



## WATER WELL

Create your own well.

### Materials

- Milk or juice carton
- Craft knife
- Scissors
- Round stick, cocktail straw, or pencil
- Thick thread
- Piece of cardboard
- Glue
- Piece of wire
- Plastic toothpaste or bottle cap
- Clay

### Procedure

**Note:** Have an adult present while using the craft knife and scissors.

- Cut away 2 walls of the carton, so that you have a square basin, a roof over it, and 2 poles one opposite the other to support the roof (see the photo). The roof supports must be wide enough to hold a spindle.
- Make 2 holes, one opposite the other, in the roof supports to accommodate the spindle.
- If you're making the spindle from a stick or pencil, cut out an oval piece of cardboard, it will make the handle. Glue that piece to the spindle so that together they form the letter "L", then attach the handle to the other side. If the cardboard is thick enough, make openings in it to insert the pencil.
- If you're using a cocktail straw to make the spindle, just bend it so that it's Z-shaped, with one horizontal section long enough to be put between the roof supports. The other 2 sections of "Z" will make the handle.
- Insert the spindle into the openings in the roof supports.
- Cut out a cardboard washer and glue it to the other end of the spindle. This will secure the spindle in place.
- Make a bucket from a bottle cap, attach to it a wire handle.
- Tie the bucket to a piece of thread and fix the other end of the thread around the spindle.
- Stick some clay to the bucket's bottom to make it sink. Now, pour water into the well and draw it out with the toy bucket.

### Results

You have created a lifting machine!

### Why?

Your water well uses 2 simple machines to help you do work. You created a basic pulley made up of a wheel on a fixed axle, with a groove along the edges to guide a rope or cable. A single fixed pulley is used to draw a bucket of water from a well. It is easy to draw from a well using a pulley because it helps in changing the direction of the force applied.



This activity was adapted from Inna's Creations. To learn more, please visit their website at [www.increations.blogspot.com](http://www.increations.blogspot.com)