

RAINGARDEN PLANT CARDS



Purpose & Goals

This activity creates a space for students to interact with raingardens or native plantings on school grounds, or [if school has no garden] to gain exposure to native plants through photos and natural history. Emphasis can be placed on artistic or scientific expression.

Goal: To use ecological literacy, historical knowledge of native prairie plants, and landscape design principles to demonstrate the connection between the landscape and water resources. With a familiarity of prairie plants, students will be empowered to learn more about nature and know how to connect details about a species to the larger picture of an ecosystem.

Standards

Large Group Option: STEM Science: 1.1.1.1.2., 1.4.3.1.1., 2.4.1.1.1., 2.4.2.1.1., 2.4.3.1.1., 3.1.1.2.3., 3.1.3.2.2., 3.2.1.1.1., 3.4.1.1.2., 3.4.3.2.1., 3.4.3.2.2., 4.3.2.3.1., 5.1.3.2.1., 5.4.2.1.1., 5.4.1.1.1., 5.4.2.1.2., 5.4.4.1.1., 7.4.2.1.1., 9.1.3.2.1.

Time: 1 hr **Grades:** 1-5, 7, 9

Preparation & Materials

- Raingarden cards (Rented from VLAWMO)
- Clipboards - one per student
- Field worksheet - one per student

Choose one of the two field worksheets: Indoor/
pre-made design or customizable for an existing raingarden

- Border markers such as string or tape (indoor)
- Pencils

Procedure

The plant cards act as a trading card game, offering a closer look at the natural history and ethnobotany of the plants, as well as the tools needed to use the plants for designing a hypothetical raingarden. Students refer to the cards and the field worksheet to step into the role of researcher and landscape designer. On the field worksheet, students record facts (ecological literacy), draw the plant (multi-faceted familiarity of plant), and placing plants according to the plant's soil and sun preferences (landscape design). The activity can be conducted in a large group or individual fashion, and can emphasize the artistic or scientific elements depending on the needs of the class.

This activity can take place outdoors, either on the lawn or adjacent to a raingarden or native planting, or an open space indoors if weather doesn't permit going outside.

How to use the plant cards:

Common and scientific name

A list of historical insights and facts about the plant. Students choose the ones that stand out to them, to be recorded on the field worksheet or in a large group setting.

BLUE FLAG IRIS
Iris versicolor

- A sword-leaved plant native to North Eastern wet meadows, stream banks, and marshes.
- The name "Flag" comes from "Flagge" in Middle English, meaning rush or reed.
- Roots cause a minor skin irritation, and have low toxicity if ingested. The roots have also been used for perfume.
- The strong leaves have been spun into strong twine.
- Its deep flower attracts hummingbirds, and forces insects to crawl in, thus brushing into the stigma and stamen and pollinating the plant.

Height: 1-2'
Spacing: 1-2'
Soil type: Moist/wet
Sun/shade: Full sun
Inundation: 5/5

Plant specs used for strategizing where plants should go in the raingarden. Inundation means the ability for the plant to be inundated (submerged) underwater after a rain event - 5 being the most capable and naturally occurring in very wet soils.

Photo of plant is used for reference if plant is not planted (or not flowering) on the schoolyard. Also for reference in drawing the plant on the field worksheet.

Raingarden Plant Cards



Procedure continued

Large group option:

1. In a cleared open space for walking around, each student is equipped with a clipboard, field worksheet, pencil, and one raingarden plant card.
2. A hypothetical raingarden is laid out with a defined garden border, sunny side, shady side, and water source (where water flows into the raingarden, i.e. rooftop drainage). See indoor field worksheet for an example of the raingarden layout, and to make the physical layout similar to what's on the field worksheet. The area close to the water source as well as the center are assumed to be wet, as water flows in and rests at the bottom of the raingarden as it drains.
3. Students observe their first card and place themselves in the garden according to the plant specifications on their card. *If the school has a raingarden, students may carefully traverse the garden to "plant" the cards.*
4. When found, students sit down to "plant their plant" and take a few moments to record their notes on the field worksheet: Name, 2 facts, an "x" to mark where in the raingarden and a brief illustration.
5. After a few minutes, students are instructed to stand back up, trade cards with a neighbor, and repeat steps 3 and 4. The field worksheet allows for up to 5 card repetitions.
6. When trading segment is complete, students gather in a circle to share their findings and cover the reflection questions.

Homework: optional

Students take their picture or field worksheet home to add plants they note at their home, in a nearby park, or grassy area - either structurally in the field worksheet or artistically in the field journal. VLAWMO brochures are available for students to take home to parents and guardians to inform families how native prairie plants can be planted throughout the neighborhood.

Reflection

Essential questions for large or small group reflection:

1. Which plants would be helpful for stabilizing soil? Which plants would you want in wet areas?
2. Out of the plant facts we found, what are some of the benefits of planting prairie plants at our school and around town? What might happen if we didn't have these plants?
3. If you were an early American settler or part of a Native American tribe in the 1800's, what would plants mean to you?
4. Which plant was your favorite and why?

Assessment

Assessment can take place as an extension from the reflection questions or observed from the worksheet.

- Students can explain how a specific native prairie plant fits into the local ecosystem. Infiltrating water into soil, stabilizing soil, attracting pollinators, etc.
- Students can identify at least three specific prairie plants by sight.
- Students can explain the various roles different plants play in landscape design, and physically locate where at least one plant should be planted according to its soil, sun, and water preferences.
- Students can name one additional topic in nature that is connected to the raingarden habitat that they would be interested in learning more about (bees, butterflies, trees, birds, water quality - things that interact with a raingarden and also play a role in the greater ecosystem)

Raingarden Plant Cards



Procedure continued

Individual field journal option: See 'Journal tips' document

1. Students are each equipped with a clipboard, paper, and 1-2 plant cards.
2. Nature journaling is explained as practicing observation - anyone can observe with any artistic ability. The end outcome is unperscribed, as students use inquiry to guide what details they key in on (science, art, etc.). The goal is to depict an experience on the page - what sounds are present?
3. To enter into depicting an experience, students start by documenting the time and weather conditions in the upper corner of their page.
4. If working in an existing raingarden, students move carefully through the garden to find a comfortable place to sit and journal. They can stay in the same spot or switch locations as they like. In this activity style, students are instructed to blend their surroundings, artistic expression, and scientific description into their journal. Students can freely swap cards to practice drawing plants (on cards or on school yard) and pull facts from the cards to create a custom, creative, artistic, and informative picture.
5. Reflection questions can be either shared as a large group, written down and completed as a personal reflection, or taken home as homework.
6. Doing the same activity again with a different season or weather condition builds on the experience and skill of observation. Recommended 3-5 entries to build skills and familiarity with the process. A full lesson can consist of one or multiple journal entries at different times and locations, or at three different locations each with multiple entries.

Homework: optional

Students do the entire activity as homework, or create a new journal entry at home.

Reflection

Essential questions for large or small group reflection:

1. Did you embrace the artistic aspect or the scientific aspect more? Which was more important?
2. How might science and art work together in real life?
3. If you were an early American settler or part of a Native American tribe in the 1800's, what would plants mean to you?
4. Which plant was your favorite and why?
5. What will you take away from your field journal? What do you hope others take away from it?

Assessment

- A designated amount of field journal entries (3-5) have been made.
- Students can identify at least three specific prairie plants by sight.
- Students can explain the various roles different plants play in landscape design, and physically locate where at least one plant should be planted according to its soil, sun, and water preferences.
- Students describe an observation from their field journals and explain changes and trends between the journal entries.