

Lesson Title: Creating a Herbarium from Recyclables

Grade levels: Appropriate for K-5

Applicable SOL:

Kindergarten: Science K.1 (investigations)

English K.2 (describing vocabulary) K.12 (writing)

1st Grade: Science 1.1 (investigation) 1.4 (plant parts)

English 1.2 (vocabulary in content) 1.13 (descriptive words)

2nd Grade: Science 2.1 (investigations)

English 2.2 (vocabulary) 2.10 (reference materials)
2.12 (descriptive writing)

3rd Grade: Science 3.1 (investigations)

English 3.2 (vocabulary in content)

3.7(reference materials) 3.9 (writing for a purpose)

4th Grade: Science 4.1 (investigations) 4.4 (plant structure)

English 4.6 (nonfiction texts) 4.8 (writing for a purpose)

5th Grade Science 5.1 (investigations) 5.5 (traits of organisms)

English 5.6 (nonfiction texts) 5.7 (writing for a purpose)

Materials:

- Assorted recyclables such as paper towel rolls, bottle caps, scrap paper, egg cartons, scraps of fabric, straws, string, popsicle sticks
- Glue
- Hot glue (with teacher assistance)
- Scissors
- Rulers
- Markers
- Index cards
- Pencils
- Nature journals
- Plant Vocabulary PowerPoint
- Art and Science document
- Field guides, or online plant identification plant resources

Procedure:

Building Supporting Knowledge: (20 to 30 minutes)

1. Recall plant vocabulary (use parts of plant vocabulary PowerPoint as needed, or print out needed pages for word wall). Go over what a herbarium is, and the structures/parts of a plant.

2. Use photos of plant specimens from Art and Science document, as well. Have students recall the purpose of plant specimens and herbariums, as well as the kinds of information recorded with the plant specimen.
3. Use nature journals to choose a plant for which the students have created a detailed line drawing. If they do not know what type of plant it is, allow time to use field guides or online resources (such as <http://www.vaplantatlas.org/> or <http://plants.usda.gov>) to identify their plant.

Main Lesson: (45 minutes)

1. Have students review their line drawings in their nature journals, as well as the notes about them. Explain that you will be creating a classroom herbarium using recyclable materials to create the plant samples.
2. Explain that they should attempt to replicate their plant using the provided materials. Go over any supply limitations. Decide how the plants should stand, or if they should lie on the base. Make decisions about the base, as well. (You may want a supply of cardboard for the base, or have a shoe box top, or flat egg carton lid for each child's base).

3. After they create the plant specimen, they should use their index card to give details about the specimen, as would be included in a herbarium.

Follow-up:

1. Have students present their projects, and ask/answer questions.
2. Create a classroom herbarium and allow students to take turns giving tours of it to other classes, parents, or staff.

Assessment Opportunities:

1. Assess students informally as they work through problems they have as they build.
2. Assess finished product for proper plant structure appropriate for your grade level.
3. Assess written part of project.
4. Assess presentations and students in the audience as well, as they ask appropriate questions.