

Activity Cards:

In this set of cards you will find species cards (lobsters, herring, cod, copepods, and humans), item cards (offshore wind turbines and lobster traps), and a question card. There are many different ways you can use these cards, but here are some of the ways we have come up with.

1) Tell a Story:

- a. Divide the cards up evenly among the students. The teacher will be responsible for the question card.
- b. Ask the students with similar cards to get together (ex. The 3 students/groups with the American lobster card should get together).
- c. Have the students in their group discuss what their cards say and help each other understand what the information is telling them.
- d. Now have the students come back together in a large group. The teacher starts the story off by reading the question card to the whole group. (The teacher should be holding a ball of string)
- e. Ask the group "Who's card might be affected if the temperature in the Gulf of Maine increases?" or a similar question.
- f. When one student/group explains how they would be affected the teacher holds on to end of string and passes the ball of string the person/group that is affected. Continue having students one by one connect with the person holding the ball of string (the ball of string should be passed around and every time you get the ball of string hold onto a part of it). For example the copepod might connect to the question card because they get smaller when the water gets warmer, then herring might connect with copepods because they eat copepods, then lobsters might connect because they eat herring in lobster traps and so on.
- g. If there are any students who don't know how they connect have them read the card out loud and see if as a group you can figure out how they connect or if they do. Depending on the question all cards might not fit in the story.
- h. Once the story is done the teacher is going to tug on their string. Then ask the students who felt the tug to tug on their strings. Any student who felt that tug should tug on their strings and so on.
 - i. Is there anyone who didn't feel it?
 - ii. Do it again but starting with a species instead of the question
- i. Ask the students if they were to start over again could they tell a different story? Would it look different?
 - i. **Modifier:** Instead of using a ball of string you could have the students stand next to the person they would like to connect to.

2) Have a Debate:

- a. For the American lobster and the offshore wind turbine cards there are 2 cards that each have information on one side of a story. (For example one lobster card says that as temperature increases lobster molt faster and therefore grow faster and the other card says that as temperature increases more lobsters may get shell disease).
- b. Split the students into 2 groups and give each group one of the cards. Give them time to discuss what the card says, what it might mean, and who is going to be impacted.
- c. Then ask them if temperatures increase what do you think will happen to the lobster population? (If using Turbine cards ask students "Should offshore wind turbines be used in the Gulf of Maine?")
- d. Bring the 2 groups back together and have each group report out about what they discussed.
- e. Are your predictions the same?
- f. Have the students discuss/ debate as a group and see if they can come to a consensus.
- g. Give students time to reflect on what they learned from the activity. Did your opinion change? Why or why not?

3) Research Project

- a. Let each student choose a species that lives in the Gulf of Maine and have them create a card(s) for that species.
- b. Add those species to your story and see how the story changes or build a new story only using those species
 - i. **Modifier/ Challenge:** Have students make cards around species or items found in your community. Use those cards to build a new story or add them into your existing story.

4) How Many Can You Make?

- a. Either as a whole class or in smaller groups see how many different stories you can make with the cards.
- b. Build a story showing connections (use post-its, string, draw lines, etc) and take a photo
- c. Challenge students to make as many different stories as they can using the same set of cards and question. How many can you make?

5) New Question

- a. Have students come up with their own question and try to answer their question with the cards
- b. If they are missing parts of the story have them create cards to complete the story.

Find new cards on at <http://mystery.gmri.org/teachers/activities.aspx>.

Did you use them a different way? Please let us know! Send an email to: labventure@gmri.org