

Core Skills Analysis

Science - Ecology and Biology

- Madalin learned about different soil-dwelling organisms like roly-polys, earthworms, mealworms, and June bug larvae, recognizing their role in an ecosystem.
- She explored the concept of decomposition by adding organic matter such as dead leaves, mushrooms, and wild strawberries to support the natural recycling process.
- By creating a terrarium, Madalin observed habitat components essential for survival, including soil, plants, shelter (rocks), and moisture.
- Keeping a notebook for observations encouraged scientific inquiry skills such as recording data, noticing changes, and looking for cause-effect relationships within the microecosystem.

Tips

Encourage Madalin to experiment with variables such as light, water levels, or different types of plants to see how these changes affect the terrarium's inhabitants. Integrate lessons on food webs by researching what each species eats and how they interact within the ecosystem. Extend the project by comparing how a terrarium differs from a natural outdoor ecosystem, possibly by taking nature walks to observe similar creatures in the wild. Finally, incorporate simple scientific drawing and labeling exercises of the organisms and plants to deepen understanding of their anatomy and adaptations.

Book Recommendations

- [Terrarium Craft: Create 50 Magical, Miniature Worlds](#) by Paula Willis: A hands-on guide filled with projects and ideas to build and care for terrariums, perfect for young science enthusiasts like Madalin.
- [The Magic School Bus Chapter Book #7: The Magic School Bus Hops Home \(Science Chapter Books\)](#) by Judith Bauer Stamper: An engaging science story that dives into insect life cycles and habitats, connecting well with observing June bug larvae and other creatures.
- [A Seed Is Sleepy](#) by Dianna Hutts Aston: Beautifully illustrated book explaining plant life cycles and the importance of seeds, enriching knowledge about grass, clover, and wild strawberries.

Learning Standards

- CCSS.ELA-LITERACY.RI.5.7 - Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer or solve a problem related to the terrarium ecosystem.
- NGSS 5-LS2-1 - Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment, as seen in the terrarium.
- NGSS 3-LS4-3 - Construct an argument with evidence about the relationships between organisms or their environments, using observations from terrarium inhabitants.

Try This Next

- Create a detailed observation worksheet for daily or weekly notes on changes in the terrarium ecosystem, including space for drawings.
- Design a 'Creature Profile' worksheet where Madalin can record facts, dietary habits, and behaviors of each insect or worm in the terrarium.

Growth Beyond Academics

This activity likely fostered Madalin's curiosity and patience as she observed slow natural processes over time. Taking responsibility for the terrarium and maintaining a notebook supports independence and develops a habit of careful observation. The project also encourages a nurturing attitude toward

living creatures and respect for the environment.