

## **Below the Surface**

### **Marine Debris Jenga**

There are over one million species of animals that live below the surface of our oceans. Not only can animals be found in this habitat, but plastics are also a part of it. Explore marine animals, the impact plastics have on this environment and what you can do to help.

#### **Materials Needed**

- 1) Jenga sets with colored blocks (water – blue; plants – green; herbivores – yellow; carnivores – red)

#### **Activity Procedure**

- 1) Have each group build a tower with their Jenga blocks as if they were playing a regular game. The colors do not matter. If they want to sort them, they can. It's up to each group.
- 2) Let the group know that their tower will be representing the Gulf of Mexico.
- 3) Begin the scenario:
  - a. It has been raining for several days in Houston. The rain has washed all the debris from the street into Buffalo Bayou that is being sent to the Gulf. Because there is polluted water entering the Gulf, remove 6 blue blocks from the tower.
  - b. Since most of the debris is sitting at the top of the water, it is not allowing as much sunlight through. This is affecting photosynthesis that the plants in the ocean need to grow. Because this is affecting the amount/size of plants in the Gulf, remove 5 green blocks from the tower.
  - c. Less plants = less food for herbivores. Remove 4 yellow blocks from the tower.
  - d. Less herbivores = less food for carnivores. But some carnivores have been turning to the debris as food sources because it is near their feeding area. Less food and debris is affecting these animals, remove 7 red blocks from the tower.
- 4) Once the scenario is complete, have the groups raise their hand if their tower is still standing. Discuss how sturdy their towers are now versus at the beginning of the scenario.
- 5) Discuss how all the living and nonliving factors play a role with each other in an ecosystem. Discuss what would have happened to the habitat if plastic was not a component.

#### **More Information**

This activity is modelled off our Ecosystem Jenga activity. Here is an example of another way to use these Jenga blocks.



Allow participants to choose an ecosystem for the group. Rainforest and desert work well.

- i. A slight drought has come through your environment.
  1. Remove 5 blue pieces
- ii. With less water, fewer plants will survive.
  1. Remove 4 green pieces
- iii. Herbivores will have less food to choose from with fewer plants.
  1. Remove 3 yellow pieces
- iv. Carnivores will have less food to choose from with fewer herbivores.
  1. Remove 2 red pieces
- v. Did your ecosystem survive?