

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What is a Green Engineer?

Draw and label a picture of a green engineer at work.



Explain your drawing of a green engineer:

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What is a Green Engineer?

**B**

Draw a picture of a green engineer at work. Label your picture.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

A

## What is a Green Engineer?

Which of the following would a green engineer do for his or her job?  
Mark **ALL** that apply:

- design machines to make lots of water bottles
- figure out how to use less material to make a cereal box
- plant trees in a park
- figure out how to make water bottles easy to reuse
- decide how to make paper cups a more popular color
- clean up polluted water
- design machines that use less energy
- figure out how to make paper easier to recycle



Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Too much trash is a problem around the world. How could the trash problem be fixed in a way that is **MOST** friendly to the environment? Circle the **BEST** answer.

- A. recycle more trash
- B. send trash into space
- C. find ways to make less trash
- D. bury trash under lots of dirt to make parks

2. A company is making a new type of plastic fork.

List 3 resources that the company will need to make plastic forks in a factory.

(1) \_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

(3) \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

People like to drink juice, water, and soda from plastic and glass bottles. This can create a lot of waste.

Describe 3 ways that people can reduce this waste.

(1) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(3) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. If you put a wooden spoon and a metal spoon into a pot of hot water, the metal spoon will feel warmer to the touch. Why? Circle the BEST answer.

- A. Heat moves more easily through metal than through wood.
- B. Heat moves more easily through wood than through metal.
- C. The metal spoon was warmer than the wooden spoon before it went into the pot.
- D. Wood holds cold really well.

A boy poured hot soup into a cool bowl. Soon his bowl was too hot to carry.

2. Explain what happened to the bowl:

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3. Explain what happened to the soup:

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. A boy has an insulated lunch bag. He is using it to keep his sandwich cool. How does it work? Circle the BEST answer.

- A. It keeps cold inside.
- B. It makes things cool.
- C. It allows heat to pass through it very slowly.
- D. It does not allow any heat to pass through.

2. The next day, the boy wants to bring hot soup to school. Can he use the same lunch bag to keep his soup warm? Explain your answer.

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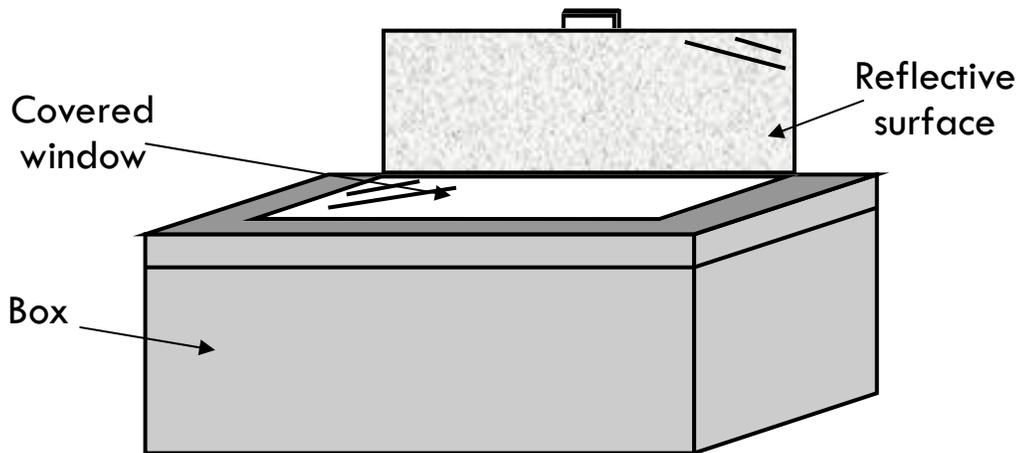
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Use the diagram below to answer the questions.



1. It is a sunny day, but the solar oven is not getting hot enough. Describe what could be done to make it work better.

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2. Which of the following BEST describes how a solar oven works?

- A. It reflects light energy from the Sun onto a box used for an oven.
- B. It transforms energy from the Sun into electrical energy.
- C. It changes light energy into microwaves to heat things up.
- D. It takes cold energy away from food and replaces it with heat energy.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

A group of kids are having a picnic outside in the woods on a hot day. They want to play a game before lunch.



*Directions: Using only materials found in the woods, design a way for them to keep their snacks and drinks cool. You can sketch your ideas on the back of this page.*

1. What materials found in the woods could they use?

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2. Describe how they could use these materials.

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3. Draw your design plan in the box below. Label the parts.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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*Directions: Using only materials found in the woods, design a way for them to keep their snacks and drinks cool. You can sketch your ideas on the back of this page.*



**B**

Draw your design plan in the box below. Label the parts.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What is a Green Engineer?

Draw and label a picture of a green engineer at work.

*A good picture would show someone working to solve problems concerning the environmental impacts of a technology's creation, use, and/or disposal.*

*Examples include: Someone figuring out how to use less material to make something, designing water bottles that are easier to reuse or recycle, designing machines that use less energy, etc.*

What is a green engineer? Explain your drawing below.

*Answers will vary, but may include: Someone who combines his or her creativity and understanding of science and math to solve problems concerning the environmental impacts of a technology's creation, use, and disposal.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What is a Green Engineer?

Draw a picture of a green engineer at work. Label your picture.

*A good picture would show someone working to solve problems concerning the environmental impacts of a technology's creation, use, and/or disposal.*

*Examples include: Someone figuring out how to use less material to make something, designing water bottles that are easier to reuse or recycle, designing machines that use less energy, etc.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## What is a Green Engineer?

Which of the following would a green engineer do for his or her job?  
Mark **ALL** that apply:

- design machines to make lots of water bottles
- figure out how to use less material to make a cereal box
- plant trees in a park
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- decide how to make paper cups a more popular color
- clean up polluted water
- design machines that use less energy
- figure out how to make paper easier to recycle

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Too much trash is a problem around the world. How could the trash problem be fixed in a way that is MOST friendly to the environment? Circle the BEST answer.

- A. recycle more trash
- B. send trash into space
- C. find ways to make less trash
- D. bury trash under lots of dirt to make parks

2. A company is making a new type of plastic fork.

List 3 resources that the company will need to make plastic forks in a factory.

*Answers will vary, but may include: plastic (or materials to make the fork), machines to make the forks, workers to run the machines, energy to run the machines, money, etc.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

People like to drink juice, water, and soda from plastic and glass bottles. This can create a lot of waste.

Describe 3 ways that people can reduce this waste.

*Answers will vary, but may include: reuse the bottles when you are finished with them, recycle the bottles when you are finished with them, drink tap water from a reusable cup instead of buying bottled water, etc.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. If you put a wooden spoon and a metal spoon into a pot of hot water, the metal spoon will feel warmer to the touch. Why? Circle the BEST answer.

- A. Heat moves more easily through metal than through wood.
- B. Heat moves more easily through wood than through metal.
- C. The metal spoon was warmer than the wooden spoon before it went into the pot.
- D. Wood holds cold really well.

A boy poured hot soup into a cool bowl. Soon his bowl was too hot to carry.

2. Explain what happened to the bowl:

*The heat from the soup moved into the bowl, so the bowl got warmer and became too hot to carry.*

3. Explain what happened to the soup:

*The heat from the soup moved into the bowl, so the soup got cooler.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. A boy has an insulated lunch bag. He is using it to keep his sandwich cool. How does it work? Circle the BEST answer.

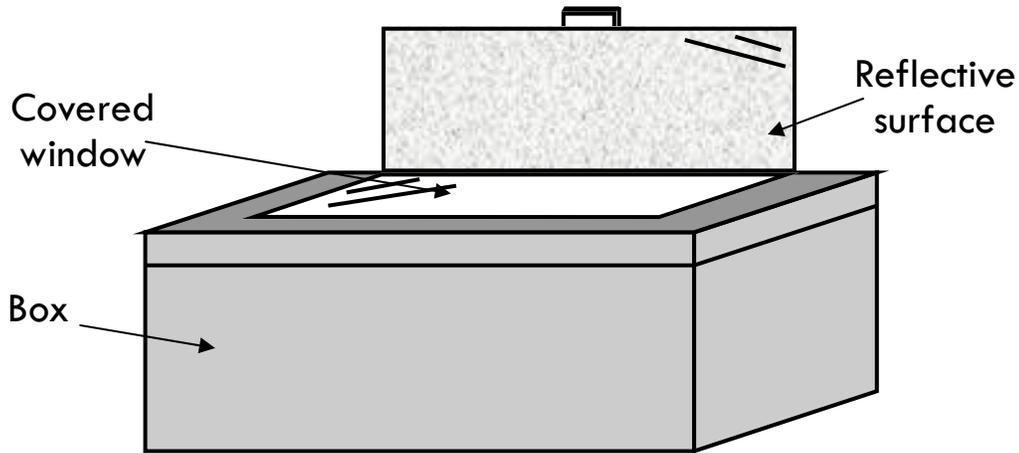
- A. It keeps cold inside.
- B. It makes things cool.
- C. It allows heat to pass through it very slowly.
- D. It does not allow any heat to pass through.

2. The next day, the boy wants to bring hot soup to school. Can he use the same lunch bag to keep his soup warm? Explain your answer.

*Yes, an insulated lunch bag can keep hot foods warm and cold foods cool. By allowing the heat from the soup to pass through it very slowly, the bag will help to keep his soup warm.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Use the diagram below to answer the questions.



1. It is a sunny day, but the solar oven is not getting hot enough. Describe what could be done to make it work better.

*Answers will vary, but may include: Insulate the box better, turn the oven so it catches more sunlight, tape up all the holes in the box so no air can get in or out, etc.*

2. Which of the following BEST describes how a solar oven works?

- A. It reflects light energy from the Sun onto a box used for an oven.
- B. It transforms energy from the Sun into electrical energy.
- C. It changes light energy into microwaves to heat things up.
- D. It takes cold energy away from food and replaces it with heat energy.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

A group of kids are having a picnic outside in the woods on a hot day. They want to play a game before lunch.



*Directions: Using only materials found in the woods, design a way for them to keep their snacks and drinks cool. You can sketch your ideas on the back of this page.*

1. What materials found in the woods could they use?

*Answers will vary, but may include: leaves, dirt, twigs and branches, etc.*

2. Describe how they could use these materials.

*Example: They could dig a hole and line it with leaves. They could put their snacks and drinks in the hole and then cover the top with wood (twigs, branches, etc.) to seal it up.*

3. Draw your design plan in the box below. Label the parts.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

A group of kids are having a picnic outside in the woods on a hot day. They want to play a game before lunch.



*Directions: Using only materials found in the woods, design a way for them to keep their snacks and drinks cool. You can sketch your ideas on the back of this page.*

Draw your design plan in the box below. Label the parts.

*A good picture would show natural materials such as leaves, dirt, twigs and branches, etc.*

*Example: They could dig a hole and line it with leaves. They could put their snacks and drinks in the hole and then cover the top with wood (twigs, branches, etc.) to seal it up.*