



# The Dino Diner

## 4<sup>th</sup> Grade

### Duration

Pre-Visit: 20-30 minutes

Museum Visit: 50 minutes

Post Visit: 30 minutes

### Location

Dinosaur Hall

### Supplies

- Worksheet
- Pencil
- Clipboard (optional)

### Standards

#### [NGSS](#)

4-LS1-1, LS1.A, LS3.A,  
LS3.B

#### [S+E Practices](#)

2, 3, 4, 6

#### [CCSS Math](#)

4.NBT.A

#### [CA State](#)

Mathematics Grade 4

Number Sense 2.1

### Vocabulary

Herbivore

Carnivore

Omnivore

Ecosystem

Fossil

Diet

### Concepts

- Scientists infer what animals eat from the shapes of their teeth.
- Bills are whole numbers with positive decimals added together to get a sum, or total.

### Objectives

- Students will identify the diet four specimens in the Dinosaur Hall based on the shape of their teeth.
- Students will estimate and compute the sum of whole numbers and positive decimals to two places.

### Outline

1. In one classroom session before visiting the Museum, review the concept that carnivores and herbivores can be identified using their teeth, and introduce the concept adding whole numbers to two decimal places.
2. At the Museum students will explore the Dinosaur Hall, completing their worksheets.
3. Back in the classroom, review student work and answer questions.



## Pre-Visit

First, if review (or introduce) the concept of whole numbers (including positive decimals). Go over how to sum up whole numbers with decimals. This will be a skill necessary to complete the worksheet.

If time, quickly review the concept that carnivores and herbivores can be identified using their teeth.

*Teaching Note: Teeth are only one indicator of diet, there are other factors that are good clues that tell us what an animal might eat, as well as animals that have contradictory diets to their teeth structure. However, for the purposes of this lesson, this does not need to be a significant concept.*

## Museum Visit

At the Museum distribute the Dino Diner worksheet and explain the assignment to the group. They should begin with the “A Fossil Foodie” worksheet. Break students into pairs or small groups and ask chaperones to assist students in exploring the hall, and encouraging them to complete each worksheet.

*Teaching Note: Good specimens and explanations of teeth are located in the section of the hall guided by the essential question: What were dinosaurs like as living animals? However, students may choose to use any four specimens they want to complete the assignment.*

If you are short on time or would like to use it as a homework assignment, the back page of the worksheet (the math portion) can be completed after the field trip.

## Post-Visit

Back at the classroom, go over the worksheet together with a focus on the math section (Mealtime!). Ask students if they had any questions about how to complete the math, and take a couple examples from student worksheets to go through together.

## Variations and Extensions

- Tell students there was a mistake on the bill, or that a customer didn't care for an item on their bill and wanted to return it and have them deduct that cost from the bill.
- Have students come up with their own menu items and costs that are whole numbers with positive decimals.

## A Fossil Foodie

You are a world renowned chef the Natural History Museum has hired to create a menu for its new late-night café, *The Dino Diner*. Like any good chef, before creating a menu you want to identify the needs of your customers. Walk through the Dinosaur Hall and choose four potential customers that might visit your café. Name them, observe and draw a quick sketch of their teeth, then circle what they prefer to eat.



Usually, sharp serrated teeth suggest an animal is a carnivore.

Flat grinding teeth suggest an animal is an herbivore.



**Customer 1:**

*Carnivore*

*Herbivore*

**Customer 2:**

*Carnivore*

*Herbivore*

**Customer 3:**

*Carnivore*

*Herbivore*

**Customer 4:**

*Carnivore*

*Herbivore*

## Mealtime!

After your market research, you designed the menu below, but your new customers can't decide what delectable dish to order, and have asked you to pick their meal! Using the customers from the first page, design a delicious dinner for each animal and give them a bill.

# The Dino Diner



### Appetizers

Fern and Flower Soup ..... Small: \$3.50 Large \$5.50  
 Seed Salad ..... \$6.75  
 Egg Salad ..... \$5.50  
 Insect Garlic Bread ..... 4 slides for \$5.75

### Pizza

Number of Toppings	Small	Medium	Large
1-2	\$10.00	\$14.50	\$19.75
3-5	\$14.50	\$19.75	\$23.25
6	\$19.75	\$23.25	\$27.00

### Toppings

Marinated Leaves	Grilled Vegetable	Grilled Fish
Barbequed Reptile	Kelp	Roasted Roach'
Twisted Twigs	Rodent Pepperoni	Boiled Clams
Seaweed	Bird Sausage	Pickled Palm
Chopped Fruit	Roasted Root	Sauropod Sausage

Customer:

*Please pay at the register.*

ITEM	COST
<b>TOTAL</b>	<b>\$</b>

Customer:

*Please pay at the register.*

ITEM	COST
<b>TOTAL</b>	<b>\$</b>

Customer:

*Please pay at the register.*

ITEM	COST
<b>TOTAL</b>	<b>\$</b>

Customer:

*Please pay at the register.*

ITEM	COST
<b>TOTAL</b>	<b>\$</b>