

NATURE-INSPIRED DESIGN FOR COSMIC EDUCATION WITH SUPERSPACE

Grade Level:

Lower Elementary (Ages 6-9)

Subject:

Montessori Cosmic Education, Science (Biology and Ecology), Geography, Art, Practical Life, Sensorial Exploration

Time Duration:

2-3 hours (can be separated over multiple sessions)

Learning Objectives:

- Understand the relationships between different components of Earth's ecosystems.
- - Develop spatial awareness, fine motor skills, problem-solving abilities, and collaboration through Superspace Tiles.
- - Encourage appreciation and stewardship of nature through open-ended play.
- - Integrate interdisciplinary learning, connecting science, geography, art, and practical life skills.

Materials Needed:

- Superspace
- Natural materials: leaves, twigs, stones, shells, pinecones, moss, sand, etc.
- Art supplies: colored paper, markers, crayons, scissors, glue
- Reference materials: books, posters, and images of various ecosystems (rainforest, desert, ocean, tundra, etc.)
- Magnifying glasses
- Journals or sketchbooks
- Pencils and erasers
- Labels and cards for plants, animals, and ecological features
- Floor mats or designated work areas

Activities and Procedures:

1. Gather students in a circle for discussion.
2. Tell the Montessori "First Great Lesson"—The Story of the Universe—emphasizing interconnectedness.
3. Introduce Superspace Tiles and explain how they will be used to explore ecosystems through open-ended play.
4. Engage students with questions about nature and their role in the environment.
5. Form Small Groups: Divide students into groups of 3-4.
6. Assign Ecosystems: Each group selects or is assigned an ecosystem (e.g., rainforest, desert, ocean).
7. Provide reference materials and magnifying glasses.
8. Students explore characteristics of their ecosystem.
 - a. Journaling & Sketching:
 - b. Groups discuss and finalize their building plans.
9. Encourage students to brainstorm how they will use Superspace to represent features of their ecosystem.
10. Provide each group with Superspace Tiles and natural materials.
11. Students build their life-sized ecosystems, using Superspace Tiles for structures like mountains, trees, or ocean waves
12. Artistic Expression: Students create plants and animals, integrating them into their Superspace models.
13. Labeling: Use labels to identify different components within their Superspace ecosystem.
14. Each group shares their Superspace ecosystem with the class. Discuss how Superspace Tiles helped them represent their environment.
15. Encourage peers to ask questions and share observations.

Conclusion:

By engaging in this lesson, students deepen their understanding of Earth's ecosystems through hands-on, open-ended play with Superspace Tiles. They develop critical thinking and collaboration skills, aligning with Montessori Cosmic Education principles. The use of Superspace enhances their spatial awareness and brings abstract environmental concepts to life.