

Objective

By the end of this lesson, Hannes will understand the process of sprouting a bean from seed, learn about the life cycle of plants, and explore the scientific principles of growth, while expressing creativity through art related to the bean sprouting process.

Materials and Prep

- Bean seeds (any type will work, like kidney beans or lima beans)
- A small cup or container (like a plastic cup or jar)
- Water
- Paper towels or cotton balls
- Markers or crayons
- Plain paper for drawing or journaling

Before starting the lesson, make sure to soak the bean seeds in water for a few hours to help them germinate more quickly.

Activities

• Activity 1: Bean Sprouting Experiment

Hannes will place the soaked bean seeds in the container with damp paper towels or cotton balls. He will keep the container in a warm, sunny spot and observe the changes over the next few days. Hannes can document the process by drawing what he sees each day.

• Activity 2: Life Cycle of a Bean Plant

Hannes will create a visual representation of the life cycle of a bean plant using markers or crayons. He can draw each stage, from seed to sprout to mature plant, and label them. This will help him understand how plants grow.

• Activity 3: Growth Journal

Hannes will keep a growth journal where he writes down observations about the bean's growth, including how much it has grown each day and any changes he notices. He can also include drawings and thoughts about the process.

Talking Points

- "What do you think a seed needs to start growing?"
- "Can you guess how long it takes for a bean seed to sprout?"
- "Did you know that plants breathe, just like we do? They take in carbon dioxide and release oxygen!"
- "What do you think happens underground when a seed starts to grow?"
- "Why do you think sunlight is important for plants?"
- "How can we tell if a plant is healthy or not?"
- "What are some other plants that grow from seeds like beans?"
- "Do you think all seeds grow the same way? Why or why not?"
- "What do you think will happen if we forget to water our bean seeds?"
- "How do you feel about watching your bean grow? What are you most excited about?"