

# Reading About Recycling:



## Glass



Look in your refrigerator. How many products come in glass bottles or jars? It's likely you will find foods that are very acid, like pickles, tomatoes, and orange juice in them. Because foods don't dissolve glass, it's a great storage material. It also lasts for a long time—and that's part of the problem!

Silicon, the major element in glass, is one of the most common elements on the planet. It's found in quartz, other igneous rocks and many forms of sand. The commercial material we call "glass" is actually made from quartz sand, soda ash, feldspar, and limestone. New glass products can be made using bits of old glass, called cullet, too.

Like carbon, silicon can be formed and reformed into new products. Glass is almost 100 percent recyclable and up to 70 percent of the materials in new products can come from previously-used glass. When we use recycled glass to make new bottles, ceramics or even works of art we save up to 34 percent of the energy needed to make the product. That's because it takes high temperatures to melt glass into the right form. Bits of used glass can also be made into abrasive products like sand paper. There are even bits of glass in some concrete roads, to make them last longer and provide better traction when it is slippery.

Glass recycling doesn't just save materials and energy. It saves room in landfills, as well. When you have walked on a beach, you may have seen bits of weathered glass. The glass may look as if the physical abrasion of other forms of silicon, wind and weather is breaking it down. But in a landfill, that glass could last for one million years! That's because there is no physical abrasion to rub and break down the hard glass into smaller bits like sand.

So when you see that blue bin on a curb or a big recycling bin in a public place, think twice about the bottle that holds your soda or favorite salsa. Its value never ends.

6	C	CARBON 12.011
14	Si	SILICON 28.085
32	Ge	GERMANIUM 72.63
50	Sn	TIN 118.710
82	Pb	LEAD 207.2

## Comprehension Questions:

1. Name two properties of glass that make it valuable: \_\_\_\_\_
2. What property does carbon share with silicon? \_\_\_\_\_
3. Why would glass last longer in a landfill than on a beach? \_\_\_\_\_
4. In the last sentence, what do we mean when we say "Its value never ends." \_\_\_\_\_
5. On the other side of this page, create a diagram to describe the life cycle of silicon, from a quartz rock to sand to several products. Conduct research to help you as necessary. Compare and discuss your diagram with others and make revisions.