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STEM Sprouts: Growing Curiosity Through Nature & Play with Dana Mhari 🌱

Instructions:

Check out this sample lesson plan and activity ideas for inspiration, ideas, and more. Feel free to edit, delete, or highlight to make it your own! These notes are yours to customize. They will not be published anywhere such that you're held to teaching exactly what's here.

Topics

Stem, nature, sensory, wiggle, explore

Lesson Ideas

Lesson Title

STEM Sprouts: Growing Curiosity Through Nature & Play

Duration

1 Hour

Lesson Plan

1. Introduction (5 minutes)
  - Welcome the students and briefly introduce the concept of STEM (Science, Technology, Engineering, Mathematics).
  - Discuss how STEM can be explored through nature and play.

2. Nature Walk & Sensory Exploration (15 minutes)
  - Take the children on a short nature walk around the play area or garden.
  - Encourage them to use their senses to observe plants, rocks, and insects.

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- Ask questions like "What do you hear?" "What do you see?" "How does it feel?"

3. Plant Investigation (15 minutes)
- Return to the classroom or designated area and gather in a circle.
- Provide each child with a magnifying glass.
- Let them closely examine different plant leaves, seeds, or flowers.
- Discuss parts of the plant and their functions.

4. Engineering with Nature (10 minutes)
- Challenge the students to build small structures using twigs, leaves, and pebbles.
- Encourage creativity and cooperation in group work.
- Discuss the stability and design of their structures.

5. Wiggle Break & Reflection (5 minutes)
- Lead a quick wiggle break with nature-themed movements like flying like birds or swaying like trees.
- Ask students what they learned and enjoyed during the activities.

6. Closure & Questions (10 minutes)
- Recap the day's exploration and link it back to STEM principles.
- Allow time for questions and share what they'll explore next time.

Materials List

- Magnifying glasses
- Twigs, leaves, pebbles
- Tray or container for collecting items
- Space suitable for a short walk

Adaptations for Different Ages

- Younger children: Focus on sensory experiences and simple observations.
- Older children: Incorporate more detailed explanations of plant biology or engineering principles.

Movement Break

- Wiggle like worms
- Flutter like butterflies

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- Hop like frogs

Bonus Activities

- Nature Scavenger Hunt: Create a simple list of items for children to find during the walk.
- Plant a Seed: Start a small planting project to explore growth over time.
- Journal Reflection: Encourage kids to draw or write about their favorite part of the lesson.

Series Outline

Week 1: Introduction to STEM and Nature Exploration
- Nature scavenger hunt to identify plants, rocks, and insects.
- Storytime with books about nature and science concepts.
- Create simple nature journals using drawing and writing prompts.

Week 2: Plant Science and Sensory Play
- Plant seeds in cups and create a growth diary.
- Sensory bins with different textures (soil, sand, leaves) for exploration.
- Experiment with colored water to observe capillary action in plants.

Week 3: Weather Wonders and Outdoor Discovery
- Build weather stations with simple tools like thermometers and wind vanes.
- Create weather-related crafts such as rain sticks or cloud identification charts.
- Nature walk to observe and document weather patterns and their effects.

Week 4: Animal Adventures and Habitats
- Construct simple bird feeders or insect hotels.
- Role play as different animals to explore movement and behavior.
- Create dioramas of various habitats using natural materials.

Week 5: Earth and Rock Explorations
- Rock classification and testing hardness with simple tools.
- Create a rock art gallery using paint or markers.
- Build a mini volcano experiment to explore geology concepts.

Week 6: Water Wonders and Liquid Investigations

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- Explore sink or float experiments with natural objects.
- Simple water cycle demonstrations using plastic bags and heat.
- Nature-based water play with buckets and natural sponges.

Week 7: Sky Gazing and Space Stories
- Nighttime sky observation with a focus on identifying constellations.
- Create simple telescopes using cardboard tubes and lenses.
- Storytelling sessions about space exploration and stars.

Week 8: Insect Investigations and Bug Hunts
- Build bug houses or create observation jars.
- Identify insects through close observation and creative drawing.
- Explore insect anatomy using magnifying glasses.

Week 9: Forces and Motion with Natural Materials
- Construct simple machines like levers using sticks and rocks.
- Explore the concept of motion by rolling objects down slopes.
- Design and test natural material catapults or slingshots.

Week 10: Eco-Friendly Fun and Creative Crafts
- Upcycle natural materials for creative art projects.
- Organize a small eco-friendly fair showcasing student creations.
- Reflective journal session to discuss and document learning experiences.

For additional support, reference this experience outline template which includes tips and prompts to help you develop and lead an excellent Grasshopper Kids experience.

Note: This lesson plan outline was drafted by Hopper. If you would like to see different results, you can submit another idea, or text us with feedback so we can work to make the algorithm better. We built this tool to help save you time in bringing more kids enrichment experience ideas to life!

