

## Plastic bottle bird feeder

**Subject(s):** Health Studies, Science

**Year(s):** 4-5

**Learning intention(s):**

To foster in students a sense of responsibility towards the environment by reducing waste and conserving resources.

**Mapping to curriculum:**

### Strands

- Health Studies - Healthy Communities and Environment
- Science - Life and Living

### Sub strands

Health Studies

- 5.5 Pollution and Health

Science

- 4.1 Organisms in their Environment
- 5.3 Energy sources and energy changes

**Learning outcome(s):**

Health Studies

- 5.5.6 Recognize their responsibility for caring for the environment

Science

- 4.1.2 know that human impact causes negative changes to the environment
- 4.1.6.1 Identify sources of food in the local environment for which living things can survive on.
- 5.3.2 Know that the sun is the primary source of light and heat energy

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## Lesson Instructions

*(adapted from Waste Material Craft Ideas – [www.topprojectideas.com](http://www.topprojectideas.com))*

### Materials

- Empty plastic bottles with caps intact (250 or 750 ml),
- A sharp knife (for the teacher) to cut each bottle in half; one bottle can be used for two students.
- water to fill the bottles.
- Piece of string (optional)
- Ruler or measuring tape.

### Preparation

1. Teacher asks students to walk around the school yard and collect empty plastic bottles they can find. Alternatively, they can bring an empty plastic bottle from home.
2. Keeping the bottle upright, the teacher uses a knife to cut the bottles in half. Ensure to keep the bottle cap screwed on to ensure that the top half of the bottle (container) can hold water.

3. Tie a piece of string to the bottle to hang it in a suitable spot for birds to drink water from. If the spot chosen for the bottle to stand on is level, then there is no need to use a string.
4. Students fill their containers with water and place or hang them in different places around the classroom.
5. Before hanging/ or placing the bottles, make sure to measure the height of the water in the bottle.

### **Observation**

1. After two days, check the containers to see if there are any changes to the water level. Use a ruler or measuring tape to measure the changes in water level.
2. Repeat the observations every two days over a two-week period. Ensure you take note of the changes with the water levels.
3. Note down any changes in your exercise book.
4. If water in the bottle is empty, refill it and measure again the water level.

### **Share and report findings**

1. In pairs, discuss the following questions:
  - a. What happened to the water level in your plastic container after a period of one week?
  - b. What were the changes after two weeks?
  - c. Can you explain why the water level stayed the same or changed over the two-week period? List as many reasons as you can for the changes?
  - d. What other ways could you have used to store/provide water more effectively for the birds? What about for other insects or animals?

### **Teacher-led class discussion**

1. Why is it important to reuse waste materials, from an environmental perspective?
2. Look around your school and home surroundings and identify what other waste materials could be reused and recycled?