DOCUMENT ORGANIZATION

The Four Column Format

Prescribed learning outcome statements that define what students are expected to achieve at the end of each grade

Suggestions for student learning experiences directly related to the attainment of specific learning outcomes

Kindergarten to Grade 4 Science: A Foundation for Implementation

**Prescribed Learning Outcomes**

Students will...

3-1-01 Use appropriate vocabulary related to their investigations of growth and changes in plants.
   Include: growing medium, nutrient, energy, root, stem, leaf, flowers, pistil, stamen, ovule, pollen, seed, fruit, adaptation, life cycle.
   GLO: C6, D1

3-1-02 Observe, compare, and contrast the structure and appearance of several types of plants.
   Examples: plants with different types of roots, trees with needles and trees with leaves...
   GLO: C2, D1, E1

3-1-03 Show respect for plants as living things.
   GLO: B5

3-0-01a Follow given safety procedures and rules, and explain why they are needed. GLO: C1

3-0-03a Make observations that are relevant to a specific question. GLO: A1, A2, C2

3-0-03b Use tools to observe, measure, and construct. Include: ruler, metre stick, pan balance, magnifying glass, bathroom scale, thermometer, magnet.
   (Math SS-I.1.3, SS-III.1.3, SS-IV.1.3, SS-VI.4.3) GLO: C2, C3, C5

3-0-03c Place materials and objects in a sequence or in groups using two or more attributes, and describe the system used.
   (Math PN-I.1.3) GLO: C2, C3, C5

*Suggestions for Instruction*

➤ Introduce, explain, use, and reinforce vocabulary throughout this cluster.

➤ Word Cycle
   Teach students how to use a word cycle to help them become familiar with the specific vocabulary related to the learning outcomes in this cluster. Use the word cycle to assess students’ knowledge of terms studied in specific sections of this cluster (see Success for All Learners, 6.31).

➤ Plant Etiquette
   Discuss and develop a list of guidelines and safety procedures to follow to ensure students show respect for plants as living things. Guidelines might include: avoid trampling on plants, touch plants only after an adult has given permission, touch and bend the plant gently to avoid damage, observe using sense of sight and sense of smell before using sense of touch, etc.

➤ Compare and Contrast
   Set up a plant observation centre where students sort and classify plants. Have students explain the method used and then resort and relabel the groups. Plants should be provided that show a variety of roots, leaves, flowers, and seeds.

➤ Venn Comparison: Plants
   In small groups, have students select two plants to compare and contrast using a Venn diagram. Students may prefer to draw the parts of each plant to show the differences.

➤ Art Connection
   Have students sketch a plant and/or press a plant to make an environmental note card.
Background information and/or definitions for teachers, often beyond what students are required to know; safety information

Suggestions for assessing specific learning outcome(s)

Grade 3, Cluster 1: Growth and Changes in Plants

SUGGESTIONS FOR ASSESSMENT

Teacher Notes

Cluster Note: Students’ achievement of the learning outcomes in this cluster is dependent on having adequate time to conduct experiments on plant growth and to follow a flowering plant through a complete life cycle.

Caution: Ensure that there are no dangerous plants such as poison ivy or poison berries in your local area. Check to make sure that there are no students with plant allergies in your class. (Refer to Success for All Learners, 9.5 for details on conducting an ecology walk.) Have a plant collection already prepared to ensure a wide variety. Students could participate in making plant collections. Alternatives to live plant collections include pictures of plants or examples of live houseplants.

When discussing the Venn diagram introduce the related vocabulary.

Science Journal Entry: Plant Etiquette
Directions to students: In your science journals, finish the following sentence:
I can show respect for plants as living things by

List as many examples as you can.
Look for
✓ examples related to avoiding damage to plants
✓ references to safety issues

Observation Checklist for Student Self-Assessment
Directions to students: At the plant observation centre you will be comparing plants to determine how they are the same and how they are different. Use this checklist to check your observation skills.

How Are My Observation Skills?
I used the following senses to observe:
✓ sight ✓ smell ✓ touch ✓ hearing
I used the following tools:
✓ magnifying glass
✓ centimetre ruler
✓ other

I observed the following properties:
✓ colour ✓ shape ✓ texture ✓ size
I also observed
Guide to Reading Specific Learning Outcomes

3-1-01 Use appropriate vocabulary related to their investigations of growth and changes in plants.

Include: growing, medium, nutrient, energy, root, stem, leaf, flowers, pistil, stamen, ovule, pollen, seed, fruit, adaptation, life cycle.

GLO: C6, D1

3-1-02 Observe, compare, and contrast the structure and appearance of several types of plants.

Examples: plants with different types of roots, trees with needles and trees with leaves...

GLO: C2, D1, E1

3-1-03 Show respect for plants as living things.

GLO: B5

3-0-4h. Follow given safety procedures and rules, and explain why they are needed. GLO: C1

3-0-5a. Make observations that are relevant to a specific question. GLO: A1, A2, C2

3-0-5b. Use tools to observe, measure, and construct. Include: ruler, metre stick, pan balance, magnifying glass, bathroom scale, thermometer, magnet. (Math SS-I.1.3, SS-III.1.3, SS-IV.1.3, SS-VII.4.3) GLO: C2, C3, C5

3-0-6c. Place materials and objects in a sequence or in groups using two or more attributes, and describe the system used. (Math PR-I.1.3) GLO: C2, C3, C5