



11. Where Has Your Chair Been?

Concepts

- We use resources from the living and nonliving components of the environment to meet our needs and wants.
- Humans make objects from natural materials.

Overview

Students will learn about how resources are processed or transformed to create objects used in everyday life. Using pictures, they will sequence the process of making an object from beginning to end (tree to chair, cotton to couch, etc.).

Science and Math Skills

- Observing
- Gathering Data
- Sequencing

Standards

- Humans depend on their natural and constructed environments.
- All organisms cause change in their environments. Some changes are detrimental, others are beneficial.

Time

Setup: 10 minutes to make copies and to cut out cards

Class: One class period

Materials

Per student:

- Set of student cards with pictures of furniture/appliances being processed (see attached PDF in this document).

Setup

Photocopy sets of student cards onto card stock and cut out sets of cards for students to sequence. Have students work in teams.

Safety

1. Follow all district and school laboratory safety procedures.

Background

Throughout history, people have created objects that meet particular needs or solve problems. Our homes and the items inside provide many examples of how things are designed and created to fulfill a need.

Technology, the practical application of scientific knowledge (or knowledge about the how the world works), is used throughout the spaces in which we live, work and go to school. For additional activities in this series, see K-5 Teacher Resources at <http://www.bioedonline.org/k%2D5/>.

Procedure

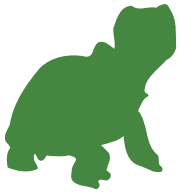
1. Each team of two students will receive a set of cards to place in sequence. Each set of cards represents several steps involved in making common household items.
2. Challenge students to place the cards in order, beginning with the first step. Ask, *Why is it necessary to make this item? Why do we need it? Does it make our lives more comfortable? Save time? Make a job easier? Could we get along without this item?*

3. As students finish a sequence, check their understanding and let teams trade cards with other groups.
4. Have students share their sequencing experiences. Ask, *How did your group decide on how each product was created? How do you know you have the right sequence?*

Student pages will contain sets of six cards representing steps in the production of familiar items, such as the following.

**Wooden chair
Upholstered sofa
Carpeting**

**Bricks
Metal pot
Feather pillow**



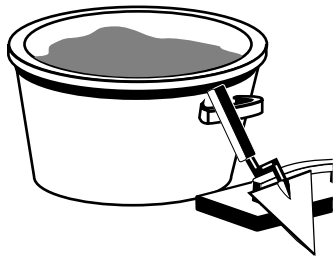
Adobe Bricks



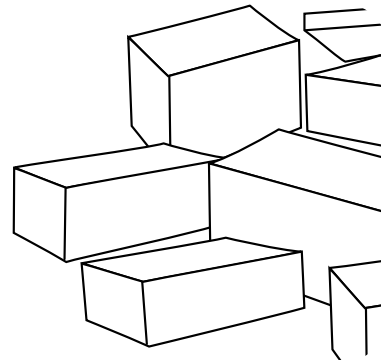
Mix fine mud and sand.



Add some water.



Mix until you can make a ball that sticks together.



Pack the mud in small boxes.

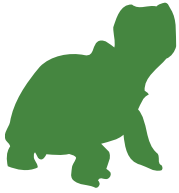


Let the mud dry in the sun.

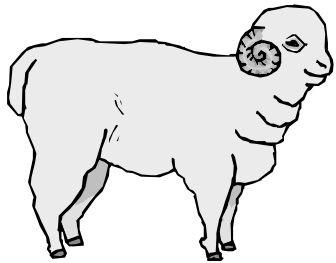


Remove the bricks from the boxes.

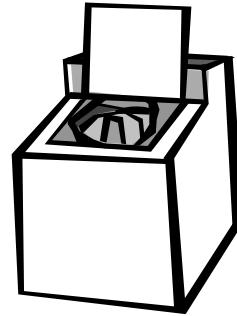




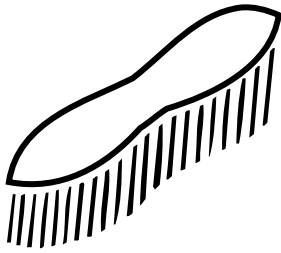
Wool Sweater



**Cut some wool off
of a sheep.**



Wash the wool.



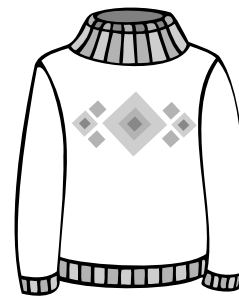
Comb the wool.



**Twist the wool
into yarn.**

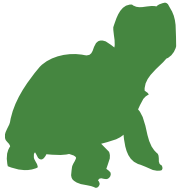


**Knit the yarn into
tube shapes.**



**Sew the shapes
together to make
a sweater.**





Frying Pan



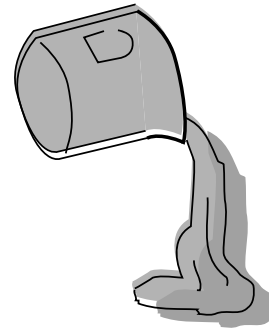
**Find some rocks
with iron in a mine.**



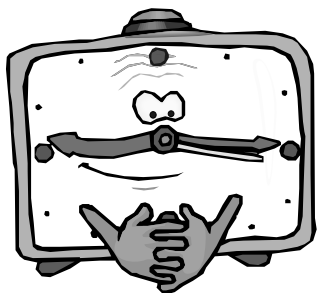
**Dig out the rocks
and break them up.**



**Heat the rocks until
the iron melts.**



**Pour the melted
iron into a mold.**

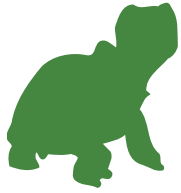


**Let the iron cool
and get hard.**



**Take the frying pan
out of the mold.**

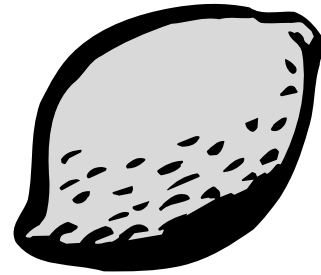




Chocolate Candy



Find a cacao tree.



Pick the cacao pods.



**Open the pods and
take out the seeds.**



**Wash the seeds and
grind the seeds.**

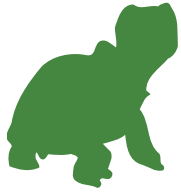


**Mix the ground seeds
with sugar. Heat it.**



**Shape the melted
chocolate into
candies.**





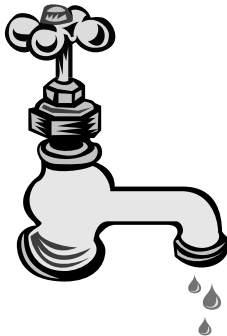
French Fries



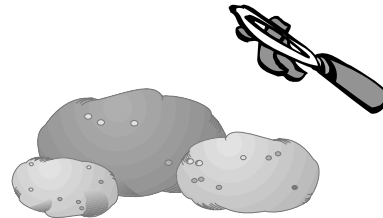
Find a potato plant.



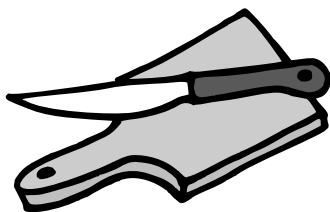
**Dig up the plant and
get the potatoes.**



Wash the potatoes.



Peel the potatoes.

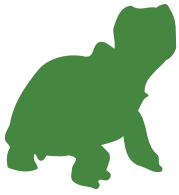


**Cut the potatoes
into strips.**

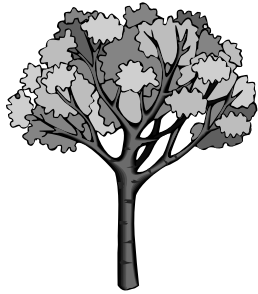


**Cook the strips in
hot oil.**





Chair



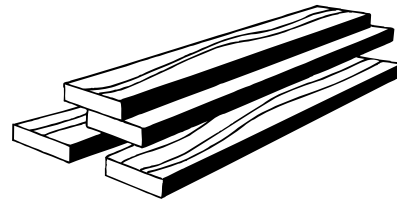
Find a tree.



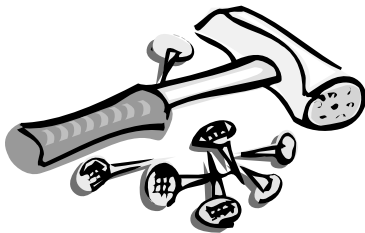
Cut the tree down.



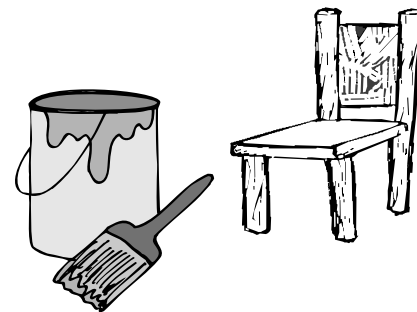
**Saw the tree
into boards.**



**Make different sizes
and shapes of boards.**



**Use glue and nails
to put the boards
together.**



Paint the chair.



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