

This lesson plan was produced by the Gulf Islands Centre for Ecological Learning in 2016 as part of the Nature Discover Project.

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Activity Name: Missing Passenger Hunt

Ages: 6-12 (also works for older students as well)

Activity Level: Moderate

Length of time: 10 to 20 min

Number of Participants: 10

Materials Required: A .6x.6 m sheet of poster paper, a package of 12.7 cm x 18 cm (5"x7") index cards for clues, length of bright coloured surveyor's tape.

On one side of the poster write in large letters:

PERSON MISSING! HELP NEEDED!

As sub text below these headings write:

The family of a missing passenger on Spaceship Earth is seeking anyone who can give information leading to the return of their beloved son ...

(see other side for details)

On the other side write:

Should you accept this case you must continue up this trail. Along the way, informants have left you written clues that will assist you in your search. These informants are things that our missing passenger INTERACTED with while living in this forest community.

On the back of each written clue card the identity of the informant is revealed.

Concept card

Use one of the index cards and write the basic concept:

Interrelationships – all living things are constantly interacting with one another and with their surroundings in different ways ...

On the back write:

All plants and animals living on the Earth are related. Some are involved with others around them because they compete for the same needs. Others work together or cooperate to meet their needs even if they don't know it. All of them depend on one another to maintain the conditions suited for life on earth.

Clue cards (in order of placement)

1. Back: THIS PLANT

Front: He always gave me carbon dioxide.

2. Back: THE SOIL

Front: When your subject dies (if he hasn't done so already) he will add to my overall formation.

3. Back: THE BRANCHES

Front: He uses me to make his nest.

4. Back: PILEATED WOODPECKER Front: I provide shelter for his nest.

5. Back: OWL

Front: I'd love to interact with him but he's asleep when I am awake.

6. Back: TREE LIMBS

Front: He uses us as stairways.

7. Back: THE GROUND

Front: He used to dig a lot of holes around here.

8. Back: THE SAPLING

Front: He planted me some time ago.

9. Back: THIS TREE

Front: He often eats at my restaurant.

10. Back: RED-TAILED HAWK

Front: He was one of my favourite meals.

Introduction: This activity is a concept trail designed to demonstrate with examples how a particular ecological process operates in this case interrelationships or interactions. The activity is from the Sunship Earth program.

The activity needs to be in a natural, preferably a forested or treed area with some undergrowth. It can also be part of an outside exploration in concert with the Micro Parks or Trails activity.

The leader guides the group through this activity frequently referring to the concept card to remind the participants during discussions of the different clues.

Before starting the teacher can "deputize" all the participants as nature detectives who will be trying to solve the mystery of the missing passenger. As part of the process of becoming detectives they must all swear to work together and jointly solve each clue before moving to the next. This is very important as there is a tendency of some to run to the next clue before finding out what the previous answer was. At each stage or clue have them go over each they have and get them to suggest who they think the missing passenger is.

Methods: Beforehand have someone or the teacher put up the poster along an existing trail or path that will be used by the group. Then move along the trail and at intervals put out or hang the clue cards as close to features or objects that might help describe the informant. For instance, the first clue could be hanging from a plant, the next on the ground, etc. (we recommend that you punch a hole in the clue cards and loop the coloured surveyor's tape through. This helps for hanging and visibility along the trail). If possible make the trail a loop so you end up where you started.

As you are walking along with your group and looking at the plants and animal signs as you go, you will come upon the poster. Have someone or a group read what it says on both sides and try to create some excitement around trying to solve this mystery. Slowly move along the trail and stop at each clue card in turn. Have different detectives read the clue. The group can discuss and decide who they think the informant is before turning over the card. Continue to the next clue and do the same process. The clues go from broad interactions to more specific to the missing passenger. Leaders remember to revisit the concept card and the instructions from the poster particularly those relating to the specific interactions of the missing passenger to the informants, along the way. When you come to the last clue card many should be now know who the passenger is, but some may not. Once the last informant is revealed it is a good time to have a small sharing session on the concept and how many interactions one small squirrel can have in such a short trail in the forest.

Concepts:

Interrelationships – all living things are constantly interacting with one another and with their surroundings in different ways ...

Communities are inter-connected and inter-related groups; they are dynamic associations of living things. Within each community, its members grow and die, rest and reproduce, absorb and release.

All plants and animals living on the Earth are related. Some are involved with others around them because they compete for the same needs. Others work together or cooperate to meet their needs even if they don't know it. All of them depend on one another to maintain the conditions suited for life on earth.

All plants and animals are connected by the flow of energy and the cycling of nutrients and as such not only are the members interconnected within each community, but each community is also connected to all the others on Earth.

Tips for Teachers:

- This activity has many concepts presented that may not all be known or understood by your group. That is OK. You are looking for the broader connections of that the whole activity demonstrates so where needed you can add a bit of information to assist. The first clue is a good example. To understand this clue and the informant the participants would need to know that plants take carbon dioxide out of the air and with sunlight converts it to food and oxygen. Knowing this gives you the first clue that the passenger is an animal (mammal).
- The clue cards provided in this activity are ones that we have used, but there are many other interactions that could be identified using different organisms and even realms such as oceans or freshwater. It would be good to design a set for each large ecosystem that you might find in your area.
- The desire of the participants to find the clue cards rather than understand the clues can be high and there will always be a few who see this as a challenge and/or a race. The trick is to get each person involved in either reading the clue, putting forward ideas on who they think the informant is and their guesses on who the missing passenger might be.

Literature Cited:

Adapted from Sunship Earth, Steve Van Matre, 1979. Institute for Earth Education.