This folio contains a variety of resources that help teachers assess student progress in reaching Grade Level Expectations (GLEs) as outlined in the Essential Academic Learning Requirements (EALRs) for science. These materials have been designed for Washington State teachers using the 2000 edition of FOSS. Look in the Assessment Overview, available at www.smerc.org, for more on how to use these classroom-based assessments.

Scoring guides for each of the assessments begin on page 4, using a +/✓/– rubric.

+ going beyond expectations
✓ meeting expectations
– below expectations

NOTE: This edition is the result of collaboration among FOSS staff at Lawrence Hall of Science, the Science and Math Education Resource Center (SMERC) at ESD 112, and many dedicated teachers in Washington State.

The Washington Edition was made possible by the generous support of the following organizations: Delta Education; Educational Service District 112; Eisenhower Funding; Hewlett-Packard; Intel; Lawrence Hall of Science at the University of California, Berkeley; Washington State School Districts; and Washington State University, Vancouver.

ASSESSMENT CONTENTS
Investigations 1 – 4 2
End-of-Module Assessment 36
Assessment Blueprint 38

INVESTIGATION DUPLICATION
MASTER CHANGES
New student sheets
• no. 5a Brassica Life Cycle
• no. 5b Brassica Picture Cards
• no. 12a, 12b, and 12c Inquiry Project Sheets
INVESTIGATION 1: BRASSICA

PART 1

INTRODUCING RECORDING

- What do we know about plants?
- How can we learn more about plants?
- How will we keep track of our new plants?

Time: 20–40 minutes

Students prepare for several weeks of plant-growth investigations. They discuss what they know about plants and prepare a class calendar to keep track of growth and development.

PART 2

PLANTING BRASSICA

- What do brassica plants need to live and grow?

Time: 50–60 minutes

Students plant rapid-cycling brassica seeds in soil and place them under a lamp where they will receive continuous light.

PART 3

OBSERVING BRASSICA GROWTH

- What changes happen to brassica plants as they grow?

Time: Four or five 30-minute sessions over 4–5 weeks

Students observe germination, growth, flowering, and seedpod formation. The investigation culminates in the harvesting of the seeds, providing an introduction to the concept of life cycle in plants.
• Plants are alive.
• Scientists use journals to record their observations.

Pre-assessment

Structure of Organization of Living Systems. Know that living things are made of small parts. (GLE 1.2.6)

Teacher Observation

30-second interview—Needs of plants

Know that most living things need food, water, and air. (GLE 1.3.8)

New and FOSS Student Sheets

Brassica A or B
Brassica Life Cycle
Brassica Picture Cards

Structure of Physical Earth/Space and Living Systems. Understand that things are made of parts that go together. (GLE 1.2.1)

Molecular Basis of Heredity. Understand that plants and animals have life cycles. (GLE 1.2.7)

Examples of questions students might generate for inquiry projects

• Do seeds germinate better in the light or in the dark?
• What would happen if you put a growing plant in a shoe box that had one hole punched at one end for light?
• What is the best amount of water to give bean plants?
INVESTIGATION 1: BRASSICA SEEDS

PART 1: INTRODUCING RECORDING

Follow directions for pre-assessment described in item 4 on page 9 of the teachers guide. The pre-assessment will be used for comparison in Investigation 4, Part 1.

| Science Notebook—Knowledge about Plants | Score | If the student...
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure of Organization of Living Systems. Know that living things are made of small parts. (GLE 1.2.6)</td>
<td>+</td>
<td>has detailed and accurate drawing with a number of plant parts labeled; can name many ways in which new plants can be started.</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>has a number of plant parts labeled; can name at least two ways plants can start to grow.</td>
</tr>
<tr>
<td></td>
<td>–</td>
<td>has not added much complexity to drawing and number of plant parts; is not sure how plants are started.</td>
</tr>
</tbody>
</table>
INVESTIGATION 1: BRASSICA SEEDS
PART 2: PLANTING BRASSICA

Use teacher observation to determine students’ understanding of what plants need to grow. Plan a 30-second interview with each student as they plant the brassica seeds.

<table>
<thead>
<tr>
<th>Teacher Observation—Needs of plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Processes and the Flow of Matter and Energy. Know that most living things need food, water, and air. (GLE 1.3.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>can identify what plants need to grow: water, air, nutrients, and light.</td>
</tr>
<tr>
<td>–</td>
<td>can’t identify the things a plant needs to grow.</td>
</tr>
</tbody>
</table>
INVESTIGATION 1: BRASSICA SEEDS
PART 3: OBSERVING BRASSICA GROWTH

Use the following series of three assessment tasks (continued on pages 8 and 9) and four student sheets to assess students after the brassica plants have completed their life cycle.

Use student sheet no. 4 called Brassica A or no. 5 called Brassica B. (A includes a word list, B does not.)

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>correctly labels all eight parts of the plant.</td>
</tr>
<tr>
<td>✔</td>
<td>correctly labels five to seven parts of the plant.</td>
</tr>
<tr>
<td>–</td>
<td>can label four or fewer parts of the plant.</td>
</tr>
</tbody>
</table>

No. 4—Student Sheet

No. 5—Student Sheet

Structure of Physical Earth/Space and Living Systems.
Understand that things are made of parts that go together.
(GLE 1.2.1)
Use student sheet no. 5 called *Brassica B*. Read aloud the riddles below and have students put marks as directed on the student sheet.

**Riddle 1:** I get water and minerals from the soil. I hold the plant in the soil. What am I? Put a red X on me. [Roots.]

**Riddle 2:** Some people say that I act like a straw. I hold the plant up toward the sun. What am I? Color me blue. [Stem.]

**Riddle 3:** I capture sunlight and make food for the plant. What am I? Circle me with a blue crayon. [Leaves.]

**Riddle 4:** Bees help me pollinate. I am colorful and hold pollen. What am I? Color me red. [Flower.]

**Riddle 5:** A new plant will grow from me. What am I? Draw a blue arrow that points to me. [Seed.]

**Riddle 6:** I hold the seeds. What am I? Circle me with a red crayon. [Seedpod.]

---

**Student Sheet—Brassica B**

**Structure of Physical Earth/Space and Living Systems.**
Understand that things are made of parts that go together.
(GLE 1.2.1)

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>identifies all correct parts for the function stated in the riddle.</td>
</tr>
<tr>
<td>✓</td>
<td>identifies most parts for the function stated in the riddle (make a note of which parts the students don’t know)</td>
</tr>
<tr>
<td>−</td>
<td>can only identify one or two parts for the function stated in the riddle (make a note of which parts the students don’t know)</td>
</tr>
</tbody>
</table>
Use new student sheets nos. 5a and 5b called *Brassica Life Cycle* and *Brassica Picture Cards*.

Have students cut apart the six picture cards on student sheet 4b. Then have them glue the picture cards on the Brassica Life Cycle sheet to show the life cycle of the plant. (Students may want to cut more closely around each illustration before gluing on to the final sheet.)

<table>
<thead>
<tr>
<th>Student Sheet—Brassica Life Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Molecular Basis of Heredity.</strong> Understand that plants and animals have life cycles. (GLE 1.2.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>can place all the pictures in the correct order to create the life cycle of a brassica plant.</td>
</tr>
<tr>
<td>✓</td>
<td>places at least half of the pictures in the correct order.</td>
</tr>
<tr>
<td>–</td>
<td>randomly places the pictures on the life-cycle sheet.</td>
</tr>
</tbody>
</table>
Draw lines from the words to the parts of the plant.

bud
flower
leaf
root
seed
seedpod
stem
BRASSICA B

Label the parts of the plant
**INVESTIGATION 2: GRASS AND GRAIN SEEDS**

**PART 1**

**LAWNS**
- What grows in a lawn?

Students plant a miniature lawn in a cup of soil—rye grass seeds and alfalfa seeds. They compare the growth of the two plants over time.

**Time:** 50 minutes plus a 30-minute session 3–4 days later

---

**PART 2**

**MOWING THE LAWN**
- Do all plants grow back after cutting them back?

After the two kinds of plants have grown tall, students cut the lawn plants to simulate mowing. They observe what happens to the two kinds of plants.

**Time:** 50 minutes plus a 30-minute session 1–2 weeks later

---

**PART 3**

**WHEAT**
- How does a seed grow?

Students plant seeds of an important grain: wheat. The wheat is planted in transparent soda straws with pieces of paper towel to provide support and water to the seeds. Students observe what happens to the plants and record changes by drawing pictures.

**Time:** 50 minutes plus three 30-minute sessions over 2–3 weeks
• Seeds need water and light to develop into new plants.
• Grasses and alfalfa are two different types of plants.

Science Notebook

Plant needs

Know that most living things need food, water, and air. (GLE 1.3.8)

Student Sheet

Growing and Mowing a Lawn

Explaining. Understand how to construct a reasonable explanation using evidence. (GLE 2.1.3)

Teacher Observation

Plant parts

Structure of Physical Earth/Space and Living Systems. Understand that things are made of parts that go together. (GLE 1.2.1)

Science Notebook

Using plants

Environmental and Resource Issues. Understand how humans depend on the natural environment. (GLE 3.2.4)

Examples of questions students might generate for inquiry projects

• What would happen if a seed started growing and you turned it upside down?
• What other seeds send up one blade and two little leaves? (Try corn, beans, radishes, and barley.) Can you predict which will send up one or two before you plant them?
INVESTIGATION 2: GRASS AND GRAIN SEEDS
PART 1: LAWNS

Use science notebooks and the prompt below to assess student understanding about what plants need to grow. Students answered a similar question in Investigation 1. Compare student performance and look for improvement.

Notebook Prompt

What are all the things that plants need in order to grow?

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>can identify what plants need to grow: water, air, nutrients, and light.</td>
</tr>
<tr>
<td>–</td>
<td>cannot identify what plants need to grow.</td>
</tr>
</tbody>
</table>
INVESTIGATION 2: GRASS AND GRAIN SEEDS
PART 2: MOWING THE LAWN

Use student sheet no. 7 called Growing and Mowing a Lawn.

Have students cut out the pictures on the student sheet and paste them on a separate sheet of writing paper or construction paper. Have them write a few words on the back to describe or explain what happened to each plant after it was cut.

**Student Sheet—Growing and Mowing a Lawn**

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>uses evidence/observations to explain that the grass grows back, but the alfalfa does not when the leaves have been cut off.</td>
</tr>
<tr>
<td>✓</td>
<td>explains that the grass grows back, but the alfalfa does not after the leaves have been cut off.</td>
</tr>
<tr>
<td>–</td>
<td>is unable to describe what happens or explain why.</td>
</tr>
</tbody>
</table>

**Explaining.** Understand how to construct a reasonable explanation using evidence. (GLE 2.1.3)
GROWING AND MOWING A LAWN

Cut the six pictures apart. Put the pictures in order to show what happens when a lawn is planted and grows, is mowed, and then grows again.
INVESTIGATION 2: GRASS AND GRAIN SEEDS

PART 3: WHEAT

Use teacher observation and 30-second interviews to assess identification of plant parts and why roots grow down and leaves up.

<table>
<thead>
<tr>
<th>Teacher Observation—Plant parts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure of Physical Earth/Space and Living Systems.</strong> Understand that things are made of parts that go together. (GLE 1.2.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>knows that roots grow down to soak up water for the plant, and that leaves grow up to catch sunlight for making food, and adds further detail about plant parts and/or functions.</td>
</tr>
<tr>
<td>✓</td>
<td>knows that roots grow down to soak up water for the plant, and that leaves grow up to catch sunlight for making food.</td>
</tr>
<tr>
<td>−</td>
<td>knows that root always grow down and leaves up, but cannot explain why or thinks that leaves and roots can grow either way; doesn’t see a problem with that.</td>
</tr>
</tbody>
</table>
Notebook Prompt

Draw or describe how plants are used in your life.

Use a science notebook journal prompt after reading the science story, *The Story of Wheat*, to have students draw or describe other ways they use plants in their life.

<table>
<thead>
<tr>
<th>Science Notebooks—Using plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental and Resource Issues. Understand how humans depend on the natural environment. (GLE 3.2.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>gives a variety of examples of how plants are used by people.</td>
</tr>
<tr>
<td>✓</td>
<td>gives at least one good example, other than wheat, of how plants are used by people.</td>
</tr>
<tr>
<td>–</td>
<td>cannot provide their own good example of how plants are used by people.</td>
</tr>
</tbody>
</table>
INVESTIGATION 3: STEMS

PART 1

ROOTING STEM CUTTINGS
- How can we make a new plant from an old one?

Time: 50 minutes plus two 30-minute sessions over 3 weeks

INVESTIGATION SUMMARY

Students are challenged to make new plants from the stems of mature plants. Each student works with a part of a plant—a stem, a leaf, or a stem and leaf. They put the parts into water and observe them over a period of time. Students draw and describe in words what they observe.

PART 2

NEW PLANTS FROM CUTTINGS
- How do we keep our cuttings alive?

Time: 30–40 minutes

INVESTIGATION SUMMARY

Students select the stems that show promise for developing into new plants and plant them in soil.

PART 3

SPUDS
- Why do potatoes have eyes?

Time: 50 minutes plus three 30-minute sessions over 3 weeks

INVESTIGATION SUMMARY

Students cut white potatoes (modified stems) into pieces and plant them in soil. After 2–3 weeks students observe the results and discuss the role of potato eyes in producing new plants.
Leaves, twigs, and roots develop on stems at the nodes.

Plants need water and light to grow.

New plants can grow from the stems of mature plants.

Plants make food from light, water, air, and nutrients from soil.

New plants can grow from stems of mature plants.

Potatoes are underground stems.

Examples of questions students might generate for inquiry projects:

- Which other plants might grow from stems?
- Does a plant grow faster from seed or from a stem?
- Can some plants grow both from seed and from stems?
INVESTIGATION 3: STEMS
PART 1: ROOTING STEM CUTTINGS

Use student sheet no. 10 called Stem Cuttings.

Student Sheet—Stem Cuttings

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>makes a reasonably accurate drawing of his or her plant; includes the date; writes a good observation.</td>
</tr>
<tr>
<td>✓</td>
<td>makes a drawing with little detail; includes the date; writes a few words that describe the plant.</td>
</tr>
<tr>
<td>–</td>
<td>puts little effort into drawing the picture; doesn’t include the date; writes a word or nothing.</td>
</tr>
</tbody>
</table>

No. 10—Student Sheet
STEM CUTTINGS

Draw what the cuttings look like after about 10 days.

Date: _____________________
Observations: ________________

Draw what the cuttings look like after about 17 days.

Date: _____________________
Observations: ________________

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Can be duplicated for classroom or workshop use.
INVESTIGATION 3: STEMS
PART 2: NEW PLANTS FROM CUTTINGS

Use teacher observation and 30-second interviews to assess students’ ability to identify nodes.

<table>
<thead>
<tr>
<th>Teacher Observation—Looking at nodes</th>
<th>Structured Environment of Organisms. Know that living things are made of small parts. (GLE 1.2.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Score</strong></td>
<td><strong>If the student...</strong></td>
</tr>
<tr>
<td>+</td>
<td>can point to nodes and explain that the node is where the roots begin to grow when you are starting a new plant.</td>
</tr>
<tr>
<td>✓</td>
<td>can point to evidence of fine roots growing from nodes to select a stem cutting that shows promise for developing into a new plant.</td>
</tr>
<tr>
<td>−</td>
<td>cannot identify nodes.</td>
</tr>
</tbody>
</table>
INVESTIGATION 3: STEMS
PART 3: SPUDS

Use teacher observation and 30-second interviews to assess students’ ability to look at diverse plants. Ask students to compare the different plants they have been growing and talk about how the different parts are alike and how they are different.

<table>
<thead>
<tr>
<th>Teacher Observation—Comparing characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of Living Matter. Understand characteristics of living organisms. (GLE 1.1.6)</td>
</tr>
<tr>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>+</td>
</tr>
<tr>
<td>✔</td>
</tr>
<tr>
<td>–</td>
</tr>
</tbody>
</table>
INVESTIGATION 4: BULBS AND ROOTS

PART 1

**BULBS**

• What are bulbs?

Time: 50 minutes plus two 30–40-minute sessions over 2–3 weeks

Students observe garlic or onion bulbs and plant them in a cup with a bit of cotton to hold them in place. They observe the emergence of the roots and the shoot. After 2 weeks students may take their bulbs home to plant where they can observe them grow into mature plants.

PART 2

**PLANTING ROOTS**

• What other plant parts can grow new plants?

Time: 50 minutes plus two or three 30-minute sessions over 2–3 weeks

Students investigate plants with edible roots—carrots and radishes. After observing the parts—leaves, stems, and roots—students cut the plants into three or four parts and plant them in vermiculite to see if they will produce new plants. After observing the changes for 2–3 weeks, students draw conclusions about the likelihood of producing new plants from parts that are usually found underground.
• Bulbs are alive.

• Bulbs need water to start growing.

Science Notebook

Plants around the world

Interdependence of Life. Know that plants and animals need a place to live. (GLE 1.3.10)

Science Notebook

Knowledge About Plants

Structure of Organization of Living Systems. Know that living things are made of small parts. (GLE 1.2.6)

• Some parts of roots will grow into new plants. Other parts will not.

Inquiry or Design Project

Investigating Systems: GLEs 2.1.1—2.1.5

or Designing Solutions: GLEs 3.1.1—3.1.3

Examples of questions students might generate for inquiry projects

• If you cut a bulb in half, would it still grow?

• Does temperature make a difference in how fast bulbs grow?

• What happens if bulbs receive different amounts of sunlight? Is there an optimum?
INVESTIGATION 4: BULBS AND ROOTS
PART 1: BULBS

After reading “Plants Around the World” in the Science Stories, use the science notebook prompt to assess students understanding that plants need a place to live.

Notebook Prompt:
Describe, draw or make a model that shows two different places that plants could live in, giving an example of a plant for each place.

<table>
<thead>
<tr>
<th>Science Notebook—Plants around the world</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interdependence of Life.</strong> Know that plants and animals need a place to live. (GLE 1.3.10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>gives detailed drawing, model, or description that demonstrates two different plants, where they would live, and that these two places represent different environments.</td>
</tr>
<tr>
<td>✓</td>
<td>demonstrates two different plants, where they would live, and that these two places represent different environments.</td>
</tr>
<tr>
<td>–</td>
<td>shows only one plant or one environment.</td>
</tr>
</tbody>
</table>

Review students’ presessments. Ask them to do that task again on a clean sheet of paper (see item 4 in Investigation 1 on page 9 of the teacher’s guide), or hand back the preassessments and ask students to add to them or comment about them. Note how their knowledge has changed.
### Science Notebook—Knowledge about Plants

**Structure of Organization of Living Systems.** Know that living things are made of small parts. (GLE 1.2.6)

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>has detailed and accurate drawing with a number of plant parts labeled; can name many ways in which new plants can be started.</td>
</tr>
<tr>
<td>✔</td>
<td>has number of plant parts labeled; can name at least two ways plants can start to grow.</td>
</tr>
<tr>
<td>–</td>
<td>has not added much complexity to drawing and number of parts; is not sure how plants are started.</td>
</tr>
</tbody>
</table>
INVESTIGATION 4:  BULBS AND ROOTS

PART 2:  PLANTING ROOTS

INQUIRY OR DESIGN PROJECT

The inquiry or design project has been included to help students meet the Investigating Systems and Designing Solutions GLEs. Use the three K/2 inquiry or design project sheets and materials from the FOSS kit, adding materials as needed or possible to complete a project. See examples of inquiry questions at the bottom of each At A Glance page.

Look for opportunities to model the use of these sheets to answer students’ questions, explore their ideas, or challenge misconceptions throughout the module. At least once in each module, teachers should model an inquiry or design project and at least once each year, students should have the opportunity to independently explore their own questions.

<table>
<thead>
<tr>
<th>Inquiry or Design Project Scoring Guides</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investigating Systems:</strong> GLEs 2.1.1–2.1 or Designing Solutions: GLEs 3.1.1–3.1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>If the student...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>with minimal guidance, is able to complete an inquiry project and complete the student sheets to represent their work.</td>
</tr>
<tr>
<td>✓</td>
<td>with guidance, is able to complete an inquiry project and complete the student sheets to represent their work.</td>
</tr>
<tr>
<td>−</td>
<td>is not able to follow directions for completing an independent inquiry project.</td>
</tr>
</tbody>
</table>
Name __________________ Date __________________

**K/2 INQUIRY OR DESIGN PROJECT PLANNING**

Choose one question starter.

What would happen if ______________________

____________________________________________________________________

____________________________________________________________________

Can I make a ______________ that __________

____________________________________________________________________

____________________________________________________________________

Make a prediction. I think that __________________

____________________________________________________________________

____________________________________________________________________

List your materials (attach a page with a drawing or list).
Name ____________________ Date ________________

K/2 INQUIRY OR DESIGN PROJECT RECORDING

What did you do? ________________________________

_________________________________________________________________

What did you measure? ___________________________

_________________________________________________________________

What did you observe? ___________________________

_________________________________________________________________

Draw or describe what happened.

<table>
<thead>
<tr>
<th>Start of Investigation</th>
<th>End of Investigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Did your investigation or design do what you predicted? How do you know?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
END-OF-MODULE ASSESSMENT

This assessment is used as an evaluative tool after all the investigations have been completed. Below are the items you will need for the written assessment and interviews.

MATERIALS FOR THE WRITTEN ASSESSMENT

- Assessment sheet nos. 4–6 called *End-of-Module Assessment*

MATERIALS FOR THE INTERVIEW ASSESSMENT

- Preassessment sheets written before beginning the module
- Completed assessment sheet no. 4 subtitled *Interview Assessment*

☐ Use the duplication master to make copies.
GETTING READY

1. SCHEDULE THE ASSESSMENT
   This assessment is in two parts: one part is a written assessment and the other is a short interview.

2. ADMINISTER THE WRITTEN ITEMS
   Assessment items in content areas such as science usually require a high level of reading. If you feel that students will have a difficult time reading the items on their own, make an overhead transparency and read each item and its possible answers (when appropriate) aloud. Have students mark their answers and move on to the next item, working together through the assessment, item by item. Students will need more time on the first page to draw their picture of a plant and describe several ways to start plants.

3. ADMINISTER THE INTERVIEW
   Interview one student at a time for 3 minutes. Help students compare the changes in their preassessment drawings and what they have drawn and written in items 1 and 2 of the end-of-module assessment. Add a few notes to the pages to highlight the changes. Plan another activity for the rest of the class while you are conducting the interviews.
**SCORING THE ASSESSMENTS**

**INTERVIEW ASSESSMENT**
Score this assessment holistically. If students can identify several things they drew or wrote about plants that improved from the preassessment to the end-of-module assessment, give them a ✓.

**WRITTEN ASSESSMENT**
If students answer eight of the ten items correctly, give them a ✓. If they get them all correct, give them a +.

- **Item 1.** Drawings should include roots, stem, and leaves. Flowers and seeds count toward a +.
- **Item 2.** At least two ways new plants can be started: seeds, cuttings (potato eyes), bulbs, and roots.
- **Item 3.** light, air, space, nutrients
- **Item 4.** water
- **Item 5.** the middle plant
- **Item 6.** from left to right 5, 1, 4, 6, 3, 2
- **Item 7.** root
- **Item 8.** flower
- **Item 9.** stem
- **Item 10.** leaf
## K-2 Grade Level Expectations (GLE) Assessment Opportunities

### Systems

<table>
<thead>
<tr>
<th>Characteristics of Living Matter. Understand characteristics of living organisms. (GLE 1.1.6)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 3, Pt. 3</td>
<td>Interview</td>
<td>Important to cover in this module.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Structure of Physical Earth/Space and Living Systems. Understand that things are made of parts that go together. (GLE 1.2.1)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 1, Pt. 3, 2, 3</td>
<td>Covered in several other modules.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Structure of Organization of Living Systems. Know that living things are made of small parts. (GLE 1.2.6)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 1, Pt. 1, 2, 3, 4</td>
<td>Covered in several other modules.</td>
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</table>

<table>
<thead>
<tr>
<th>Molecular Basis of Heredity. Understand that plants and animals have life cycles. (GLE 1.2.7)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 1, Pt. 3</td>
<td>5, 6</td>
<td>Important to cover in this module.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Life Processes and the Flow of Matter and Energy. Know that most living things need food, water, and air. (GLE 1.3.8)</th>
<th>FORMulative</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 1, Pt. 2, 3</td>
<td>3, 4</td>
<td>Covered in several other modules.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Interdependence of Life. Know that plants and animals need a place to live. (GLE 1.3.10)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 4, Pt. 1</td>
<td>Important to cover in this module.</td>
<td></td>
<td></td>
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</tbody>
</table>

### Inquiry

<table>
<thead>
<tr>
<th>Explaining. Understand how to construct a reasonable explanation using evidence. (GLE 2.1.3)</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inv. 2, Pt. 2, 4</td>
<td>Assessed throughout grades in inquiry projects.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Communicating. Understand how to record and report investigations, results, and explanations. (GLE 2.1.5)</th>
<th>FORMATIVE</th>
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<tbody>
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<td>Inv. 3, Pt. 1, 4</td>
<td>Assessed throughout grades in inquiry projects.</td>
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</table>

### Application

<table>
<thead>
<tr>
<th>Environmental and Resource Issues. Understand how humans depend on the natural environment. (GLE 3.2.4)</th>
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<tbody>
<tr>
<td>Inv. 2, Pt. 3</td>
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</table>

### Inquiry or Design Project

<table>
<thead>
<tr>
<th>Investigating Systems: GLEs 2.1.1—2.1.5 or Designing Solutions: GLEs 3.1.1—3.1.3</th>
<th>FORMATIVE</th>
<th>SUMMATIVE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td>Important to do one project per module.</td>
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<td></td>
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