

Curriculum topics

- Germination
- Measurement & Data
- Plants Growth
- Properties of Materials

Subjects

- Life Science
- Mathematics

Grade range: 2 – 8

Who we are: Resource Area for Teaching (RAFT) helps transform the learning experience by inspiring joy through hands-on learning.

NAPKIN NURSERY

Roll Up the Learning with Napkin Starter Pots



Plants are a crucial part of the environment for many reasons, including providing animals, humans, and other organisms with a source of food. Plant growth and development takes place over 6 main stages such as seed germination, budding, flowering, and pollination. When people garden at home or at school, they usually start by buying seeds or partially grown plants from a nursery. Nurseries are places where plants are grown for transplanting, for use as stock for budding and grafting, or for sale. In this activity, students turn paper napkins into decomposable flowerpots that can be planted in the ground or set into another planting container.



Example of nursery that sells decorative flowers

Share Your feedback!

<http://bit.ly/RAFTkitsurvey>

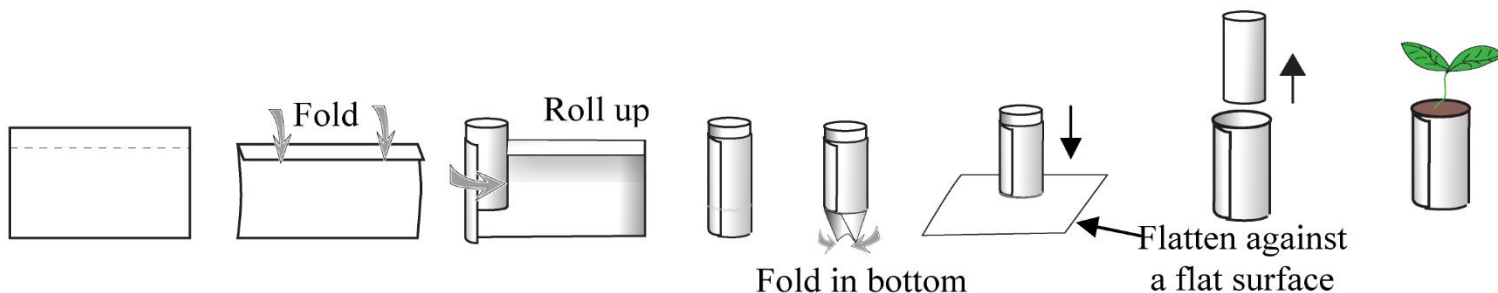
Materials

Materials in the kit may vary but generally, this kit contains the following:

- Paper napkins (2)
- Cylindrical object, 2" diameter x 3" long (1)
- Craft stick (1)
- Seeds, flowers or other (5)
- Paper clips, small (2)
- Potting soil
- **Not included:** Ruler, spray bottle

To Do and Notice

1. **Assembly:** Unfold and then refold or cut a paper napkin to make sections about 4" wide by 8" long. Fold one long side over 3/8" from the edge. Refer to the illustrations below.
2. Place the cylindrical object on the napkin's narrow side so that the long unfolded edge extends ~1" beyond the object's bottom. Roll the napkin around the object.
3. Fold the bottom edges of the napkin cylinder inward against the object's bottom. Press the object's bottom onto a flat surface to better form the bottom of the pot.
4. Remove the round object from the napkin pot. Fill the pot with potting soil, tap the bottom on a flat surface, and press downward on the soil to compact the soil.
5. Dampen the soil by spraying with water. Dampen the side of the pot where the rolled napkin overlaps and gently press in to flatten the seam. Optional: Use a paperclip to hold the side seam tightly together.
6. Place ¼" marks along the length of a craft stick. Write your name, type of seed, planting date, and/or the experimental variable being tested on the other side of the craft stick.
7. For a large seed use the end of the craft stick to form a depression in the top of the soil, place the seed, and cover. For smaller seed(s) scatter seeds on the soil and then cover with a topping of sifted soil. Spray with water to dampen.
8. Insert the unmarked end of the craft stick into the soil such that a mark is level with the soil surface.
9. **Observe:** Place the napkin pot in a warm location, water as needed and observe at regular intervals.
10. **Share** your learning with RAFT! Submit photos/video via email at education@raft.net or on social media ([Facebook](#), [Twitter](#), [Instagram](#)).



Core Content Skills:

Science & Engineering (NGSS)

Planning and Conducting Investigations, Analyzing and Interpreting Data, Developing and Using Models, Organization for Matter and Energy Flow in Organisms, Interdependent Relationships in Ecosystems, Biodiversity and Humans, Adaptations, Properties of Materials, Structure and Function, Cause and Effect

CCSS Math

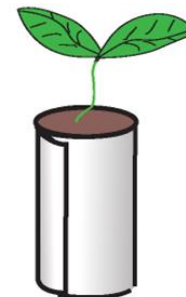
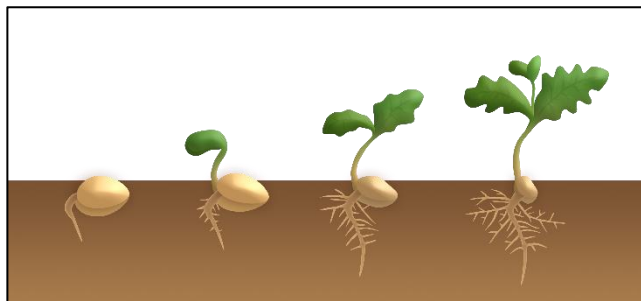
Measurement & Data

Social Emotional Learning

- Self-awareness
- Self-management
- Responsible decision-making

The Science Behind the Activity

Plants produce seeds that are inactive, or dormant, allowing the seeds to survive poor growing conditions. When the moisture, temperature, and light levels are sufficient to trigger growth, the seeds can germinate, if they are not too old. **Germination** is the dynamic process by which a seed becomes a young plant (shown below). During germination the plant embryo in a seed uses nutrients contained within the seed to grow and produce a plant seedling. The seed contains enough nutrients to sustain plant growth until the plant can begin to produce nutrients via photosynthesis.



Reuse

This kit uses 100% reusable materials designed for other uses. To continue making a positive impact in reducing waste, reuse these materials in other projects. Additionally, any unused materials can be collected and delivered back to RAFT.

Feedback

Please comment on this kit by taking this short survey: <http://bit.ly/RAFTkitsurvey>. Let us know of any material concerns (missing, broken, or poorly fitting parts) as well as any suggestions for improvement.

Visit <https://raft.net> to view related activities!

- Capillary Capers
- Grow It and Wear It
- The Germinator
- Seed Ease

Resources

- Interactive articles on plants - https://wonderopolis.org/wonders?category=&subcategory=&order_by=&q=plants
- Plant growth virtual lab - <https://nt7-mhe-complex-assets.mheducation.com/nt7-mhe-complex-assets/Upload-20190715/InspireScience6-8CA/LS12/index.html>