



High Touch High Tech®

Science Experiences That Come To You™

All Thumbs ©

Supply list

- Masking tape

Background info:

Our hands are pretty special! Take a look. You have 5 fingers including a thumb. Your thumb is considered an **opposable thumb**. That means that you can touch your thumb to your other fingertips. Try it! Now try touching your pointer finger tip to your middle finger tip. Can't be done because those two fingers are not opposable.

We adapted to have a thumb so that we can throw things and carry tools. If you look at your hand, your thumb can wrap around an object and hold it with support from the rest of your hand. This **adaptation** developed over time to fit our needs as a species. Having this special thumb helped us survive and evolve into the species we are today! Do you think you can do all the things you normally do without a thumb?

Procedure:

1. First, we are going to tape our thumb down and then we are going to try a bunch of different tasks
2. Tape the thumb to either the palm of your hand or to the side of your pointer finger
3. Now let's try some tasks.
4. Tasks to try:
 - a. Turn a door knob
 - b. Tie your shoe
 - c. Throw a ball
 - d. Write your name
5. Free discovery: Try a few other things around the room.
6. Were you able to do these tasks like normal?

Experiment Conclusion:

Everything was probably way harder right? Our opposable thumbs are one of our features that makes us special. Most animals have paws or hooves and can't do what we do. Some animals do have opposable thumbs like us including our closest animal relative the chimpanzee. Opossums, koalas, gorillas, and even some frogs also have opposable thumbs.

Fun fact: Our opposable thumb evolved partly so we could punch each other.