Name _____ Date _____

Nurdle Survey

Scientific Worksheet

Question

How many nurdles are present in our local environment, and what does this reveal about plastic pollution in our waterways and along our shores?

Materials

- Stopwatch/timer
- Recording sheet or device with internet
- Pencil
- Glass jars
- Tweezers (optional)
- Gloves (optional)

Hypothesis

If nurdles are present at my site, then I will find them _____
because_____.

Background Information

Nurdles are small plastic pellets used to make nearly all plastic products. Many spill during production and transport, washing into rivers and onto beaches. They absorb toxins and harm wildlife when mistaken for food.

Videos/Resources to Review:

- Nurdle Patrol Training Video (Beach)
- Nurdle Patrol Training Video (River/Creek)
- The Great Nurdle Hunt – Problem with Nurdles (PDF)
- Nurdle Fact Sheet

Procedures

Beach Survey

1. Start at the waterline and walk to the first high tide (wrack line).
2. Search for 10 minutes.
   - Found a nurdle? Restart timer and continue.
   - No nurdles? Record "0" and move to the next wrack line (unless at vegetation line).
3. Submit data at NurdlePatrol.org.

River/Creek Survey

1. Start at the strand line (where water reached in past 24 hrs).
2. When you find your first nurdle, begin a 10-minute timer.
3. Count nurdles at the end of the timer.
4. Submit data at NurdlePatrol.org.

Data Collection

- Number of nurdles found: _____
- Time spent searching: _____ minutes
- Site description: _____
- Photos attached: Yes / No

Analysis

- Were nurdles present at your site? _____
- What patterns did you notice (location, amount, conditions)?

Conclusion

What did your survey reveal about nurdle pollution in your area?
How does this connect to the larger problem of plastic pollution in oceans and rivers?
What solutions could help reduce nurdle pollution?

NGSS and TEKS Standards

NGSS Standards (Next Generation Science Standards)

- ESS3.C: Human Impacts on Earth Systems — how human activities (including pollution) affect land, water, ecosystems. Next Generation Science Standards
- In LS2.C / Ecosystem Dynamics, pollution is one of the anthropogenic changes that can disrupt ecosystems. Next Generation Science Standards
- Engineering design connections in NGSS: designing methods, models, solutions are integral to many of these performance expectations (especially in middle / high school)

TEKS Standards (Texas Essential Knowledge and Skills)

- Scientific Investigation & Reasoning / Engineering Practices — TEKS expects students to ask questions, collect and analyze data, use models, communicate results, plan and carry out investigations. Texas Education Agency
- Interdependence within Ecosystems / Human Impact on Systems — many TEKS standards address how organisms (including humans) affect and are affected by the environment (e.g. pollution, resource use).
- Conservation and Natural Resources — TEKS often includes content about limiting human impact, conserving resources, recycling, and ecosystem protection.

NURDLE PATROL.org

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