Communication Biography
Toby Churchill

Toby always loved to invent things. At age 5, he got a construction set and immediately threw away the instructions. His first invention was a vegetable peeler. As he got older, he built a bicycle, a go-kart, and a motorbike.

While swimming in a polluted river at age 21, Toby was infected by a virus. The virus damaged his brain. He lost the ability to speak, walk, or use his right arm.

Toby needed a way to communicate with others. Nothing was available, so Toby invented his talking typewriter, the Lightwriter.

Until Toby finished the first Lightwriter, many people thought he wasn’t serious. But once they saw his new invention, other people began to want one too! Today his company sells thousands of them every year!

To Learn More:
Visit the Tech Lab website at www.omsi.edu/tech for links to more information and Online Activities!

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**Totem Poles**

**What is your totem?**

**Materials:**
- Empty paper towel tube or oatmeal box
- Construction paper
- Colored pencils
- Glue
- Scissors

**To do and notice:**
- A totem is a symbol that comes from nature like the sun, an animal, or a plant.
- A symbol is an object that stands for a bigger idea, for example, a drawing of a heart stands for love.

1. Think of four totems that represent you and your family.
2. Draw totems on paper and cut them out.
3. Glue the totems on the paper towel roll or oatmeal box.
4. Stand up the paper towel roll.
   You have created a family totem pole!
5. See if a friend can guess what your totem represents.

**Going further:**

Totem poles made by the native tribes of the Northwest Coast can represent families, adventures, and stories. Only the owner and the carver know the real story (unless you tell it!)

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**Bring it Into Focus**

**See how a camera lens works.**

**Materials:**
- White paper
- Magnifying glass
- Sunny weather

**To do and notice:**
1. Hold the magnifying glass between an object and a piece of paper.
2. Slowly move the magnifying glass back and forth until an image appears on the paper. The image will be upside down.

Experiment with different objects. Try big and small things, Try it close up and far away.

**Going further:**

You see objects because they reflect light. The glass lens focuses the light from the nearby objects. A camera lens focuses light onto film. The image inside a camera is upside down, as are the images inside your eyes! (Your brain turns the images right-side up.)