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Hydroponic Gardens

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Hydroponic Gardens

INTRODUCTION

Can plants grow without soil? In hydroponic gardening, plants grow without traditional soil by receiving water and essential nutrients. In this activity, you'll use wheatgrass seeds and water-absorbing Orbeez to investigate how seeds begin to grow. Your mission: Create a mini garden, observe your seeds, and discover what plants need to grow!

MATERIALS

- Clear plastic cup
- 10–15 wheatgrass seeds
- Fully hydrated Orbeez (water beads)
- Water

BUILD YOUR MINI GARDEN

1. Add the Orbeez to your cup. Place a layer of fully hydrated Orbeez in the bottom of the cup. Avoid excess standing water.
2. Plant your seeds. Gently spread 10–15 wheatgrass seeds across the surface. Press them lightly against the moist beads without burying them deeply.
3. Add water. Keep them moist, but not submerged. Leave the container open to allow airflow.
4. Find a growing spot. Place your garden in a bright location with indirect sunlight. Check it daily and mist lightly if the seeds begin to dry out.
5. Observe. Watch for roots and green shoots over the next several days.

BE A SCIENTIST!

Think about these questions:

- What does a seed need to germinate?
- Why do Orbeez expand when placed in water?
- What changes do you notice each day?
- Will the wheatgrass grow indefinitely with only Orbeez and water?

IMPORTANT SAFETY

- Orbeez are NOT edible and must never be placed in mouths. Keep them away from young children.
- Do not eat the seeds or plants from this experiment.
- Dispose of used beads in the trash, never down a drain.

SCIENCE FACT

Seeds contain stored energy to begin growing, but plants need light, water and nutrients for continued healthy growth. Orbeez hold moisture but do not provide all the nutrients plants need for long-term growth.

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