

Grow Cards

Standards of Learning

Science K.1, K.7, K.9, K.11, 1.1,1.4, 1.8, 2.1, 2.4, 2.8

Objective

Students will:

- Make recycled paper containing seeds to plant
- Investigate how materials can be reused and recycled

Materials

- Newspaper
- Screen
- Bin
- Water
- Cookie cutters
- Blender
- Seeds
- Paper towels

Background Knowledge

Recycling involved processing used materials into new products to prevent waste of useful materials. Recycling helps to reduce energy usage, reduces air pollution and water pollution by reducing the need for waste disposal, and lowers greenhouse gas emissions. Materials that can be recycled include glass, paper, metal, plastic, textiles, and electronics. In order to recycle materials they need to be sorted, cleaned, and processed into new materials that will be manufactured. These are also considered items that are reusable because they can be used over and over again once they are made into something else. Almost 40% of our total waste comes from paper and paperboard so it is important to explain to your students the need to recycle. This would be a great time to discuss materials that can be recycled and the materials in our world that can be reused. In this activity, students learn about recycling paper to make very special greeting cards. These cards contain seeds and can be planted to enjoy all summer!

This activity also provides a great opportunity for you to talk about germination and plant growth with your students so that they know what their seeds need to grow and how they grow. Germination is when the seed sprouts and begins to grow. It is important for your students to know that it starts right when there is a bud present from the seed. Explain to your students that their sprout will need a while to grow and that every plant is different in the amount it takes for them to get to maturity. Ask them what their plant will need to grow. All plants need water, light, temperature, time, soil (nutrients), oxygen, and space to grow to full maturity, which is something you can show your students as they are creating their own dirt baby. The process that their plant is going to go through is also something that should be talked about and monitored for a few weeks. All plants go through about the same cycle of sprout, growth, flower, and fruit. However, it is important to also point out to your students what their plant parts are since they will not have flowers or fruits. The basic parts of the plant to point out are roots, leaves, stem, flower, seeds, and fruit. Make sure to point out that not all plants have every part.

Adapted from Junior Master Gardener Program



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Procedure

1. Ask students if they have ever received a card for their birthday, Christmas, or other special occasion. Then ask if they have ever planted one of those cards in the garden.
2. Tell them that today they are going to make a greeting card that can be planted and will grow.
3. Have students tear newspaper into small pieces (about the size of a postage stamp).
4. Fill the blender half full with newspaper scraps and $\frac{3}{4}$ full with water. Make sure the students recognize that they are reusing and recycling the newspaper so that it does not just get thrown away. Explain how recycling is good for the Earth.
5. Blend at a high speed until mixture has an oatmeal-like consistency.
6. Place the screen over the bin and select a cookie cutter.
7. Place the cookie cutter on the screen and pour a thin layer of the mixture into the cutter.
8. Place several seeds into the mixture.
9. Remove the screen from the bin and place on a paper towel.
10. Remove the cookie cutter and take another paper towel and lay over shaped mixture.
11. Press the towel on the shaped mixture to remove excess water and move to a dry safe place.
12. Let stand for one to two days to completely dry out.
13. Decorate and share with someone you love!

Extension

- Have students write an explanation paragraph on how they created their Grow Card.
- Use the Grow Cards to start a school garden. Note the life cycle of each plant.
- Discuss how the newspaper was recycled and what other items can be recycled.

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