

Classify items for composting

Subject(s): Science

Year(s): 3–4

Learning intention(s)

Students will be able to classify items or materials that are good or not suitable for composting.

Mapping to curriculum

Strand(s)

- 3. Life and Living
- 4. Farming

Sub strands

- 3.1 Plant and Animal Groups
- 3.5 Growing plants in a nursery
- 4.1 Organisms in their environment
- 4.6 Farming

Learning outcome(s)

- 3.1.2.1 Classify animals and plants according to simple sorting rules
- 3.5.1.1 Explain nursery, germination and transplanting
- 4.1.1.1 Identify different environments around their school or community/village
- 4.1.6.1 Identify sources of food in a local environment for which the living things within the environment can survive on
- 4.6.3.1 List three gardening methods (raised beds, ridges and mounds).

Lesson Instructions

(Adapted from Pha Tad ke Botanical Garden (2013), Teachers Manual Primary School Garden Plant Information, page 45).

Materials/resources

- '3 medium-sized boxes or containers' – 3 per class
- 'Sample Answers' Sheet – 1 sheet for the teacher.

Key Vocabulary

Compost: Material that is decayed or rotten but useful for use in gardens to improve soil health.

Soil fertility: The ability of soil to provide essential nutrients for plants to grow.

Manure: Waste matter from animals that can be used for fertilizing the soil.

Activity 1: Description

1. Provide general information about composting

- The teacher provides general information about composting and why it is a useful method for enhancing and retaining soil fertility.
- Have students think individually about what type of rubbish or waste they can put into a compost bin.
- Have the students write or draw on a piece of paper two items that can be put in the compost bin.

- In groups of 3 -4 students, they present their items and explain the reasons why they think the items are suitable.
- Allow enough time for the students to discuss why some items may be suitable or not.

Activity 2: Description

2. **Classify** the items that are good or unsuitable for composting.
 - *The teacher prepares three boxes, with clearly marked labels - Yes, No and Maybe.*
 - *She/he asks the students to place their pieces of paper (with the drawn or named items) in the appropriate box ie (Yes or No or Maybe). If they are unsure, then they put the item into the 'Maybe' box.*
 - *The teacher uncovers the contents of each of the boxes and spreads these out carefully on a table. He asks the students to walk around the table and take note of the different items that have been classified.*
 - Pick an item from each box and ask the students if the item has been placed in the correct pile/box. Spend some time to clearly explain why some objects can or cannot be placed in a compost.
 - Refer to the sample answers provided to guide the class discussion.

Task(s)

Year 3-4 task

Ask students to draw a table in their exercise books with three columns labelled – Yes, No and Maybe. Under each heading, ask them to list 4 items that are good for composting, 4 items that are not suitable for composting and 2 items that could be good or unsuitable.

Teacher Supporting Resource:

Sample Answers for Activity 2

YES	NO	MAYBE
<ul style="list-style-type: none"> • Grass and weeds, • chicken and buffalo manure, • feathers, • coffee grinds, • vegetable waste from the kitchen, • paper, cardboard, • wood chips, • straw and rice husks, • dead leaves, • cotton cloth, • soil 	<ul style="list-style-type: none"> • Cooked meat and fish, • large bits of wood, • plastic metal, • glass, • wire, • nylon, • synthetic fabrics • coal ash, • seeding grass, • tough weeds, • dairy products 	<ul style="list-style-type: none"> • Cloth (depends on the kind),ie natural fibres such as cotton, may be okay but man-made ones such as synthetics or plastics are not good. • Wood (depends on size) • Weeds