



GOING ON A NURDLE HUNT

This lesson plan developed by:



Overview:

Every year, an estimated 10 trillion plastic pellets end up in our oceans. These pellets, also known as nurdles, are the building blocks of many common plastic items, like beverage bottles and food containers. But these pea-sized pieces of plastic are frequently spilled, leaked, or dumped into our waterways. Conducting a nurdle hunt and documenting where the pervasive problem exists will help raise awareness about the issue and build support for real change.

Materials:

- Container to hold plastic pellets
- Gloves
- Timer
- Proper clothing and shoes for location and weather
- Access to the Nurdle Patrol app

Duration:

30 minutes to 1 hour

Physical Activity:

High

Background:

Tiny plastic pellets, or nurdles, are the building blocks of most plastic products. These microplastics are shipped around the world to be melted and molded into plastic goods. Plastic pellets easily spill, leak, or wash away during production, shipping, and storage, ending up in our rivers, lakes, and coastal waters. These small pieces of plastic are extremely difficult to clean up once spilled and add to the massive amounts of plastic pollution inundating our waterways.

Going on a Nurdle Hunt (cont.)

No matter where you live, there's a good chance that these pellets pollute waterways nearby. Plastic pellet pollution is often most concentrated near sites where pellets are manufactured, used, or transported. Going on a nurdle hunt is not only an adventurous way to contribute to citizen science efforts to track plastic pellet pollution, but also an opportunity to talk about the broader issues surrounding plastic.



For this activity, we recommend using [Nurdle Patrol](#), which is a citizen science project dedicated towards tracking the global extent of the plastic pellet pollution problem. To help scientists identify and map nurdle pollution hotspots, you can host a nurdle hunt and report your findings in the Nurdle Patrol's online database. The reported information can be used by scientists, legislators, and environmental groups to advocate for solutions and prevent future spills.

Activity:

Part 1: Introduction to Plastic Pellet Pollution

1. Ask the whole group the following questions:
 - What is plastic made from?
 - What are nurdles?
 - What happens to plastic items after they are put in the recycling bin?
 - Does plastic biodegrade?
2. Discuss what some of the impacts of plastic pellet pollution and why it would be helpful to identify where nurdles are found in the environment.

Part 2: Conduct a Nurdle Hunt

1. Pick a location.
Nurdles can be spotted anywhere, but are found in highest concentrations near facilities that produce, transport, transfer, or use them. You can find plastic pellets along riverbanks, lake shores, and beaches. If the waterbody is tidal, the best time to look is during low tide. You can search for nurdles in the wrack lines, which are areas of natural debris left by the previous high tides.
2. Wear proper attire.
Ensure that participants are wearing proper clothing and shoes to conduct a nurdle hunt based on location and weather.

Going on a Nurdle Hunt (cont.)

3. Know what to look for.

Plastic pellets are round, typically 2-5mm (about the size of a lentil), and come in all different colors. All plastic pellets are microplastic, but not all microplastics are plastic pellets. Please don't include other types of microplastic in your count, but if possible, clean up other plastic items you find in the environment.



For proper data collection, you will need to time the pellet count. Start the timer after someone has found the first plastic pellet. The amount of time you search for pellets should be divisible by 10 minutes.

4. Record and upload data.

It's really important to record your findings and report them after you've completed your hunt. To report your data, you will need to first download the Nurdle Patrol app on a mobile device. Be sure to allow "Nurdle Patrol" to use your location while using the app. This prompt should appear, when you open the app for the first time. Also, be sure to complete your profile in the app or you will not be able to report your data. If there are too many pellets to count, visually estimate. If you find none, that is still important information to share! You can also upload your data through the [Nurdle Patrol website](https://www.nurdlepatrol.org).

Data to record:

- How many people were looking?
- How many plastic pellets were found?
- How long did it take to find that amount?
- What was the date of your nurdle hunt?
- Where were you? (If you open the Nurdle Patrol app at the location, the latitude and longitude will automatically populate, as long as you have allowed the app to use your location while using the app).

5. Properly dispose nurdles.

Unfortunately, like many types of plastic, nurdles are not recyclable. To dispose of them, place them in a sealed bag or container before putting them into the garbage to ensure they do not get lost into the environment again. If possible, use a container that was already being disposed.

Discussion:

You have now participated in a citizen science project that will help identify where this pollution is happening and make a case for action.

- What are some human activities that contribute to warming ocean water?

Going on a Nurdle Hunt (cont.)

- Why do you think it's important for people to learn about plastic pellet pollution?
- Do you think it would be easy to clean up nurdle spills?
- What can you do about plastic pollution in your area?

You can also [view a map of previous nurdle reports](#) to see if others have collected plastic pellets in your area or you can see where nurdles have been collected around the globe.

Ocean Literacy Principles:

Ocean literacy is an understanding of the ocean's influence on us, and our impact on the ocean. There are seven [Ocean Literacy Essential Principles](#) that all people of our blue planet should have an opportunity to learn and understand. This activity touches upon the following Essential Principles:

1. The Earth has one big ocean with many features
6. The ocean and humans are inextricably interconnected

Further Your Impact with Sailors for the Sea Powered by Oceana:

As sailors and water-lovers, you are among the first to notice changes to our seas such as fewer marine animals, more pollution and damaged marine habitat. Through our Green Boating initiative, Sailors for the Sea Powered by Oceana provides opportunities for you and your community to address pressing ocean health issues. As a Green Boater, you will be provided with the information, resources and access to combat marine plastic pollution, prevent habitat destruction, source responsible seafood and protect marine animals. From demanding plastic-free alternatives to choosing sustainable seafood, your voice and actions are an important part of restoring the abundance of our oceans and protecting marine habitats. [Join our growing Green Boating Community today.](#)