

# AMAZEMENT IN THE BASEMENT: YOU BE THE SPECIMEN ACTIVITY

## GRADE LEVEL: K-5



### Standards Connection

- SEPs: Analyzing and Interpreting Data, Constructing Explanations and Designing Solutions, Engaging in Argument from Evidence
- DCIs: LS3.A, LS3.B, LS4.B
- CCCs: Structure and Function

### Objectives

- Students will observe and compare physical traits in themselves and museum specimens
- Students will analyze similarities and differences between their own traits and those of specimens in the exhibit
- Students will discuss how traits vary among members of the same species

### Key Vocabulary

- Traits: Characteristics or features of a person, animal, or plant, like eye color, height, or fur pattern
- Inherited Traits: Traits that are passed down from parents to their children, like having curly hair if your parents have curly hair
- Variation: Differences in traits between individuals of the same species, like some cats having short tails and others having long tails
- Symmetry: When something looks the same on both sides, like a butterfly's wings
- Coloration: The colors and patterns on an animal or plant that help it survive, like a zebra's stripes or a chameleon changing colors

### Materials

- Exhibit panels and displays featuring specimens
- Two worksheet printouts: one with sentence frames and another with open response lines to support different learning approaches.
- Pencils and/or colored pencils

# INSTRUCTIONS

We recommend completing the Introduction section in the classroom or as a group before entering the Museum. The Discussion and Wrap-Up section can then be conducted back in the classroom following your field trip.

## Introduction (10 minutes)

- Begin by asking students:
  - What are traits? Can you name some traits that humans have?
  - Do you think animals have traits like us? Why or why not?
  - How do you think we get our traits? Do we all look the same?
- Pair students up and have them describe their partner's traits.
- Explain that in the exhibit, they will compare their traits with the specimens around them.

## Exploration (20 minutes)

- Guide students to the lobby of the exhibit. Distribute a worksheet and pencil to each student. Before exploring, students should draw themselves inside the first specimen case and label their traits.
- Have students explore nearby specimens and choose one to observe closely.
- Instruct them to draw and label the traits they notice in that specimen, focusing on similarities and differences between themselves and the specimens (e.g., symmetry, color, shape).
- Encourage students to think about how the traits they observe might help the specimens survive.
  - Examples: bright colors can warn predators, camouflage helps animals blend into their environment, or how strong claws or beaks help with gathering food
- For specimens where there are multiple of the same kind (e.g., butterflies, Pacific pocket mouse, African clawed frogs), tell them to observe if there are any differences between individuals of the same species or if they all look exactly the same.

## Discussion and Wrap-Up (10-15 minutes)

- Back in the classroom, have students share their observations with a partner or in small groups.
- Lead a class discussion using these guiding questions:
  - What traits did you notice in the specimens?
  - How were the traits similar or different from your own?
  - Did you notice variation/differences among specimens of the same species? What does that tell us?
  - Why do you think variation in traits is important for survival?
- Reinforce the idea that traits can be inherited but also vary within a species, which helps species adapt to their environment.

## Extension Ideas

- Create a classroom "museum exhibit" where students display their drawings and findings.
- Compare human traits in class, such as eye color, hair type, or handedness, to explore variation within a species. This could be done as a game like Four Corners, where you label each corner with a variation of a trait (ex. eye color) and then students go to each corner of the room based on their variation of the trait (e.g., blue eyes, brown eyes, green eyes, etc.).

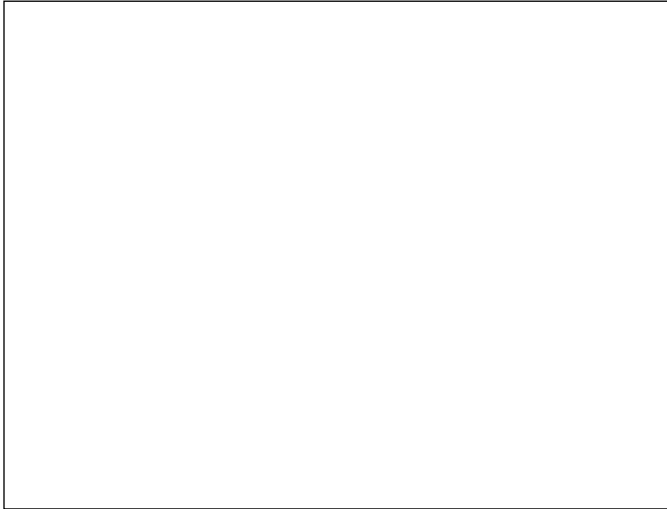
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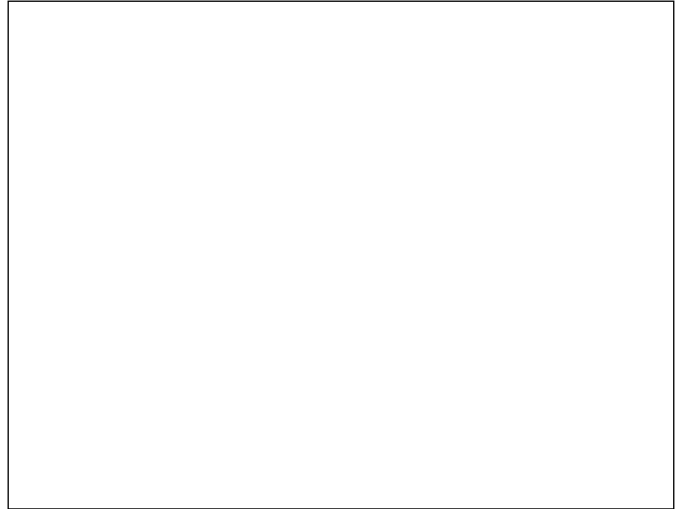
## AMAZEMENT IN THE BASEMENT: YOU BE THE SPECIMEN

**Directions:** Draw a picture of yourself in Box 1. Pick your favorite specimen and draw it in Box 2.

**Box 1: You**



**Box 2: Specimen**



**What is one trait that you have and how do you think it helps you survive?**

I have \_\_\_\_\_ (trait) which helps me \_\_\_\_\_.

**Do you and the specimen have any traits in common?**

One thing we have in common is \_\_\_\_\_ (trait). I think we both have this trait because \_\_\_\_\_.

**What traits make you different from the specimen?**

I have \_\_\_\_\_ (trait) and the specimen has \_\_\_\_\_ (trait).  
I think we are very different because \_\_\_\_\_.

**What differences and likenesses do you observe within the same species?  
(E.g., butterflies, Pacific pocket mouse, African clawed frog)**

I observed multiple \_\_\_\_\_ (specimen type) and noticed that one specimen was \_\_\_\_\_ (difference) from the rest. I think this might be because

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I observed multiple \_\_\_\_\_ (specimen type) and they all look the same.

I think this is because \_\_\_\_\_

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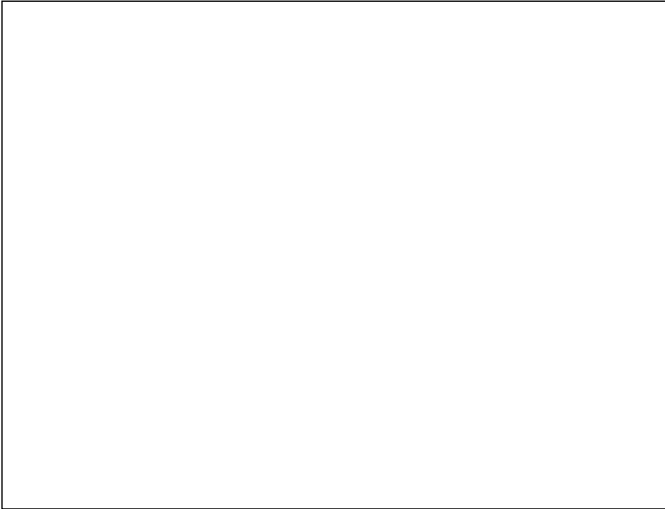
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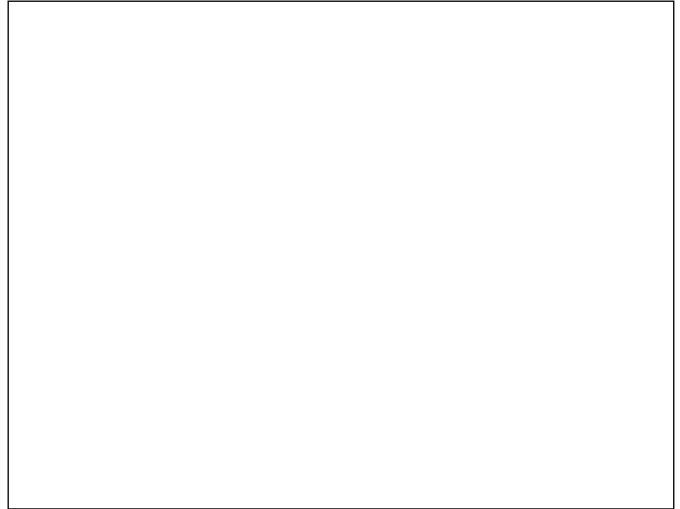
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**What traits make you different from the specimen?**

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