

Nature Detective

Nurturing the Scientist and the Artist in the Child

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We cannot create observers by saying, "observe," but by giving them the power and the means for this observation and these means are procured through education of the senses."

--Maria Montessori

1. What is Nature Detective?

Science is all around us. Today's world is driven by science and technology than ever before. For centuries, scientists and mathematicians observed nature and came to conclusions that form the fundamentals of science and math. In Nature Detective, we hope to bring those exercises to our classroom and excite and activate that talent in children to make fundamental discoveries.

2. Why Nature Detective?

- Exploration, prediction, and discovery
- Social interaction
- Concentration and focus
- Develop curiosity
- Thinking Beyond the Obvious
- Builds self-esteem and confidence

Nature Detective Activities:

1. **Nature Walk:** Collect, classify and observe samples.
 - leaves
 - beans
 - rocks
 - Matching games
 - bi-valves
 - outside-inside of shells
2. **Patterns, Shapes, Tessellation, Symmetry:** Arrange objects in attractive display and invite children to observe large patterns like branching, spirals, swirls, circles, curves, repeating patterns and other regular patterns. Compare natural objects to geometric shapes. Observe animal skin: lizards, snakes, turtle shell, fish scales; arrangement of seeds on flower heads and in pods, corn cobs, pineapple, pinecones. Discuss purpose of symmetry in nature.
3. **Leaves**
 - Types of leaves
 - Shapes of leaves
 - Art Projects with leaves
 - Margins in leaves
 - Leaf identification
4. **Seeds: Carriers of Life!**
 - Seed Travelers
 - Seed Dispersal by wind or by animal
 - Nut Eaters

5. Who Am I?

- Identify the herb, plant or tree by researching the leaf, bark, fruit and seeds.

6. Rotting Log

- A habitat for many creatures.
- Ecosystems in the rotting log.
- History of the rotting log.
- Who lives in this log?

7. Fungi

- Ready to Grow Fungi Kit
- Spore Printing
- Mold Garden
- Yeast

8. Rock Detective

- Collecting, Cleaning and Sorting
- Rocks are Mixtures of Minerals
- Mineral Mystery –scratch test
- Fossils tell stories of the past.
- Very interesting to observe and analyze.
- Provides opportunities for research, reading and writing.

9. The Limitless Sky

- Observing and recording clouds
- Daily Temperature Record
- Night-time Sky Journal
- Astronomy bag

10. Nature Drawing

- Still Life
- Sketching
- Classroom pet drawing
- Outdoor sketching

Open-ended questions for discussion:

- Why is this feature a good thing for living things?
- How do you think this characteristic came to be?
- What would you like to know about this object?
- How will you get the information?
- Why is it interesting?
- How is it different from other objects in the tray?
- What did you discover?
- Do you think other people may have discovered this?
- How does this discovery help you?

Things to Consider:

- Planning and building the Nature Detective Curriculum takes time.
- Generate a budget - both time and money.
- Collect, organize and store the materials.
- Rotate Materials according to children's interests.

Resources:

- Talk to your science teachers and observe their environments.
- Use the list of activities included in this handout as a starting point and make it your own. Share your ideas with your colleagues and with us.
- Use the Internet for a quick read and to spark new ideas.

We have found that Nature Detective activities allow children to observe, learn and appreciate beauty in things around them. Good luck with your group of detectives! We would love to hear from you.

Thank you!

Rupali Sharma and Nancy Sergi-Gott