

Lesson 2: Similarities and Differences Between Parents and Offspring

The foundation of the first lesson can be used with other organisms including insects, birds, mammals, and humans. We extend the first lesson on how living things are similar to and different from other living things of the same type and focus on another foundational inheritance concept: how offspring or babies resemble their parents and each other. Children readily talk about who in their own families they look like. Thus, we begin this lesson by asking them what family member they most resemble. Because this part of the lesson is dealing with biological familial relationships, special considerations or sensitivity may be needed in classrooms with adopted children or cases in which children live with extended family. To look at how babies compare to their parents, we use readily available insects. For example, darkling beetle larvae (mealworms) and adult beetles are inexpensive and easy to use for classroom observations. We focus children's observations to compare juveniles and adults of the same kind of animal.

Phase 1: Encouraging Play

To begin implicit learning, we provide children with adult and baby stuffed animals in the dramatic play area that look similar (e.g., mama and baby opossums) and ones that do not (e.g. caterpillars and butterflies). We also include picture books for children to peruse (see Print Resources).

Phase 2: Exploring

To begin intentional learning, we present the mealworm larvae or darkling beetle "babies" and ask students to record their observations in drawings. We ask the children *What do you notice about the mealworm? What color is it? How many legs does it have? Where are the legs located? How many parts does its body have?* Next, we have children look at the adult beetles and record their observations in drawings. Questions to focus their observations include *What do you notice about the beetle? What color is it? How many legs does it have? Where are the legs located? How many parts does its body have?*

Phase 3: Sharing and Discussing Data

Next children share data and discuss similarities and differences between the adults to the babies. *How is the baby like the adult beetle?* (Both have six legs, both have antennae.) *What is different?* (Different colors; the baby has more parts to its body.) We summarize the lesson by stating *Based on our data, babies or offspring are alike and different from their parents.* To

extend the learning we use images of animal babies with their parents and children make observations of how they are alike and different.

Print Resources

Collard, S.B. 1997. *Animal dads*. Boston, MA: Houghton Millin Co.

Jenkins, S., and R. Page. 2008. *Sisters and brothers*. Boston, MA: Houghton Mifflin Co.

Padilla, R. 2010. *Plants and animals*. Monterey, CA: National Geographic School Publishing.

Weber, P. J. 2010. *Life cycles*. Monterey, CA: National Geographic School Publishing.

Winegar, L. 2010. *Adult and baby animals*. Monterey, CA: National Geographic School Publishing.