

ACTIVITY: DIGGING FOR DEBRIS

Objective: To learn about the diversity of trash items found in the marine environment, and why they are difficult to remove.

Materials:

- Several shallow trays or shoe boxes (pie tins work well)
- Sand to cover the bottoms of each tray or box
- A variety of small trash items, such as bottle caps,
- Pieces of larger trash items such as straws, food wrappers, plastic bags, etc. (items should be clean)
- A handful of small plastic pieces. Small beads and/or beanbag fill work well for this (both colorful and clear pieces)
- Clock or stopwatch to keep time
- Paper and pencils for participants to take notes
- (Optional) A variety of items naturally found on beaches such as shells, dried seaweed, twigs, etc.

Instructions:

1. Add the trash, plastic pieces and natural items to the sand in the tray/box and gently shake it back and forth to mix everything evenly. Some items should become covered with sand so that not everything is on the surface of the sand.
2. Split the participants into small groups and provide each group with a tray/box.
3. Give participants between 30 seconds and 1 minute to retrieve as many trash items as possible from the tray/box.
4. When time is up, have participants record the trash they have collected.
5. **Ask:** *Did you recover all of the trash from your tray? If not, what was left behind? What was the hardest thing to collect?* More than likely, there will be small pieces left behind or hidden in the sand.
6. **Explain:** *When trash enters the marine environment it often breaks into smaller and smaller pieces. This is especially true for plastics. Sometimes resin pellets, the raw material that manufacturers use to create plastic products, can also escape into the environment. These pellets, also called “nurdles,” are difficult to collect because they are tiny and often colorless.*
7. Ask everyone to observe their trays again: their sand may appear clean, but there are most likely still pieces of plastic. **Explain:** *While a beach may appear clean, there can still be trash hidden beneath the surface and in the sand. These small pieces can be just as harmful as larger pieces to the ecosystem and wildlife.*
8. **Ask:** *How might tiny plastics, or microplastics, affect the environment and wildlife? Why would it be difficult to recover spilled resin pellets in the environment? Do you think it would be easier to recover these pellets or prevent them from escaping into the environment in the first place?*