

## Level 3 Module 3: Traits

### CONTENT OVERVIEW

**ANCHOR PHENOMENON:** Individual Variation in Humpback Whales

*Essential Question:* What makes an individual humpback whale unique?

By studying humpback whales, we learn that inherited traits and environmental conditions result in variation within the same species. We also learn how traits affect an individual's ability to survive.

**CONCEPT 1:** Describing Organisms

*Focus Question:* How can we identify individuals?

By observing pictures and videos of humpback whales and other animals, we learn that individuals of the same species can have the same characteristics but different traits.

**CONCEPT 2:** Growth, Development, and Environmental Influences

*Focus Question:* How do individuals change over time?

Studying different species shows how individuals' traits are influenced by different factors.

**APPLICATION OF CONCEPTS:** Water Conditions and Environmental Influences

We see how environmental factors influence traits by designing investigations to collect data about the traits of plants grown in different water conditions.

**CONCEPT 3:** Inherited Traits

*Focus Question:* How do individuals get their traits?

Observing plant and animal families shows us that individuals inherit different combinations of traits from both parents.

**CONCEPT 4:** Advantages of Traits

*Focus Question:* How do individuals' traits affect their lives?

Modeling how different traits are helpful shows us how those traits provide individuals with advantages.

## SUPPORTING OUR CLASSROOM

If you have any of the items listed, please consider donating them to our class to use in our science investigations.

- 9-ounce plastic cups
- Potting soil

## SUPPORTING YOUR YOUNG SCIENTIST AT HOME

### ONGOING CONVERSATIONS

Support science learning at home by having conversations about traits. Here are some suggestions to get you started:

- Talk about the characteristics and traits of the different plants and animals near your home. Extend the conversation by talking about the advantages of these characteristics and traits.
- Compare the traits of a species in different places that you have visited or might want to visit.
- Look for trait similarities and differences in families such as eye color or handedness. Discuss whether these might be inherited traits or traits influenced by the environment.

### ACTIVITIES

These activities support and extend the learning going on in the classroom:

- Take photos of or examine different pictures of individuals from the same species to look for variation among individuals.
- Visit a zoo to observe different characteristics and traits of the animals.
- Observe plants in your environment. If the plants are the same species, look for shared traits. If they are different species, look for shared characteristics.

### BOOKS

Local libraries are a great resource for fiction and nonfiction books related to traits. Browse the library catalog or start with these suggestions:

- *Here Come the Humpbacks!* by April Pulley Sayre
- *Creature Features: Twenty-Five Animals Explain Why They Look the Way They Do* by Steve Jenkins and Robin Page
- *Amazing Animals: Elephants* by Kate Riggs

## WEBSITES

Keep the learning going by exploring these internet resources:

- Visit the Marine Education and Research Society (<https://mersociety.org/humpback>) to learn more about humpback whales.
- Observe organisms and look for characteristics of species and traits of individuals of the same species at <https://www.inaturalist.org>.