

Scarecrow Science: Seasons, Soil, and Sun

Get ready to build your own garden guardian and learn some Earth Science along the way!

Part 1: Why Scarecrows? Seasons and Farming

Let's start by thinking about why people use scarecrows. They are meant to scare birds away from crops, right? When do farmers need to protect their crops the most?

Discussion Points:

- Talk about the growing season. When do plants grow best? (Spring and Summer in many places).
- How do seasons happen? Remember the Earth's tilt on its axis as it orbits the Sun? This causes different parts of the Earth to receive more direct sunlight at different times of the year, leading to seasons.
- Connect this to farming: Farmers plant in the spring when temperatures rise and sunlight increases, and harvest in the late summer or fall. Scarecrows are most needed during this growing and ripening time.

Activity: In your science journal, draw a simple diagram showing the Earth's tilt and how it causes seasons. Label the growing season.

Part 2: Building Your Scarecrow - Materials and Weather

Now, let's gather our materials and start building! As we build, think about the materials we are using.

Building Steps:

1. **Frame:** Lash the shorter stick across the longer stick (about a foot from the top) using twine to create a 'T' shape. This forms the scarecrow's shoulders and spine.
2. **Head:** Stuff the burlap sack or pillowcase firmly with straw or leaves. Tie it closed, leaving some fabric at the bottom to attach to the frame. Draw or paint a face on it! Attach the head to the top of the long stick.
3. **Body:** Dress the frame. Put the shirt onto the cross-stick arms and the pants onto the bottom part of the long stick.
4. **Stuffing:** Stuff the shirt and pants with straw, leaves, or paper until your scarecrow looks full. Tuck the shirt into the pants and tie the waist, wrists, and ankles loosely with twine to keep the stuffing in.
5. **Finishing Touches:** Add a hat, gloves, or any other fun accessories.
6. **Placement:** If possible, securely place your scarecrow upright in a garden spot or a large pot with soil.

Discussion Points During Building:

- What are our materials made of? (Wood, cotton/fabric, straw/plant matter, burlap/jute).
- What will happen to these materials when left outside in the sun, rain, and wind? (Think: fading colors, wood weakening, fabric tearing, straw getting soggy). This is related to **weathering** - the breakdown of materials by weather elements.

Part 3: What Happens Next? Decomposition

Our scarecrow won't last forever outside. Many of the natural materials we used will start to break

down.

Discussion Points:

- What is decomposition? It's the process where organic materials (like plants, wood, cotton) are broken down by tiny living things like bacteria and fungi.
- Which parts of our scarecrow will decompose? (Straw, leaves, cotton clothes, wooden frame eventually). Which parts won't, or will take much longer? (Plastic-based paints or synthetic fabrics if used).
- Why is decomposition important in nature? It returns nutrients to the soil, helping new plants grow (part of the nutrient cycle).

Optional Mini-Experiment:

- Take small samples of the materials used (straw, cotton cloth, wood shaving, maybe a piece of plastic if you have some).
- Place each in a separate small, clear container with a bit of soil and moisten with water. Seal loosely.
- Place them somewhere warm (but not direct sun) and observe over the next few weeks. Record changes in your science journal. Which materials break down fastest?

Wrap-up & Assessment

Let's review what we learned!

- Why are scarecrows used mainly during certain seasons? (Related to Earth's tilt, seasons, and the growing cycle of crops).
- How does weather affect the scarecrow's materials? (Weathering - sun fading, rain damage, wind).
- What will eventually happen to the natural parts of the scarecrow? (Decomposition by microbes, returning nutrients to the soil).

Look at your awesome scarecrow! It's not just a garden decoration; it's a great way to observe Earth Science in action right in your backyard!