

Reuse and Recycle



Children all over the world have some things in common. They all need food, shelter, and clothing. And they all play. Many children create their own toys with things they find in their environment. This leads to the invention of many homemade toys.

Challenge:

Design and build a homemade toy that two to four children can play with together. Use as many found materials as possible.

Criteria:

The toy you design should

- □ be a toy that children around the world would like to play with.
- \Box be designed for 2 to 4 children should be able to play with together.
- □ be constructed of mostly found materials.
- □ be safe to play with.
- □ be easy to carry.

Materials: What can you use?

- found objects: clean reusable materials provided by your teacher (See Teacher Hints)
- straws
- craft sticks
- pipe cleaners
- thread
- fabric scraps
- glue
- tape
- string, used
- paper clips, used

Tools: You may use these things to help you build. They may not be become part of your solution.

- scissors
- rulers
- safety snips
- hole punch
- sewing needles
- crayons
- markers



~ You do not need to use all of the materials and tools. ~



Homemade Toys: Teacher Notes

Alternative Background Statement:

The XYZ Company is looking for a few good homemade toys. They want to publish a web site with pictures and directions of homemade toys that will encourage children around the world to make their own toys. The XYZ Company thinks it is important to encourage children to *Reuse* and *Recycle* items that might otherwise get thrown out.

Alternative Criteria:

Change out the criteria to meet the needs of your student population. Examples of additional criteria include:

- size requirements (standard or non standard)
- weight requirements
- no brand new materials may be used except for glue or tape

Possible extensions:

Any of these could be included as criteria or developed into a follow-up activity.

- Create rules for playing the game.
- Write a description of your toy that would make children want to play with it or make it.
- Design and create an advertisement that generates interest in the toy or game.
- Design and build a container for your toy or game.
- Design an assembly line so that you can mass-produce your toy.

Resources About the History of Toys:

Growing Up in Ancient Egypt, by Rosalie David, Troll Associates 1994 *Growing Up in Ancient China,* Ken Teague

History of Toys and Games

http://www.history.com/exhibits/toys/timeline.html

Toys Are History

http://www.yale.edu/ynhti/curriculum/units/1985/6/85.06.04.x.html

Brief History of Toys

http://www.hants.gov.uk/museum/toys/history/

Hints about Materials:

Teachers should select **clean**, **reusable**, and **recycled** materials that are readily available and appropriate to their grade level. Examples of items that <u>could be</u> provided are listed below. Pick and chose the items that are available to you. Remember not to overwhelm children with too many choices. Other the other hand, provide enough choices so that the challenge remains open ended.

- boxes
- empty food boxes
- cardboard
- paper tubes (paper towel, toilet paper, etc)
- egg cartons
- milk cartons
- drink bottles
- fabric scraps



- yarn
- string
- buttons
- ribbon
- washers
- wire
- rubber band
- dowels
- aluminum foil
- cans (smooth any sharp edges for children)

clean used paper:

- construction (scraps, back sides)
- wrapping
- newspaper
- tissue
- paper bags

wheels can be made from used:

- thread spools
- plastic milk carton tops
- plastic lids
- cardboard (trace around something round and cut out)











Have fun! -ginger gwhiting@childrensengineering.com