



# Contents

**TEACHER GUIDE**

- Assessment Rubric ..... 4
- How Is Our Resource Organized? ..... 5
- Bloom’s Taxonomy for Reading Comprehension ..... 6
- Vocabulary ..... 6

**STUDENT HANDOUTS  
READING COMPREHENSION**

- How Warm Will Earth Get? ..... 7
- Alternative Fuels.....
- Transportation .....
- Industry ..... 7
- Urban Planning .....
- Green Buildings.....
- Masdar City.....
- Lowering Your Greenhouse Gas Emissions .....
- Hands-on Activities, Writing Tasks ..... 11
- Crossword ..... 15
- Word Search..... 16
- Comprehension Quiz ..... 17

**EASY MARKING™ ANSWER KEY** ..... 19

**MINI POSTERS** ..... 21

**✓ 6 BONUS Activity Pages!** Additional worksheets for your students

**FREE!**

- Go to our website: [www.classroomcompletepress.com/bonus](http://www.classroomcompletepress.com/bonus)
- Enter item CC5771
- Enter pass code CC5771D for Activity Pages



# Industry



1. Think of things that are made by people. In the chart below, list 10 things you use every day. Raw materials are what is used to make things. Describe the materials used to make each item.

Items Manufactured by People	Raw Materials

2. Think about how things are made. The manufacturing process can result in greenhouse gas emissions. What parts of this process do you think results in these emissions?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Industry



**T**hink about all of the things you use every day. These things were most likely **manufactured**. This means they were made by people. Pens, desks, computers, refrigerators, music players, even this book you are reading. They all had to be made from **raw materials**. Materials like trees, metal ores and petroleum oil. This process results in a lot of greenhouse gas emissions. The process includes the mining of these materials. It also includes production of goods in factories. The packaging and shipping of goods to stores is the final step in this process.

**STOP** What are manufactured products?  
 \_\_\_\_\_  
 \_\_\_\_\_

### How can industries lower emissions?

Many industries are now working to lower greenhouse gas emissions. Recycling raw materials uses less energy than getting new supplies. Using less packaging also results in less energy use. Some industries are using natural light. Others are using alternative fuels to run vehicles and provide electricity for buildings. A Carbon Cap-and-Trade Plan puts limits on the amount of greenhouse gas emissions a company is allowed to emit. Some companies encourage their workers to use alternative forms of transportation to travel to and from work. This is done through commuter benefits programs.



Warehouse



# Industry



1. Number the events from 1 to 5 in the order they occur in the manufacturing process.

- a) Packaging the product.
- b) Mining raw materials.
- c) Shipping the product.
- d) Assembling the product in a factory.
- e) Transporting raw materials to a factory.



2. List steps that industries could take to help lower greenhouse gas emissions.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Circle the raw materials.

trees	plastic	petroleum oil
glass	metal ores	paper



# Industry



4. Answer each question with a complete sentence.

a) Explain why choosing products with less packaging can help lower greenhouse gas emissions.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

b) Explain why recycling can result in lower greenhouse gas emissions.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Research

5. Learn more about the life cycle of a product. Choose a manufactured product you use in your everyday life. Then, research the life cycle of your product. From getting the raw materials to disposing of the product after its useful life. Use the internet or library resources. Find out how your product goes through each stage of its life cycle.

- What are the raw materials? How do people get them?
- How are the raw materials made into the product? Where are the factories that make the product? What are the main processes involved?
- What kinds of packaging are usually used for the product? How is the packaging produced?
- How is the product shipped?
- How is the product disposed of after its use? Are any special steps needed to dispose of the product safely?

Create a poster or chart. It should show each step in the life cycle of your product. Make a note of which steps result in greenhouse gas emissions.





# Investigate Product Choices

How to lower greenhouse gas emissions while shopping? What choices could you and your family make?

First, make a list of 5 products you or your family members purchase regularly. Consider items like foods, clothes, school supplies, and cleaning products.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

If possible, go shopping with your family when they purchase these products. Bring a notebook. At the store, look at all of the choices for each product. Look at the packaging. Read the labels. Find out where each product is made. Find out whether it contains recycled materials. Write a description of each product.

Now, study your list of product descriptions. Figure out which product choices use fewer fossil fuels to manufacture or grow, to package, and to transport. Create a 4-column chart with columns labeled as below. In the product description column, write a brief, general description of the product category, such as "dish detergent." In the other columns, write the names or descriptions of the brands or choices that are good, better, and best for lowering greenhouse gas emissions. Display your chart in class. Talk about why you classified the products in the different categories.

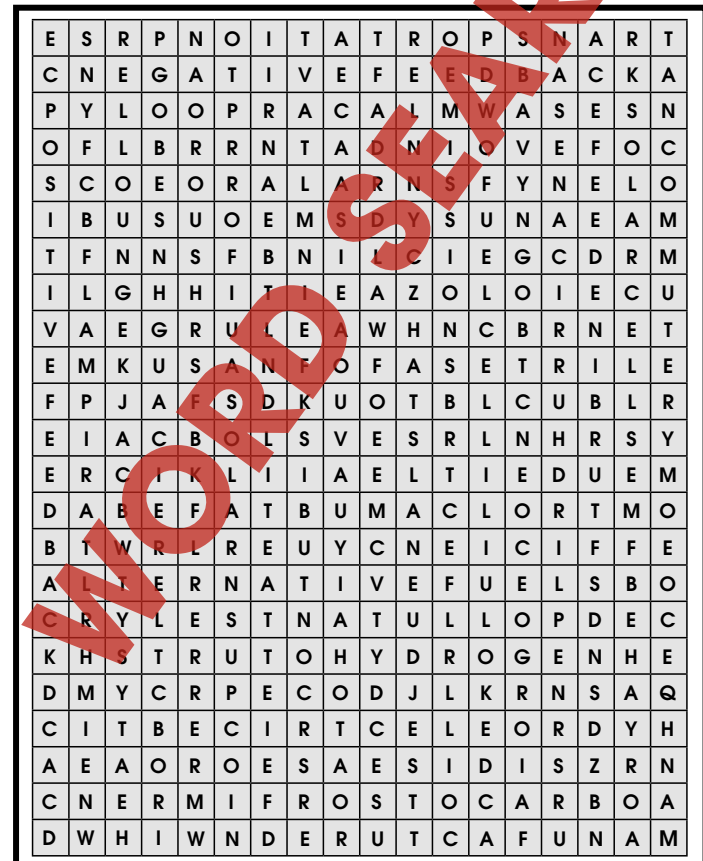
Product Description	Good	Better	Best



# Word Search

Find all of the words in the Word Search. Words are written horizontally, vertically, diagonally, and some are even written backwards.

- |                   |               |                   |                |
|-------------------|---------------|-------------------|----------------|
| alternative fuels | emissions     | manufactured      | solar          |
| biofuel           | fossil fuel   | Masdar            | solar cells    |
| carpool           | fuel cell     | negative feedback | transportation |
| commuter          | hybrid        | pollutants        | turbine        |
| dam               | hydroelectric | positive feedback | urban          |
| efficiency        | hydrogen      | renewable         | wind           |



# Comprehension Quiz

## Part C

Answer each question in complete sentences.

1. Explain how changes in **greenhouse gas emissions** will affect Earth's average temperature. 4

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Describe two alternative fuels that can be used to power vehicles. Be sure to explain the source of energy in each fuel. 4

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Describe two alternative sources of energy that can be used to produce electricity for homes and other buildings. 4

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Explain how urban planning can affect climate change. 5

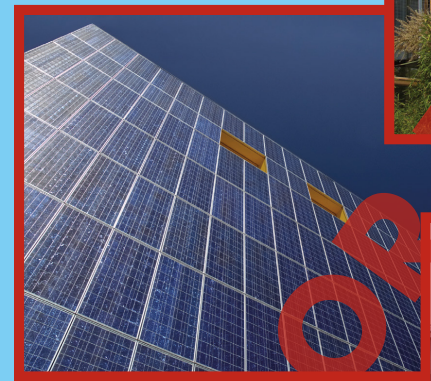
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SUBTOTAL: /17

# Alternative "Green" Homes and Businesses





# Industry



## 4. Answer each question with a complete sentence.

a) Explain why choosing products with less packaging can help lower greenhouse gas emissions.

---

---

---

b) Explain why recycling can result in lower greenhouse gas emissions.

---

---

---

### Research

5. Learn more about the life cycle of a product. Choose a manufactured product you use in your everyday life. Then, research the life cycle of your product. From getting the raw materials to disposing of the product after its useful life. Use the Internet or library resources. Find out how your product goes through each stage of its life cycle.

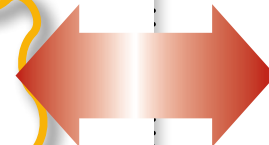
- What are the raw materials? How do people get them?
- How are the raw materials made into the product? Where are the factories that make the product? What are the main processes involved?
- What kinds of packaging are usually used for the product? How is the packaging produced?
- How is the product shipped?
- How is the product disposed of after its use? Are any special steps needed to dispose of the product safely?

Create a poster or chart. It should show each step in the life cycle of your product. Make a note of which steps result in greenhouse gas emissions.

4.

a) Packaging takes energy to produce.

b) Recycling takes less energy than using raw materials.



# EASY MARKING ANSWER KEY

10







# Industry



**T**hink about all of the things you use every day. These things were most likely **manufactured**. This means they were made by people. Pens, desks, computers, refrigerators, music players, even this book you are reading. They all had to be made from **raw materials**. Materials like trees, metal ores and petroleum oil. This process results in a lot of greenhouse gas emissions. The process includes the mining of these materials. It also includes production of goods in factories. The packaging and shipping of goods to stores is the final step in this process.



**What are manufactured products?**

---



---

## How can industries lower emissions?

Many industries are now working to lower greenhouse gas emissions. Recycling raw materials uses less energy than getting new supplies. Using less packaging also results in less energy use. Some industries are using natural light. Others are using alternative fuels to run vehicles and provide electricity for buildings. A Carbon Cap-and-Trade Plan puts limits on the amount of greenhouse gas emissions a company is allowed to emit. Some companies encourage their workers to use alternative forms of transportation to travel to and from work. This is done through commuter benefits programs.



Warehouse



# Investigate Product Choices

How to lower greenhouse gas emissions while shopping? What choices could you and your family make?

First, make a list of 5 products you or your family members purchase regularly. Consider items like foods, clothes, school supplies, and cleaning products.

---



---



---



---

If possible, go shopping with your family when they purchase these products. Bring a notebook. At the store, look at all of the choices for each product. Look at the packaging. Read the labels. Find out where each product is made. Find out whether it contains recycled materials. Write a description of each product.

Now, study your list of product descriptions. Figure out which product choices use fewer fossil fuels to manufacture or grow, to package, and to transport. Create a 4-column chart with columns labeled as below. In the product description column, write a brief, general description of the product category, such as "dish detergent." In the other columns, write the names or descriptions of the brands or choices that are good, better, and best for lowering greenhouse gas emissions. Display your chart in class. Talk about why you classified the products in the different categories.

Product Description	Good	Better	Best



# Alternative "Green" Homes and Businesses

