

# WHERE CAN TRASH GO?

**Grades:**

3 – 4

**Time Allotments:**

Teacher Preparation: 15 minutes

Lesson and Activity: 45 minutes

**Vocabulary:**

Landfill

Recycling Centers

Resource Recovery Facility

Transfer Station

**Integrated Curricular Areas and Corresponding Core Curriculum Content Standards:**

Science: **5.1:** ((G4) A1, A4

**5.3:** (G4) B1

**5.10:** (G6) B1-2

Social Studies: **6.6:** (G4) A1-3, D1

Language Arts: **3.2** (G3) C5

Mathematics: **4.1:** (G4) A1&6

**4.2:** (G4) D2

**Content Objectives: Students will be able to –**

1. Describe options for where trash can go after it is collected from various locations;
2. Describe differences between these facilities and what is done at each; and
3. Identify where solid waste facilities are located in some of the counties in the state.

**Process Objectives: Students will –**

1. Use a map scale to measure distance on a map;
2. Use a directional arrow to determine direction on a map; and
3. Use a map key/legend to identify features and facilities on a map.

**Materials:****For teacher's presentation:**

- Copies of "Where Can Trash Go?" worksheet for each student
- Copies of "New Jersey Solid Waste Disposal Facilities" map for each student
- Rulers for each student or group of students
- Copies of New Jersey state maps that include county names – one per student or group of students
- Crayons
- Blank drawing paper

**For each student:**

- Copy of “Where Can Trash Go?” worksheet
- Copy of “New Jersey Solid Waste Disposal Facilities” map
- Pencil and crayons
- Drawing paper

**Anticipatory Set:**

- Review information about resource recovery facilities, recycling centers, regional transfer stations and county landfills (see introduction to Section IV and glossary)
- Ask students to raise their hands if at home they help out by bringing the trash and/or the recyclable materials to the curb for pick-up
- Ask them to describe where they think these materials go after they are picked up – list their ideas on the board
- Explain that this lesson will focus on the locations of real facilities in New Jersey that deal with some aspect of solid waste management – whether they are working with materials to be recycled, transported or disposed of

**Teacher’s Presentation or Modeling:**

- Through discussion the teacher will introduce students to the following terms: “Landfill,” “Recycling Center,” “Resource Recovery Facility” and “Transfer Station”

**Guided and Independent Practice:**

- Divide the students into small groups or have them work individually on this lesson
- Distribute copies of the “Where Can Trash Go?” worksheet and the “New Jersey Solid Waste Disposal Facilities” map to each student and make sure they each have a pencil. Also distribute copies of the New Jersey state map and one ruler to each student or group of students
- Have students use the New Jersey maps to label the counties correctly on their “New Jersey Solid Waste Disposal Facilities” maps. Next, have them identify the area where the school district and/or nearby communities are located
- Have them provide responses to the questions on the worksheet independently or in small groups. Teacher assistance may be needed if they are not familiar with a map scale or how to use one, or how to use a directional arrow

**Closure:**

- Have students share their answers to questions on the worksheet and then provide them with the correct response for each question
- Assign each student one of these facilities (landfill, recycling center or transfer station). Distribute blank paper and drawing materials. After reviewing the purpose of each facility and the type of activity that goes on there, have them draw a picture of their assigned facility by imagining what it would look like if they visited it. Post the completed pictures together in the classroom by facility. For example, tape up all of the landfill drawings together. Encourage students to look at each other’s drawings

**Assessment:**

- Responses to questions from teacher;
- Participation in student group (if groups were used);
- Illustration of their assigned waste facility; and
- Responses to questions on “Where Can Trash Go?” worksheet

**Extensions:**

- Invite a county or municipal solid waste employee to the classroom to provide students with information regarding how trash from residents in the county is handled
- Explore options for a local class field trip – many recycling centers and landfill operations offer opportunities for on-site tours

**Additional Resource:**

**Map of New Jersey with counties labeled** – U.S. Census Bureau  
[http://quickfacts.census.gov/qfd/maps/new\\_jersey\\_map.html](http://quickfacts.census.gov/qfd/maps/new_jersey_map.html)

## “Where Can Trash Go?” Worksheet

Name(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Directions:** Use a map of the State of New Jersey to label the counties on the “New Jersey Solid Waste Disposal Facilities” map. After this is completed answer the questions below.

1. Which counties do NOT have a county landfill? \_\_\_\_\_  
\_\_\_\_\_
2. Locate where you think your town is on the map. Does your county have a county landfill? Yes \_\_\_\_\_ No \_\_\_\_\_
3. Using the map scale, about how many miles is it from your town to your county landfill OR to the closest county landfill? \_\_\_\_\_
4. If you lived in Hunterdon County near the county’s regional transfer station which county landfill is closest to you? \_\_\_\_\_
5. Using the map scale, how many miles is it from the Bergen County landfill to the Sussex County landfill? \_\_\_\_\_
6. How many miles is it from the Cape May County landfill to the Middlesex County landfill? \_\_\_\_\_
7. Which counties have more than one regional transfer station? \_\_\_\_\_  
\_\_\_\_\_

(con’t)

8. Why do you think these counties have more than one transfer station? \_\_\_\_\_

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9. Which direction would you be traveling in if you went from the regional transfer station in Cape May to the one in Burlington County? \_\_\_\_\_

10. Which direction would you be traveling in if you went from the resource recovery facility in Warren County to the one in Camden County? \_\_\_\_\_

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11. Using the map scale, about how many miles would you travel to go from the Monmouth County landfill to the Ocean County landfill and then to the Burlington County landfill? \_\_\_\_\_

On this same trip, which direction(s) would you be traveling in? \_\_\_\_\_

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12. Which is the shorter distance (check one):

A. \_\_\_\_\_ The regional transfer station in Hunterdon County to the transfer station in Mercer County; or

B. \_\_\_\_\_ The regional transfer station in Mercer County to the transfer station in Burlington County

## “Where Can Trash Go?” Worksheet

### ANSWERS

**Directions:** Use a map of the State of New Jersey to label the counties on the “New Jersey Solid Waste Disposal Facilities” map. After this is completed answer the questions below.

1. Which counties do NOT have a county landfill? **Passaic, Morris, Essex, Union, Hudson, Hunterdon, Somerset and Mercer**
2. Locate where you think your town is on the map. Does your county have a county landfill? Yes \_\_\_\_\_ No \_\_\_\_\_ **Answer varies**
3. Using the map scale, about how many miles is it from your town to your county landfill OR to the closest county landfill? **Answer varies**
4. If you lived in Hunterdon County near the county’s regional transfer station which county landfill is closest to you? **Warren**
5. Using the map scale, how many miles is it from the Bergen County landfill to the Sussex County landfill? **36 or 37**
6. How many miles is it from the Cape May County landfill to the Middlesex County landfill? **127 or 128**
7. Which counties have more than one regional transfer station? **Morris, Bergen, Hudson, Essex, Union, Middlesex and Monmouth**

(con’t)

8. Why do you think these counties have more than one transfer station?  
So all the trucks don't have to go to one crowded place. So they can send different kinds of garbage (bricks, blocks, big logs) to different places.
9. Which direction would you be traveling in if you went from the regional transfer station in Cape May to the one in Burlington County? North/Northwest
10. Which direction would you be traveling in if you went from the resource recovery facility in Warren County to the one in Camden County? South
11. Using the map scale, about how many miles would you travel to go from the Monmouth County landfill to the Ocean County landfill and then to the Burlington County landfill? Around 45 miles

On this same trip, which direction(s) would you be traveling in? Southwest, then west.

12. Which is the shorter distance (check one):
- A. The regional transfer station in Hunterdon County to the transfer station in Mercer County; or
- B.  The regional transfer station in Mercer County to the transfer station in Burlington County

If you have to stay in New Jersey the drive is almost the same!