Grade: 3rd

Topic: Plant Growth
(1 week Lesson)

Title: *Comparing Germination*

Objective:
Students will compare how plants are alike and different by observing stages from dry seed to germination. This will be done by comparing 4 different seeds and their growth process.

Standards:
3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis,
3.1.3 Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers**.**
3.1.5 Demonstrate the ability to work cooperatively while respecting the ideas of others and communicating one's own conclusions about findings.
3.2.3 Keep a notebook that describes observations and is understandable weeks or months later**.**
3.2.6 Make sketches and write descriptions to aid in explaining procedures or ideas**,**
3.6.3 Explain how a model of something is different from the real thing but can be used to learn something about the real thing**.**
3.6.4 Take, record, and display counts and simple measurements of things over time, such as plant or student growth.
3.6.5 Observe that and describe how some changes are very slow and some are very fast and that some of these changes may be hard to see and/or record**.**

Materials:
- *Scott Foresman Teachers Guide* (SF p. 26-27)
- Radish, sunflower, corn, and Pinto seeds.
- Paper towel and paper plate
- Waxed paper and masking tape
- Metric ruler and a cup of water

Activities:
1. See pre assessment.
2. Review the following vocabulary words; seed leaf, germinate, seedling (SF p.2-3).

Directed Inquiry (from SF p. 26-27**)**

3. Teacher will model the activity that students will be doing with seeds.

4. Students follow directions from SF 26-27 and create a description chart in their science notebooks.

Extension Activity**:** Have students come up with different ways to test germination with the same 4 kinds of seeds. ie: different light, different soil, different temperature.

Assessment

Pre Assessment**:** In their science notebooks, students will respond to the question, "How fast do different kinds of seeds germinate?" They will also make and support predictions about the four seeds before they are used in the lesson.

Post Assessment**:** Students will compare results with their predictions. Under the "Line of Learning" share what they have discovered and infer why. Small groups and/or whole class discuss what they've learned.

References:

Plant Growth and Development teacher's guide (2002). STC The National Science Foundation: Burlington, NC.
Scott Foresman Indiana Science Teacher's Edition Grade 3 (2006). Scott Foresman: Glenview, IL. Vol. 1.