Plastic: Sand Dig and Game to Teach Kids About Plastic

Teach kids about the negative impacts that plastic pollution has in our coastal and ocean ecosystems by using this fun, hands-on sand dig with all the real things found on our Oregon beaches, & help them understand basic solutions to lessen their single-use plastic consumption through a scavenger hunt!

By: Nastassja Pace, Surfrider Foundation Portland Chapter Chair, 2010-2012

Items you need:

- **Plastic kiddie pool** – to fill with sand/debris
- **2 poster board** – 1 with images/writing & 1 with plastic bottle, bag & lunch package glued to it
- **Tupperware** – filled with sand, natural debris & all types of plastic pollution
  Note: all items were collected from Oregon beaches
- **Items below are stored in Tupperware on top of sand mixture:**
  - **6’x8’ tarp** – to put under kiddie pool before filling with sand/debris
  - **Beach towel** – to fold up and kneel on when engaging kids in the “Sand Dig”
  - **Metal shovels & screen** – allow kids to use to dig/sift through “Sand Dig”
  - **Metal screen** – allow kids to use to sift out & find materials in “Sand Dig”
  - **Dust pan/hand broom** – use to transport sand/debris to & from Tupperware/pool like a shovel & to clean up scattered sand at end of session
  - **Metal water bottle** – for scavenger hunt game
  - **Metal lunch box** – for scavenger hunt game
  - **Cloth tote bag** – for scavenger hunt game
  Note: All scavenger hunt items are marked with a Surfrider Foundation sticker

Note: Yes, I realize many of these items are plastic, which is hypocritical and confusing, however, all of these items are not single use, and I found them all used and for free on Craigslist.org in my neighborhood. This is something you may consider addressing when engaging your audience.
Sand Dig:

Ocean covers 71% of the Earth's surface.
 Everywhere the ocean meets land there is a shoreline or beach.
 Sand is made up of tiny bits of everything that is found on the beach.

Objects found on the beach can be grouped into evidence of:
 1. Plant life
 2. Animal life
 3. Humans
 4. Non-living material

Dig in the sand and discover what Oregon beaches have evidence of. Place your found evidence in one of the four categories.

Set up:

1. Place the poster board pictured above right by the “Sand Dig” on a chair or easel. Use this to start the conversation to your audience.
2. Place the tarp open on the ground; put kiddie pool on top.
3. Fill kiddie pool with sand, natural & plastic debris from Tupperware.
4. Place the metal strainer & shovel in the sand.
5. Fold the towel up & place next to kiddie pool to kneel on when helping kids dig & learn.

Teach about Plastics: This is how I go about it, please feel free to make it your own.

1. Ask kids if they ever go to the beach, where, what is the name of it?
2. Tell them I found all of this stuff (sand, debris, trash) at Pacific City beach & Cannon Beach—on our very own Oregon coast in just 1 hour.
3. Ask them to look at the poster (above) and go over the O.E.S.O.
4. When get to “S” stop the kids (as they are playing in the sand) and ask what is that they are finding most of? Most often they’ll say garbage or trash.
6. Explain how plastic, just like all the other things that make up the sand, such as shells, rocks breaking down over time from wind, sun, etc, breaks down and turns into smaller and smaller bits—eventually becoming kind of like sand.
7. Find little small bits of plastic that have broken down and show them this.
8. Ask them why this is bad? If they don’t come up w/ answers below, explain them.
9. Explain how this is bad: 1. We could not clean it all up because it’s too small.
   2. That the plastic is becoming, essentially, a part of the ecosystem—it’s becoming a part of the sand—of the beach.
   3. Animals, birds, fish may eat it or get entangled in it.
10. Depending on the time, size and age of the group, ask them to go through the “Sand Dig” and pull out some items—go over the 4 categories of evidence (1. Plant life, 2. Animal life, 3. Humans, 4. Non-living material).
11. Have them decipher which category their items collected fall under.
Scavenger Hunt:

Play the Scavenger Hunt Game:

- Ask the kids to go find the 3 re-usable, more durable & environmentally friendly alternatives to these 3 plastic options around the room.
- Let them know that each item will be marked with a Surfrider Foundation sticker (seen in the lower right hand corner of the image above).
- Ask them to LEAVE the items where they are, but to come back and tell you what they were/where they are.
- When they return and give the answers, engage the conversation why re-usable, durable items are more environmentally friendly. Ask them questions about why they think the re-usable might be a better option. Ask them which items they use at home, etc.
- Provide a prize if you choose (you supply prizes – and try for them not to be plastic. If so, like a sticker, remind them to stick it somewhere worthwhile & to make sure they dispose of backing properly.
- Note: I recommend playing the scavenger hunt after you do the “Sand Dig”. Showing the problem and then providing solutions allows the kids to leave feeling positive and like they can make good changes easily at home.

Set up:

1. Place poster board with 3 plastic items by the “Sand Dig” on chair or easel.

2. Hide the 3 re-usable, more durable & environmentally friendly alternatives to these 3 plastic options around the room (make the hiding spots harder or easier depending on the time, size & age of group.)

Set up:

1. Place poster board with 3 plastic items by the “Sand Dig” on chair or easel.

2. Hide the 3 re-usable, more durable & environmentally friendly alternatives to these 3 plastic options around the room (make the hiding spots harder or easier depending on the time, size & age of group.)