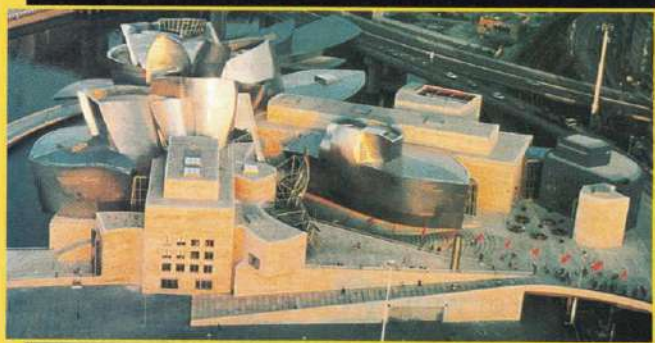


NATIONAL GEOGRAPHIC VISUALIZING ELEMENTS

Figure 2

Most of us think of gold as a shiny yellow metal used to make jewelry. However, it is an element that is also used in more unexpected ways, such as in spacecraft parts. On the other hand, some less common elements, such as americium (am uh REE see um), are used in everyday objects. Some elements and their uses are shown here.



▲ **TITANIUM** (tie TAY nee um) Parts of the exterior of the Guggenheim Museum in Bilbao, Spain, are made of titanium panels. Strong and lightweight, titanium is also used for body implants.



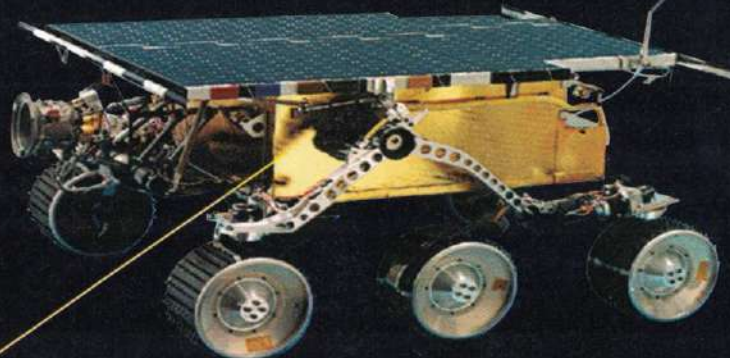
▲ **LEAD** Because lead has a high density, it is a good barrier to radiation. Dentists drape lead aprons on patients before taking X rays of the patient's teeth to reduce radiation exposure.



▲ **ALUMINUM** Aluminum is an excellent reflector of heat. Here, an aluminum plastic laminate is used to retain the body heat of a newborn baby.



▲ **TUNGSTEN** Although tungsten can be combined with steel to form a very durable metal, in its pure form it is soft enough to be stretched to form the filament of a lightbulb. Tungsten has the highest melting point of any metal.



▲ **GOLD** Gold's resistance to corrosion and its ability to reflect infrared radiation make it an excellent coating for space vehicles. The electronic box on the six-wheel Sojourner Rover, above, part of NASA's Pathfinder 1997 mission to Mars, is coated with gold.



◀ **AMERICIUM** Named after America, where it was first produced, americium is a component of this smoke detector. It is a radioactive metal that must be handled with care to avoid contact.

SECTION

1

Reinforcement

Composition of Matter

Directions: Match the terms in Column II with the definitions in Column I. Write the letter of the correct term in the blank at the left.

Column I

- _____ 1. heterogeneous mixture containing a liquid in which visible particles settle
- _____ 2. contains two or more gaseous, liquid, or solid substances blended evenly throughout the mixture.
- _____ 3. substance in which all atoms are alike
- _____ 4. any material made of two or more substances that can be physically separated
- _____ 5. the scattering of light by colloidal particles
- _____ 6. heterogeneous mixture with larger particles that never settle
- _____ 7. a mixture in which different materials can be easily distinguished
- _____ 8. homogeneous mixture of particles so small they cannot be seen and will never settle to the bottom of their container
- _____ 9. substance in which two or more elements are combined in a fixed proportion

Column II

- a. Tyndall effect
- b. colloid
- c. heterogeneous mixture
- d. mixture
- e. element
- f. suspension
- g. solution
- h. homogeneous mixture
- i. compound

Directions: Fill in the table below with the element below that matches its description.

gold
americium

lead
aluminum

titanium
tungsten

10. radioactive metal	
11. resists corrosion	
12. excellent reflector of heat	
13. highest melting point of any metal	
14. strong and lightweight	
15. has a high density	