

DISCOVERING NURDLES

Teacher Resources

- [Nurdle Patrol Website](#)
- [The Great Nurdle Hunt](#)
- Nurdle Fact Sheet

Audience | **Grades K-1**

Description

In this hands-on investigation, students will explore the properties of nurdles and other debris commonly found near shorelines, rivers, and streams. By rotating through a series of sorting and observation stations, students will learn how to identify nurdles, understand what they are used for, and recognize the environmental challenges they create.

Student Outcomes

- Students will be able to sort a variety of objects (including nurdles) by observable properties such as color, shape, size, texture, and sink/float.
- Students will be able to identify a nurdle and explain its purpose in plastic manufacturing.
- Students will recognize the environmental problems caused by nurdles and propose simple solutions to address them

Materials

- Nurdles
- 4–6 trays or shallow pans with sand
- Sand, pebbles, sticks, and other natural items
- Clear container with water (for sink/float test)
- Magnifying lenses and tweezers
- Gloves (optional)
- Student handouts & pencils
- Chart paper titled “Plastic” & sticky notes

Teacher Preparation

Set up 4–5 investigation stations.

- Station 1: Sort by color
- Station 2: Sort by texture
- Station 3: Sort by shape
- Station 4: Sort by size
- Station 5: Sink or float test (water, nurdles, pebbles, and sticks)

Alternative Setup:

If students cannot rotate between stations provide each group with the same set of materials.

Introduction (Engage)

1. Begin with a brainstorm: Ask students, "What things can you think of that are made of plastic?"
 - Students write or draw 1–3 examples and place them on the class "Plastic" chart.
 - Review responses as a group and connect them to everyday life.
2. Read aloud *A Planet Full of Plastic* or play the short video [Hurdles with Nurdles, 0:28–1:00].
 - Introduce nurdles: what they are, what they are used for, and why they are a problem in the environment.

Procedure (Explore)

1. Explain the investigation and review safety expectations.
2. Guide students through the stations:
 - At each station, students use tools to uncover and sort objects based on the property for that station.
 - Students record observations on their handout by drawing what they see and noting any details.
 - Allow 6–8 minutes per station before rotating.
3. After all rotations, bring the class together to share findings and compare observations.
4. As a group, discuss how nurdles are similar to or different from natural materials. Students should now be able to recognize and identify a nurdle.

Discussion & Reflection (Explain/Extend)

- Use guiding questions to prompt deeper thinking:
- What do nurdles remind you of?
- Why is it helpful to sort objects by their properties?
- Do all nurdles look the same? Why or why not?
- Which properties make nurdles harder to tell apart from natural materials?
- Do all nurdles float? What did you notice?
- Why might animals mistake nurdles for food?
- What problems do nurdles create in the environment, and what could we do to help solve this problem?

Name: _____

Discovering Nurdles Student Worksheet



Station 1 - Color



Station 2 - Texture



Station 3 - Shape



Station 4 - Size



Station 5 - Sink or Float

Draw a double T-chart to record results.