45 Minutes

The Preventable Journey

3rd - 5th

PDF Guide

Students will engage in a hands-on activity to discover how litter can travel across locations and understand the effects it can have on different environments.

Program Details

Targeted SOLs

- English 3.10, 4.7
- Science 3.1, 3.8, 4.1, 4.6
- Health 3.1.b, 3.1.c

Supplies Needed

- Pictures of 9 locations
- Tape to hang pictures
- 9 dice
- Pencils and copies of the tracking sheet for each student (included below)

Set-Up

Designate 9 location stations around the room. Locations should be spaced out enough that students can move comfortably. Ensure each station has a location sign displayed and has its corresponding dice.

Program Outline

1. Pre-Activity Discussion

- What is litter?
- Where does litter come from?
  - Litter comes from trash that is disposed of improperly.
    - Not tying trash bags shut all the way
    - Lids of trash cans flying open and trash escaping
    - Overflowing trash receptacles
    - People leaving their trash where it does not belong

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- What places do you see litter?
  - Prompt students with the station locations if necessary.
- What types of litter do you see when you are outside?
  - Ideally a student will mention plastic bags. Other responses include cigarette butts, food wrappers, water bottles, Styrofoam to-go boxes, etc.
- Let's play a game to understand how items like these end up at some of the places you mentioned.

2. The Preventable Journey

Today, we are all going to be plastic bags! Let's see where we end up.

1. Introduce students to the different possible locations around the room.
2. Provide each student with a location tracking paper. Students can pick, or be assigned, a starting location to stand at. Students should write their starting location in the blank for #1.
3. Each student should roll the dice at their station to see which location they travel to next as a plastic bag. Write the name of this location in #2 and move to that location's station.
   - Each student should repeat the process of rolling the dice, writing down their next location, and moving to that location until their sheet is full (#1-#10 have a location).

NOTE: There are 9 locations and students will roll 10 times. They might go to some locations more than once or get stuck at a location. It's all a part of the game. Plastic bags don't just go one place and stay there!

3. Graphing Exercise

Once all students have completed their dice roles, the group should come back together to analyze their data.

1. List the nine different locations where everyone can see, asking students to help.
2. For each location, write down the total number of visits, including if students visited more than once.
3. Once the data has been collected, ask the students to graph how many visits the students had to each location on the back of their paper.
   a. The X axis will have each location name and the Y axis will be numbered 0 through the number of students in the group. Give 5-7 minutes to complete this portion.
   b. The instructor should draw a bar graph as well, but wait to share it.
   c. Ask the students to hold up their graphs and compare them to the instructor's. Ask them if theirs matches. Why or why not? Help students understand any mistakes.

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4. Discussion

- Which location was visited the most? Which was visited the least? Why might this be?
  - Some possible responses include proximity of a location to humans who create litter, that litter is often moved by water so it goes where water goes, etc.
- How might litter move from location to location?
  - Wind, rain, animals, humans.
- How can we prevent litter from ending up at these locations?
  - Never litter!
  - Pick up any trash you see
  - Tie trash bags shut
  - Don’t add trash to an overflowing trash can

5. Thank the students

Thank students for listening and learning.

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Supplemental Activities for The Preventable Journey

Litter and Shared Spaces

1. Help students identify places they share with other people (parks/playgrounds, streets, sidewalks, parking lots, etc.)
2. Discuss how litter affects the spaces we share with others. We wouldn't be happy if someone came into our yard and threw their trash in it.
3. Spread trash and recycling out on ground. Discuss with students how they would feel if they were playing in that space with all the trash.
4. Challenge students to pickup and sort the trash. Team work!
5. Check the recycling to see what they got right and explain any mistakes.

Recycling Race

1. Set up one recycling bin and one trash bin far enough away that the students can run to them.
2. Have each student take a turn by grabbing one item and running it to the correct bin.
    - You can set a timer to encourage students to place as many items in the bins as possible.
    - You can allow each student to have a set amount of turns.
    - You can allow the students to play until all items have been placed in the bins.
3. Once the game is over, check each bin and explain any mistakes.
4. Play again if time allows so that students can learn from any mistakes.

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Name Grade:

Using the space below write your starting location and then the location names you move to after rolling the dice.

(Location Names: tree, roadside, front yard, storm drain, river, Chesapeake Bay, ocean, beach, turtle.)

Roll	Location Name
Start location	
Roll 1	
Roll 2	
Roll 3	
Roll 4	
Roll 5	
Roll 6	
Roll 7	
Roll 8	
Roll 9	

Which location did you visit the most?

Which location did you visit the least?

How many trash bags were present (how many students participated)?

What are ways you can help prevent plastic bag litter?

What types of litter do you see around your school? Your home?

Name Grade:

Using the space below write your starting location and then the location names you move to after rolling the dice.

(Location Names: tree, roadside, front yard, storm drain, river, Chesapeake Bay, ocean, beach, turtle.)

Roll	Location Name
Start location	
Roll 1	
Roll 2	
Roll 3	
Roll 4	
Roll 5	
Roll 6	
Roll 7	
Roll 8	
Roll 9	

Which location did you visit the most?

Which location did you visit the least?

How many trash bags were present (how many students participated)?

What are ways you can help prevent plastic bag litter?

What types of litter do you see around your school? Your home?

Beach

Chesapeake Bay

Front Yard

Ocean

Roadside

Storm Drain

Tree

Turtle

Roadside Cube

Tree

Tree

Storm Drain

Roadside

Roadside

Front Yard

Front Yard Cube

Storm Drain

Tree

Tree

Roadside

Storm Drain

Front Yard

Tree Cube

Roadside

Tree

Tree

Roadside

River

Front Yard

Storm Drain Cube

Storm Drain

River

River

Storm Drain

River

Storm Drain

River Cube

Beach

River

River

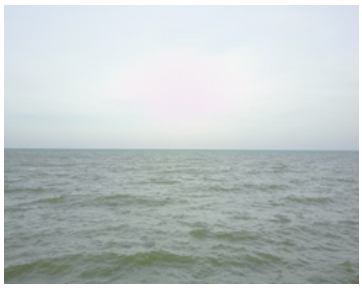
Chesapeake Bay

River

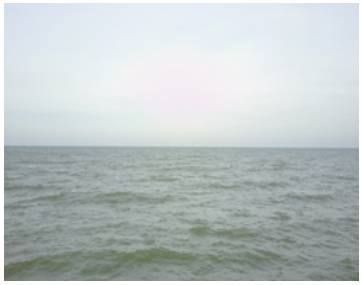
Chesapeake Bay

Chesapeake Bay Cube

Beach



Ocean



Ocean

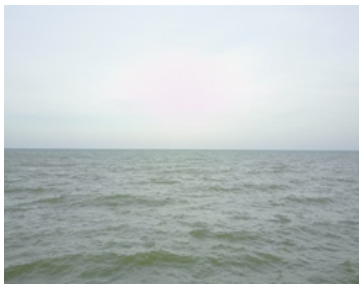
Chesapeake Bay

Beach

Chesapeake Bay

Ocean Cube

Turtle



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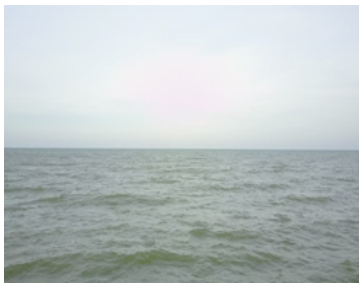
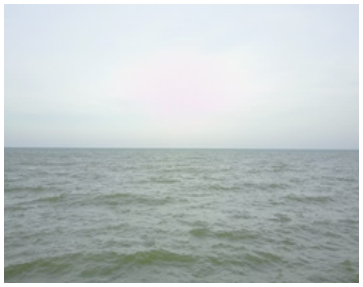


Ocean

Beach



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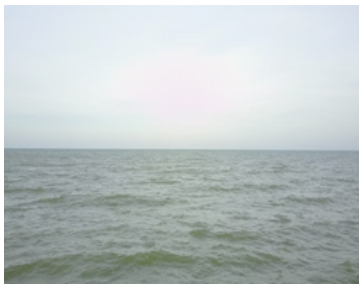
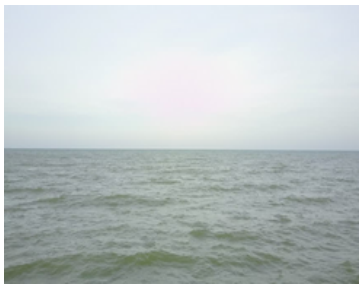


Ocean

Beach Cube

Beach



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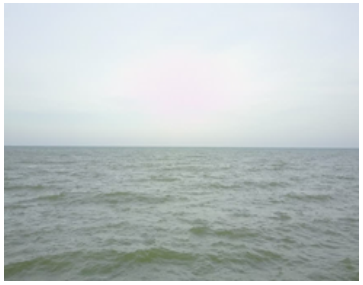
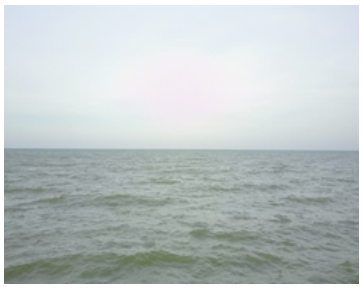


Ocean

Beach

Beach



Ocean

Turtle Cube

Turtle

Turtle

Turtle

Beach

Turtle

Turtle