

Technology, Tools, and the Engineering Process

READ ALOUD PASSAGE

All human-made things start as something from the Earth. Plastic comes from oil. Glass comes from sand. Metal comes from rocks called ores. Paper comes from wood. Machines need energy from outside themselves to work, like gasoline or electricity. Living things are different. They generate their own energy by eating food.

Animals also build things, but those things are natural, not human-made. A bird builds a nest from sticks. A beaver builds a dam from wood and mud. These were not made by people, so we call them natural.

People also use tools to help them build things. A tool is any human-made object that helps someone do a task, like a hammer, a needle, or a pair of scissors. Making a tool, and then using it, is part of a bigger process called technology. Technology is not just the finished object sitting on a shelf. It includes every step along the way: figuring out what is needed, choosing materials, testing ideas, and fixing mistakes.

Sometimes engineers get their best ideas by studying nature instead of inventing something from scratch. A bird's nest holds together in a strong wind, and a beaver's dam can hold back a whole stream. When people copy a design from nature to solve a human problem, that is called biomimicry. An engineer might study how a bird weaves a nest to design a stronger basket, or study a beaver's dam to design a better way to hold back water.

Activity 1

Because / But / So Complete each sentence three different ways.

All human-made things start as natural materials from the Earth because

.....

All human-made things start as natural materials from the Earth but

.....

All human-made things start as natural materials from the Earth so

.....

Activity 2

Circle True or False for each statement.

1. **True / False** Technology includes every step of making something, not just the finished object.
2. **True / False** Biomimicry means copying designs found in nature to solve human problems.
3. **True / False** A tool is a human-made object that helps people do a task.
4. **True / False** Animals build using technology in exactly the same way humans do.

Activity 3

Write one of each type of sentence about technology.

Statement (Declarative):

Question (Interrogative):

Exclamation (Exclamatory):

Command (Imperative):
