

# Stages of Materials

Describe the stages of the materials below by writing in the number that goes with each material for extraction, production, distribution, disposal, and environmental impact listed on page 2.

<b>Material</b>				
	Soda Can	Junk Mail	Glass Jar	Plastic Milk Jug
<b>Resource</b>	3			
<b>Extraction</b>				
<b>Production</b>				
<b>Consumption</b>				
<b>Disposal</b>				
<b>Impact on Environment</b>				

ANSWERS (going down columns): Soda Can: 3, 8, 12, 13, 17, 21 / Junk Mail: 1, 6, 9, 14, 18, 24 / Glass Jar: 4, 7, 11, 15, 20, 23 / Plastic Milk Jug: 2, 5, 10, 16, 19, 22

# Stages of Materials

Use the following descriptions to fill out the chart. Write the number below in the correct box in the table on page 1.

## RESOURCE

1. Trees
2. Oil and gas
3. Bauxite ore
4. Silica Sand

## EXTRACTION PROCESS

5. Oil and gas are extracted from the ground through hydraulic fracturing.
6. Roads are built into forests and trees are cut down.
7. Trees are cleared and open pit mines are blasted in the ground to mine sand.
8. Rainforests are cut down and the mineral is mined out of the ground.

## PRODUCTION PROCESS

9. Scraps from trees are taken to a paper mill where it is mulched, cooked, bleached, and dried.
10. Oil and gas goes to a refinery where is it turned into pellets that are made into plastic.
11. Sand is melted at very high temperatures to be turned into glass jars.
12. The mineral is sent far away to be processed into aluminum and then transported around the world to be made into cans.

## CONSUMPTION

13. Companies fill aluminum cans with beverages for consumers to buy.
14. Companies purchase the paper, print on it and mail it to residents.
15. Companies fill glass jars with food for consumers to buy.
16. Companies fill plastic jugs with milk for consumers to buy.

## DISPOSAL

17. Consumers either recycle the aluminum can or send it to the landfill.
18. Consumers either recycle the paper or send it to the landfill.
19. Consumers either recycle the plastic or send it to the landfill.
20. Consumers either recycle the glass or send it to the landfill.

## IMPACT ON ENVIRONMENT

21. Causes deforestation in rainforests, erosion and water pollution.
22. Endangers wildlife littering streams and oceans, breaks down into microplastics that can get into our soil, food and bodies.
23. Requires lots of energy to melt sand at very high temperatures, thus creating greenhouse gases from the burning of fossil fuels.
24. Bleaching emits air and water pollution.