

## Who's Your Mama?

### NGSS Performance Expectations:

- 1LS3-1 Make observations to construct an evidence based account that young plants and animals are like, but not exactly like their parents.

### NGSS Science and Engineering Practices:

Constructing explanations and designing solutions

### NGSS Crosscutting Concepts:

Patterns- patterns can be used as evidence to support an explanation; patterns of change can be used to make predictions.

### Materials:

Power point discussion cards, parent/offspring matching cards, Is Your Mama a Llama? by Deborah Guarino (optional)

Guiding questions: Do plant and animal offspring have physical traits similar to the physical traits of their parents? What evidence can you give to support your answer? What patterns do you observe in the types of physical traits that are similar and different among various parents and their offspring?

### Procedures:

1. OPTIONAL- Read Is Your Mama a Llama? to the class. As you read the story, ask students to make observations about why the different animals could not be the llama's mama.
2. *Have you ever seen a baby animal at the zoo or somewhere else? What baby animals have you seen? Was the parent around the baby animal? If so, how did you know it was the parent of that baby animal? What observations did you make about how the baby animal and the parent interacted?*
  - *A plant's or an animal's young is sometimes called the offspring.*
  - *When a scientist talks about the way someone or something looks they are talking about the physical traits of that someone or something. For example, one of my physical traits is that I am \_\_\_\_\_.*  
*What is one of your physical traits?*
3. Introduce guiding questions. Ensure students' understanding of the two new vocabulary words by asking students again what offspring means and what physical trait means. The students should also give an example of each. (A chick is an offspring of a chicken. One physical trait I have is that my hair is brown.)
4. Watch the following video clip with your students (about 30 seconds) and have students make observations. The sound is not necessary. <https://www.opened.com/video/ultimate-animal-moms-baby-animals-youtube/1031197>

5. *Did you notice the different parents teaching their offspring in the video? What were some of the things the parents taught their offspring? (the horse taught the colt to roll in the dirt, the wolves taught the offspring to howl, the mountain goats taught their offspring how to defend themselves, and the elephants taught their offspring how to spray dust to cool off and get rid of insects)*
6. *What did you observe about the physical traits of the adult horse? What did you observe about the offspring's physical traits? How were the parent's physical traits similar to the physical traits of the offspring? What differences did you see in their physical traits? (you will probably need to replay the video and pause it)*
7. *What about the elephants? How are the parent's traits similar to those of the offspring? How are their physical traits different?*
8. *Today we are going to look at some photos of parents and offspring and match each parent and offspring. We noticed in the video that the offspring can have physical traits very similar to the parent, but the two also have some different physical traits. Show the power point discussion cards of the parrot, pine tree, panda, and octopus. Ask students to discuss the questions in small groups and as a class.*
9. End the lesson with the card sort- students match parents and offspring- this can be completed in small groups or as a whole class. Ask students to share answers and evidence supporting the match. (beaks are almost identical, body covering is the same type and color, same body shape, etc)
10. Reflect- *What have learned about the physical traits of parents and their offspring? Return to the guiding questions: Do plant and animal offspring have physical traits similar to the physical traits of their parents? What evidence can you give to support your answer? (answers should include specific plants and/or animals from the video or the photos) What patterns do you observe in the types of physical traits that are similar and different among various parents and their offspring? (similar- face shape, body shape, type of covering, type of feet, leaf shape, etc.; different- size, coloring, etc.)*

Animals on the cards include the following: giant panda, Chesapeake blue crab, green lynx spider, brown necked parrot, grizzly bear, Canada goose, Caribbean reef octopus, great blue heron, and the opossum.

Plants on the card include the following: sugar maple, buffalo-bur, nandina, ponderosa pine, and beet.