

**Directions: Circle the correct answer.**

1. Which of these items is a source of natural plastic?
  - a. Horns
  - a. Elephant tusks
  - b. Tortoise shells
  - c. All of the above
  
2. What does the word "plastic" mean?
  - a. Useful
  - b. Moldable
  - c. Flame-resistant
  - d. Edible
  
3. What product was Baekeland trying to replicate when he unexpectedly invented Bakelite?
  - a. Gelatin
  - b. Shellac
  - c. Gold
  - d. Indigo dye

**Short Response:**

4. Name one reason modern people want to get rid of plastic.

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5. Baekeland gave three reasons plastic was a good thing when it was invented. Name one of them.

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**Fill in the Blank:**

6. Elephants, tortoises, and other animals almost died out from being hunted as sources of natural plastic. When an animal species dies out, it is called going \_\_\_\_\_.



7. The hybrid plastics invented by earlier scientists Hyatt and Parkes were dangerous because they were \_\_\_\_\_.
8. Products made of \_\_\_\_\_ were less expensive to make and easier for the common person to own.

**Making Connections**

9. In the video, Layla told Leo Baekeland that people today use plastic once or twice and then throw it away.
- a. Thinking about your everyday life, list four plastic items you or your family commonly use in the left-hand column below.
  - b. For each item listed, note in the right-hand column how long you usually keep it before throwing it away or recycling it. It is okay to estimate.

| Plastic Item | How Long We Keep It |
|--------------|---------------------|
| _____        | _____               |
| _____        | _____               |
| _____        | _____               |
| _____        | _____               |

10. Choose one or more items from your list that have the shortest time written in the right-hand column. With a partner, brainstorm possible ways that you could extend the life of each item. For example: What else could you use it for? Is it able to be reused for the same purpose? Be creative! Write your thinking below.

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\_\_\_\_\_

\_\_\_\_\_

## Leo Baekeland | Worksheet Answer Key

**Directions: Circle the correct answer.**

1. Which of these items is a source of natural plastic?
  - b. Horns
  - a. Elephant tusks
  - b. Tortoise shells
  - c. All of the above**
2. What does the word "plastic" mean?
  - a. Useful
  - b. Moldable**
  - c. Flame-resistant
  - d. Edible
3. What natural product was Baekeland trying to replicate when he unexpectedly invented Bakelite?
  - a. Gelatin
  - b. Shellac**
  - c. Gold
  - d. Indigo dye

**Short Response:**

4. Name one reason modern people want to get rid of plastic.  
**Students should list one of the following.**
  1. **Plastic causes a lot of pollution (OR people keep throwing away their plastic after just one use).**
  2. **Plastic is produced using fossil fuels, and people are afraid we will run out of them.**
5. Baekeland gave three reasons plastic was a good thing when it was invented. Name one of them.  
**Students should list one of the following.**
  1. **It was a humane solution to the problem of animals going extinct.**
  2. **It made life more affordable for the average person.**
  3. **It was very versatile and could be used to make almost anything.**

**Fill in the Blank:**

6. Elephants, tortoises, and other animals almost died out from being hunted as sources of natural plastic. When an animal species dies out it is called going **extinct**.
7. The hybrid plastics invented by earlier scientists Hyatt and Parkes were dangerous because they were **flammable**.
8. Products made of **plastic** were less expensive to make and easier for the average person to own.

## Making Connections

9. In the video, Layla told Leo Baekeland that people today use plastic once or twice and then throw it away.
- Thinking about your everyday life, list four plastic items you or your family commonly use in the left-hand column below.
  - For each item listed, note in the right-hand column how long you usually keep it before throwing it away or recycling it. It is okay to estimate.

### Plastic Item

Answers will vary. Students should list four plastic items from daily life.

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### How Long We Keep It

Answers will vary. Students should estimate how long they keep each item.

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10. Choose one or more items from your list that have the shortest time written in the right-hand column. With a partner, brainstorm possible ways that you could extend the life of each item. For example: What else could you use it for? Is it able to be reused for the same purpose? Be creative! Write your thinking below.

Sample answer: A student uses a hard plastic kiddie pool for about a year before it cracks and can no longer hold water. The student could propose taking better care of it (not jumping while playing in it, storing it in the garage, etc.) so that it does not crack. Another solution could be repurposing the pool to make a kid's garden or sandbox, or bringing it inside to make a pretend boat or naptime bed.