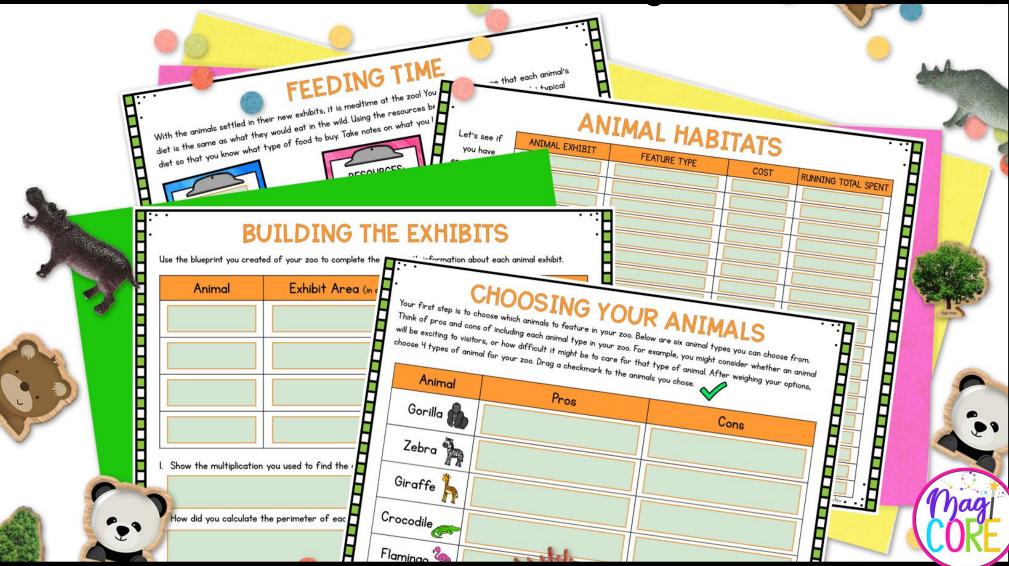
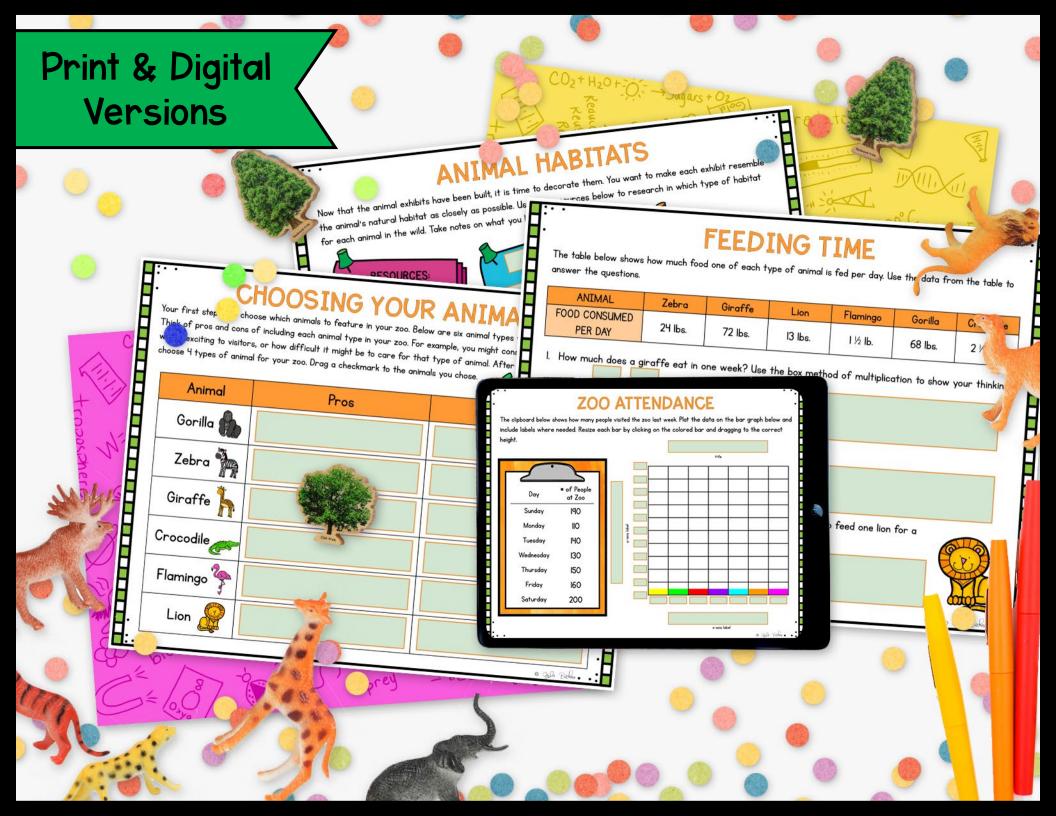


# Project Based Learning

### 4th Grade Print & Google Slides



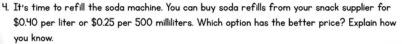


#### Aligned to Math Standards



### **Challenge** Activities for Differentiation

#### **FE #2: SNACK STAND**





vou know.



#### CHALLENGE #3: PRIMATE BABIES You just built a new primate exhibit, and several species of monkeys had babies! The zookeepers weighed the babies when they were one week old, and the data is on the clipboard below. Use the data to create a line plot showing

hahy weights. Drag an X to plot the data. Then, answer the questions.

#### GE #3: PRIMATE BABIES

To raise money to protect endangered primates in the wild, you place a donation box near the exhibits of the primate ∎s. The amount of money you raised each month is below.

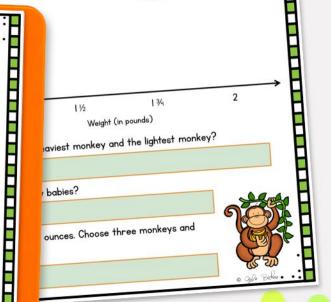
September	October	November	December	January	February
\$2,067	\$1,773	\$1,942	\$2,285	\$1,528	\$1,206

Round each monthly amount to the nearest hundred.

Was more money raised from September to November or from December to February? Determine the difference in the amount of money raised.

The zoo was only open on weekends in January. If there were 8 weekend days in January and an equal amount of money was raised each day, how much money was donated each day in January?

In March, there was approximately \$59 in the donation box at the end of days in March, calculate the total amount donated.



# TABLE OF CONTENTS

- I. Teacher and Student Directions
- 2. Choose Your Animals
- 3. Build the Exhibits
- 4. Animal Habitats
- 5. Feeding Time
- 6. Zoo Brochure
- 7. Zoo Attendance
- 8. Challenge #I Snake Lengths
- 9. Challenge #2 Snack Stand
- 10. Challenge #3 Primate Babies
- II. Self Reflection and Rubric



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### FOR THE TEACHER

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

- 4.0A.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations.
- 4.NBT.A.2 Compare two multi-digit numbers based on meanings of the digits in each place.
- 4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- 4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number.
- 4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.
- 4.NF.A.2 Compare two fractions with different numerators and different denominators.
- 4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.
- 4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

#### DIRECTIONS:

- I. 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 (optional).
- 5. Allow students to complete the self-evaluation reflection and evaluation rubric.
- 6. Allow students an opportunity to share their completed projects..

## BUILD A ZOO

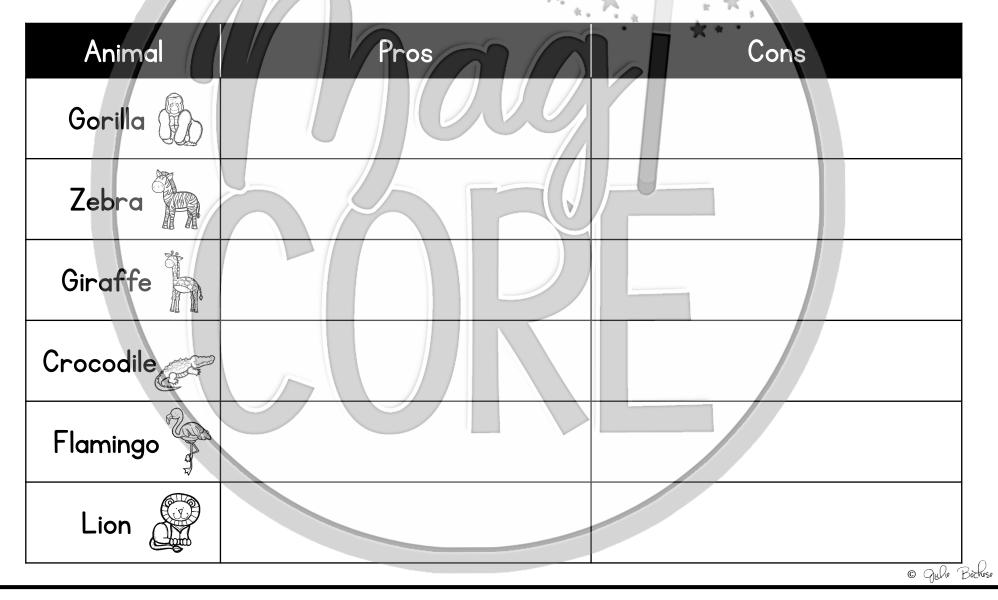
You have decided to open a zoo! It is your job to choose the animals in your zoo, build and design thoughtful enclosures for your animals to live in, keep your animals happy and healthy, and attract visitors to your zoo!

#### 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 area and perimeter of the animal exhibits.
- Research and learn about your animals' natural habitats.
- Recreate the animal habitats in the exhibits 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.
- Calculate profits for your zoo based on tickets sold .
- Interpret data about zoo attendance.
- (Optional) Complete the challenge pages.
- Complete the self-reflection and evaluation rubric.

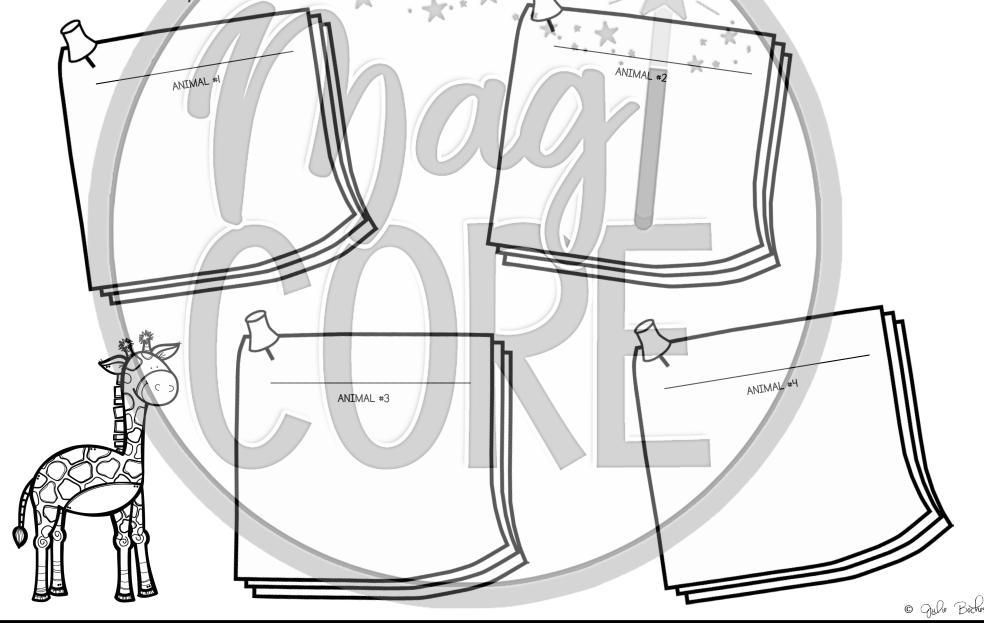
## **CHOOSING YOUR ANIMALS**

Your first step is to choose which animals to feature in your zoo. Below are six animal types you can 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 weighing your options, choose 4 types of animal for your zoo. Circle the animals you chose.



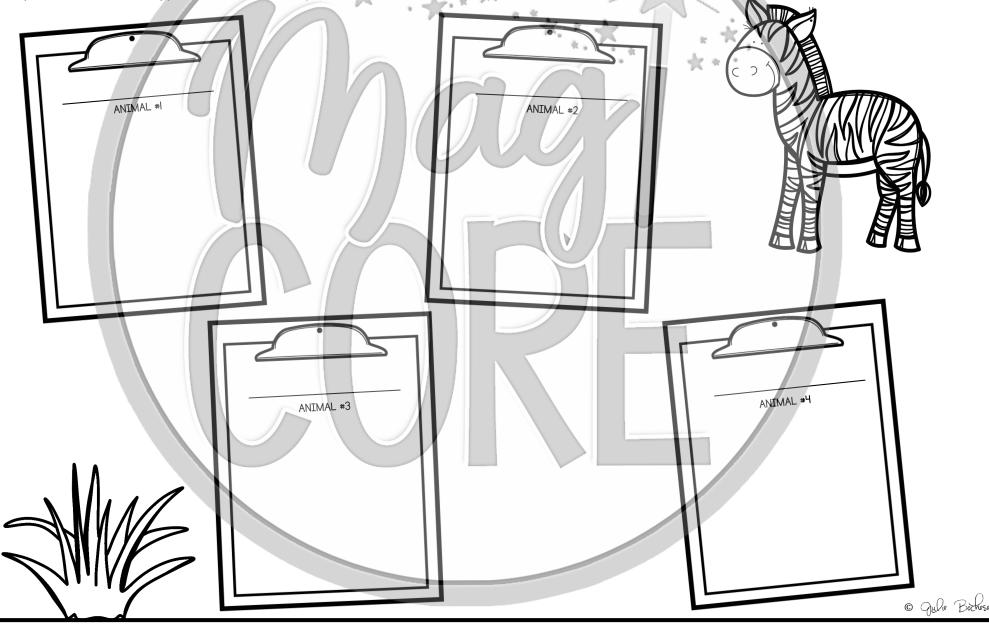
## **ANIMAL HABITATS**

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.



## **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	Adult	Child	Baby
	(65+ years)	(18-64 years)	(2-17 years)	(0-I years)
TICKET PRICE	\$6	\$8	\$3	Free

I. The Johansen family wants to go to the zoo. The family consists of Grandma (68 years old), Mom (38), Dad (39), Michael (8), Lara (4), and Rowan (1). They have a coupon for half off the price of admission. How much will the Johansens spend on tickets?

2. On a typical day, the zoo sells 75 adult tickets. How much money does the zoo make from adult tickets on a usual day? Use the standard algorithm to show your thinking.

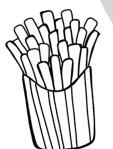
3. On Wednesday, the zoo sold 62 senior citizen tickets, 78 adult tickets, 94 child tickets, and 42 baby tickets. How much money did the zoo earn from tickets on Wednesday?

## CHALLENGE #2: SNACK STAND

4. It's time to refill the soda machine. You can buy soda refills from your snack supplier for \$0.40 per liter or \$0.25 per 500 milliliters. Which option has the better price? Explain how you know.



5. You add French fries to the snack stand menu. To make the French fries, you purchase 8 kilograms of potatoes. Each individual French fry weighs about 9 grams. About how many French fries can you make from the potatoes you purchased?



6. It takes 3 <sup>3</sup>/<sub>4</sub> minutes to fry each batch of French fries. How long will it take to fry 6 batches?

# 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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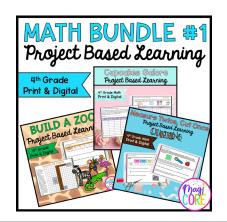
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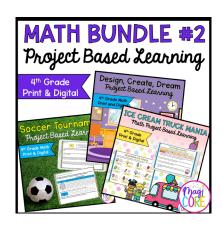
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