

Focus on: Isopod Characteristics

This lesson is meant to support the unit, Structures and Functions of Living Organisms. It can be done to generate background knowledge prior to teaching the unit, during the unit to reinforce lessons, or as a follow up to the unit to increase the retention of information. How you guide your students will depend on the information you have already taught and the information you want to introduce. Please remember that many gardens run on a yearly cycle and it will be easier to find isopods during the peak or near the end of the growing season.

Clarifying Objectives:

K.L.1.1 Compare different types of the same animal to determine individual differences within a particular type of animal.

K.L.1.2 Compare characteristics of living and nonliving things in terms of their:

- Structure
- Growth
- Changes
- Movement
- Basic needs

K.P.1.1 Compare the relative position of various objects observed in the classroom and outside using position words such as in front of, behind, between, on top of, under, above, below, and beside.

K.P.1.2 Give examples of different ways objects and organisms move (to include falling to the ground when dropped): zigzag, round and round, back and forth, fast and slow.

Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

- Compare
- Individual Differences
- Characteristics
- Living Things
- Nonliving Things
- Structure
- Growth
- Changes
- Movement
- Basic Needs
- Position Words – in front, behind, between, on top of, etc
- Zigzag
- Round and Round
- Back and Forth
- Fast and Slow

Focus Question(s):

What are the characteristics of an isopod?

Materials:

School Garden
Science Notebooks

Garden Gloves to wear while exploring the garden especially since you will be lifting rocks, boards, etc.
Cups to hold the isopods

Activities:

1. Play this fun interactive counting game with your students:
<https://pbskids.org/sid/rolypoly.html>
2. Ask them if they know another name for roly poly. (They have many names: isopods, pill bugs, sow bugs, wood louse, slater and more!)
3. Tell students they are going to visit the school garden today to find isopods in their natural habitat. Where should we look in the garden? Tips for finding isopods:
 - Since isopods have gills, they live in damp, moist areas of the garden so they can breathe.
 - They can be found under pieces of rotting wood or wet boards that lie on the ground.
 - You can find them under damp piles of leaves and sticks that have been decomposing over winter.
 - If you move pots and stones, isopods can be found underneath.

 - After a rain or in the morning dew, they can be found crawling around anywhere.
 - To increase your chances of finding isopods, put a piece of wet cardboard in the garden a few days before you visit the garden. Do this in several different spots to create more than one viewing spot for students to see isopods in their natural habitat.
4. Head to the garden to search for isopods.
5. If an isopod is found, there will be a rush of other students who want to see it. Remind students to walk and take turns looking without pushing. We don't want to harm the people, the isopods or the plants in the garden.
6. Once a few isopods are found (they usually live in groups so if you find one, chances are you will find several), give students a chance to observe them in their natural habitat. Ask students the Guiding Questions to focus their attention on the isopod's structure, behavior and movement. Tell students not to touch the isopods today. They will get a chance to do that tomorrow.
7. Have students sketch their isopod and record other information they feel is important. Review and discuss findings.
8. When you are finished, collect enough isopods in the cups to take back to the classroom for the next lesson. Be sure to put leaf litter in the cup with the isopods and keep them moist with water.

Guiding Questions:

- Do all of the isopods look the same? How are they different?
- Do you think they have the same number of segments?
- Can you count the number of segments?
- How many legs do they have?
- Do they move the same way?
- Are their bodies shaped the same way?
- How do isopods move?

- Do isopods move forwards or backwards? How do you know?
- Do isopods have heads? Tails?
- What color is it?
- Do you think they have eyes? Ears? Nose? Mouth?
- What do you think they need in order to survive? Why are they found in a garden?
- Do you think they help the garden? Why or why not? (They are considered beneficial insects as they eat decaying leaf matter which creates nutrient rich soil. Sometimes they may eat sprouting plants in which case they would become a garden pest. They typically do not bother older plants.)