



Variation Within A Species

Grade Level:

Grade 3

Engage

This activity is designed to start your students in recognizing themselves as scientists and thinking critically about problem-solving. The goal is to teach concepts through discovery and to encourage using scientific thought processes. As with all lessons provided, please feel free to adapt them according to your students' abilities. You may find it more successful to lead activities and discussions as a whole group as opposed to having your students' work in small groups. Certain scientific vocabulary may or may not be appropriate for your students' level of understanding. Take these ideas, make them your own and your students will have a greater chance at success.

How can an Animal Keeper at the Zoo tell one animal from the other of the same species?

1. Remind students about the similarities and differences among humans that come from inherited traits. Every person has a unique set of inherited traits that makes him or her identifiable as an individual. And that goes for all animals and plants as well. However, have you ever tried to distinguish one giraffe from another?

Explore

2. Inform your students that they will act as an Animal Keeper at the Zoo. Animal Keepers, along with the rest of the Animal Care team, are responsible for the animals at a Zoo. They provide food for the animals, clean the habitats, give medications if an animal is sick, and much more. The Animal Keepers spend a lot of time with the animals in their care and there are usually many individuals of the same species that they care for. They must be able to tell one individual from another in order to provide the proper care to each. But how do they do that?
3. As a group, try to come up with a list of things an Animal Keeper might look at on an animal to be able to identify one individual from another of the same species.

Explain

4. Divide the class into three groups. Give each group a set of animal photos included at the end of this document.

5. Each group should look at the individual animals of their species and create a list of the differences they see among the individuals that they, as an Animal Keeper, can use to tell these individuals apart. Remind them of the list the class came up with in Step 3 for assistance.
6. Groups should present their findings to the class.

Adjustments for Social Distancing

To allow students to remain socially distant during this lesson, project images of each type of animal on a screen or whiteboard and create the list of individual differences together as a class.

Expand

7. After each group has completed their presentation, ask each group to again meet to discuss if they feel they should add/remove items from their lists based on what they learned from the other groups' presentations or discussed during their own.

Assess

8. Ask your students these, and/or other questions, to determine what they learned.
 - a. Why do you think there are differences among individuals? [Variation arises through different combinations of genes inherited from the parents and through the continual mutation of genes. Some variation among individuals is not genetic, but is due to specific events or environmental influences during an organism's life.]
 - b. Are the differences beneficial or not? [Variation increases the likelihood that at least some individuals will survive to reproduce no matter how environmental conditions change.]

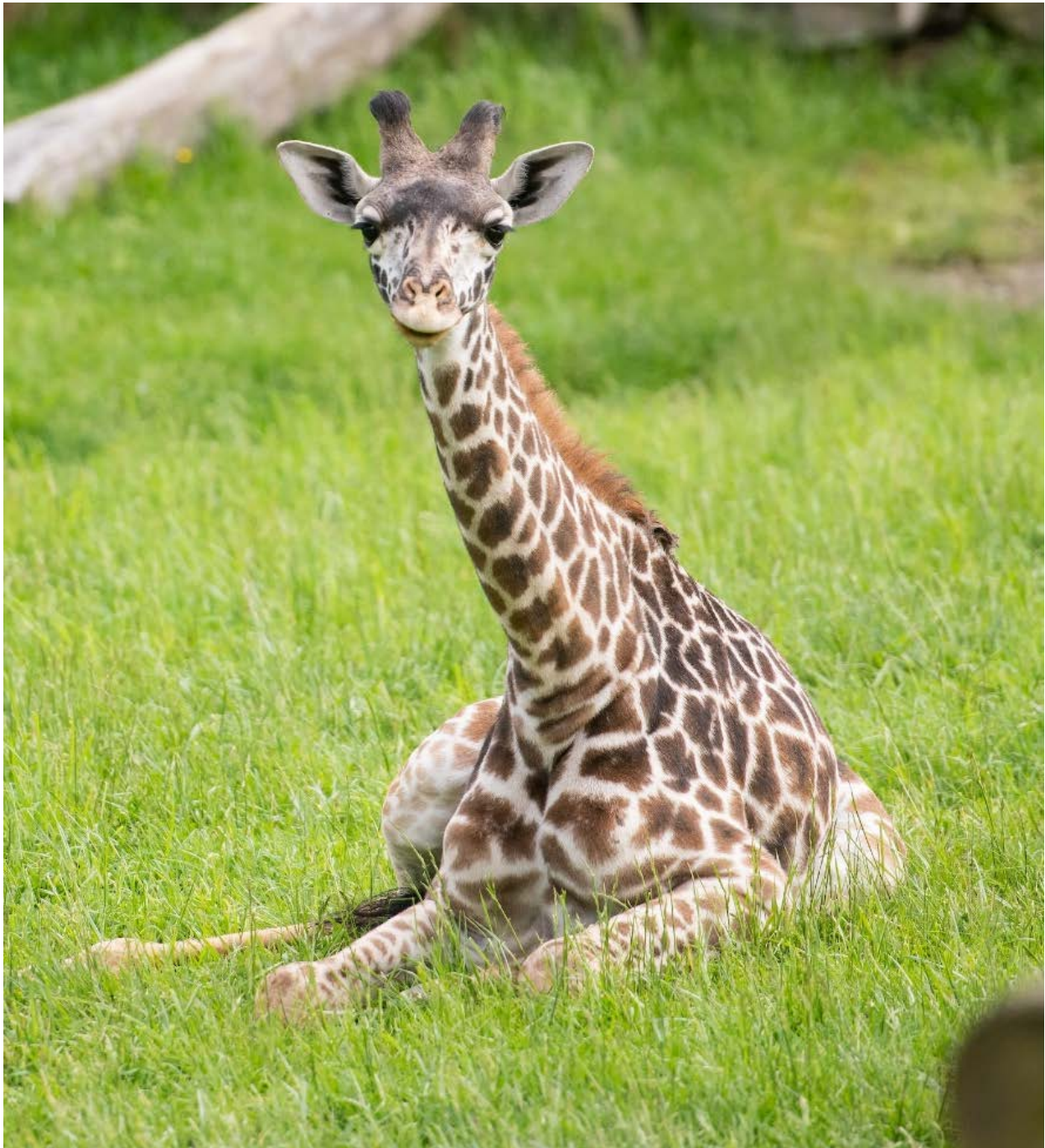
Standards

Ohio Academic Content Standards
Grade 3 Life Science Topic: Behavior, Growth and Changes Offspring resemble their parents and each other

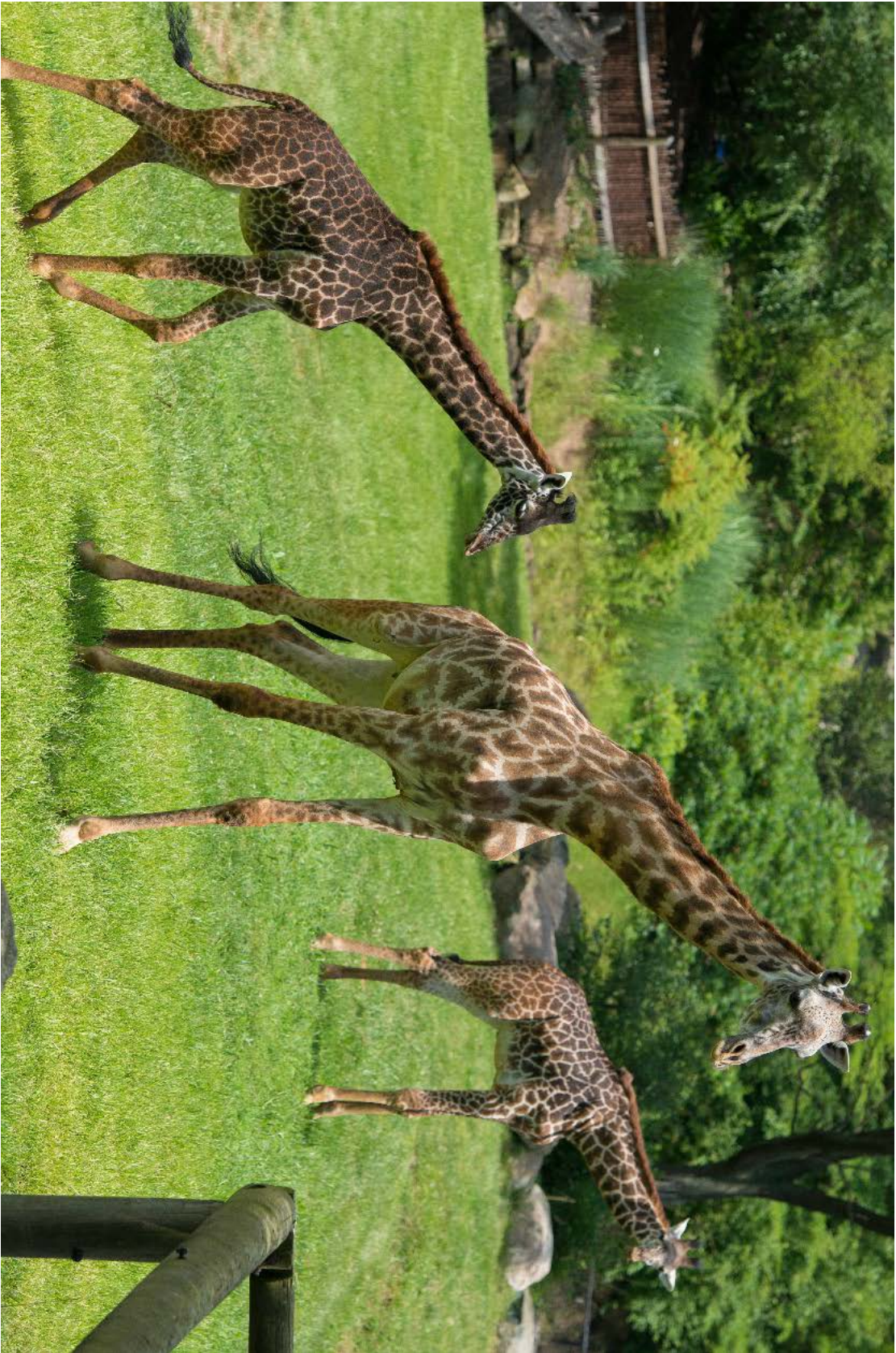


Variation Within A Species

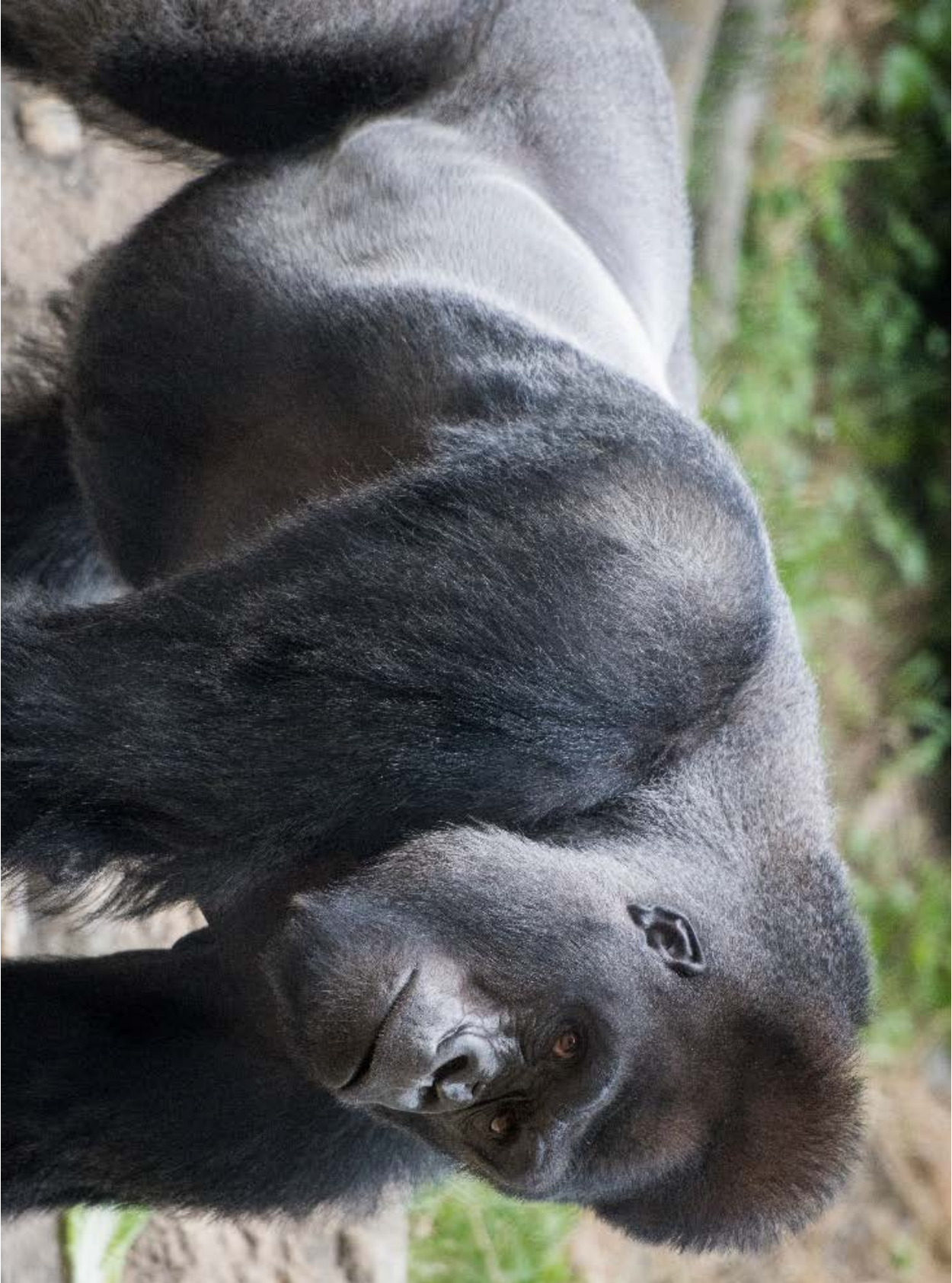
Animal photographs

























Variation Within a Species

Supplemental Materials

My Research Plan

1. What is my research question?
Is it a good question?



How can an Animal Keeper at the Zoo tell one animal from the other of the same species?

2. How can I get my information?



3. What will I do with this information?



4. How will I know I did my job well?

