

GLASS CLASS

Humans have relied on glass since the earliest known civilizations. Glass vessels can be traced back to ancient Mesopotamia, and the Romans had glass windows as early as 1000 A.D. Today, you use glass in nearly every part of your life. But how much do you know about this extraordinary material? Take this True/False quiz to find out. If you need help, go to Corning.com/GlassClass.

1. ___ Glass objects are among the oldest man-made materials, perhaps dating before 3400 B.C.
2. ___ Tiny silica glass spheres in the lunar soil brought back by Apollo astronauts were three billion years old.
3. ___ Glass used in optical fiber has 30 times the transparency of the purest water.
4. ___ Conventional glasses are nearly all based on one of the most versatile chemical families, the silicates, which are materials based on SiO_2 — silicon and oxygen.
5. ___ Silicate makes up a very small, but key part of the Earth's crust.
6. ___ The ultimate theoretical strength of glass is 10 Gigapascals (GPa), equivalent to the pressure created by a stack of 100,000 elephants!
7. ___ Windows in medieval cathedrals are slightly thicker at the bottom because of glass flow over the centuries.
8. ___ The chemical composition of glass is very difficult to alter.
9. ___ As glass is heated, it becomes gradually easier to mold and manipulate, making it ideal for shaping into artistic and practical forms.
10. ___ Glass used in optical fiber can carry 10 trillion bits of information a distance of one kilometer in just one second.
11. ___ LCD screens are just a small part of the high-tech glass industry.
12. ___ An oxygen molecule that can pass through a high-density plastic in about two weeks would take 30 billion years to pass through silica glass.
13. ___ Glass cannot be used in observation windows near the hot zones of nuclear reactors.

TUNE IN: Check out “The Glass Age” video series in which TV science investigators Adam Savage and Jamie Hyneman demonstrate some of the unexpected properties and applications of glass that enable us to work, live, and play better. There are three videos in the series: “Welcome to The Glass Age, Presented by Corning,” “The Glass Age, Part 1: Flexible, Bendable Glass” and “The Glass Age, Part 2: Strong, Durable Glass.” Find them all at: YouTube.com/CorningIncorporated.



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