



Academic Activity Chapter 7

Composites

A composite is a material that is made of more than one material combining the strengths of each material into one. The aerospace industry uses composite materials for the frames of aircraft. Civil engineers use composite materials to increase the strength of a structure.

1. Conduct an Internet investigation to learn about composite materials.
2. What are the two types of materials a composite must have? What function does each provide?

3. Identify and describe three different composites used in engineering today.

Example

Composite: fiberglass

Properties: lightweight, strong, flexible

Components: fine filaments of glass and polymer resin

Uses: boat hulls, thermal insulation

a. Composite: _____

Properties: _____

Components: _____

Uses: _____

b. Composite: _____

Properties: _____

Components: _____

Uses: _____

c. Composite: _____

Properties: _____

Components: _____

Uses: _____



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4. Using what you have learned about the nature of composites, create your own composite material. Make your material a uniform size, 12" x 2", so that you can test it against your classmates' materials. Some possible components are different thicknesses of papers, string, paperclips, scraps of cloth, drinking straws, and sawdust.