

# DAY 2 EXPERIMENT

## Pick Your Brain

### Materials

- Brain Picture
- 1-in. cubes of soft silken tofu, 1 per child
- Dental floss or knife
- 2-oz. condiment cups with lids, 1 cup and lid per child
- Wet wipes

### Pre-prep

One or two days before it is needed, cut the tofu into 1-inch cubes using a piece of dental floss or a knife. Put one cube in each condiment cup with lid. Refrigerate.

### Class Time Directions and Dialogue

Let's take a minute to do a few movements. First, do something with your legs. It can be jogging in place, lunges, or whatever. *Do so.* Okay, now do something with your arms. *Do so.* Now your eyes. *Do so.* Now your big toe. *Do so.* Now your waist. *Do so.* Did you know every movement you just did originated from one place in your body? Do you know where? *Take responses.* Yes, your brain! Your brain is like the boss of your body. It sends out commands for what you are to do and keeps your body systems running.

God designed all your body parts, and each one has a unique and important job. But let's focus on the brain.

First of all, did you know your brain is still growing? An adult's full-grown brain weighs about three pounds, but kids' brains weigh less because a young person's brain hasn't finish growing.

The brain growth is really huge the first year of life. A baby's brain triples in size during the first twelve months. In fact, God designed it so that a baby's skull stays "soft" for awhile to allow the baby's brain to continue growing. Isn't that amazing? God thought of everything!

By the time a baby is two, his brain is 80% of the size it will be when he's an adult.

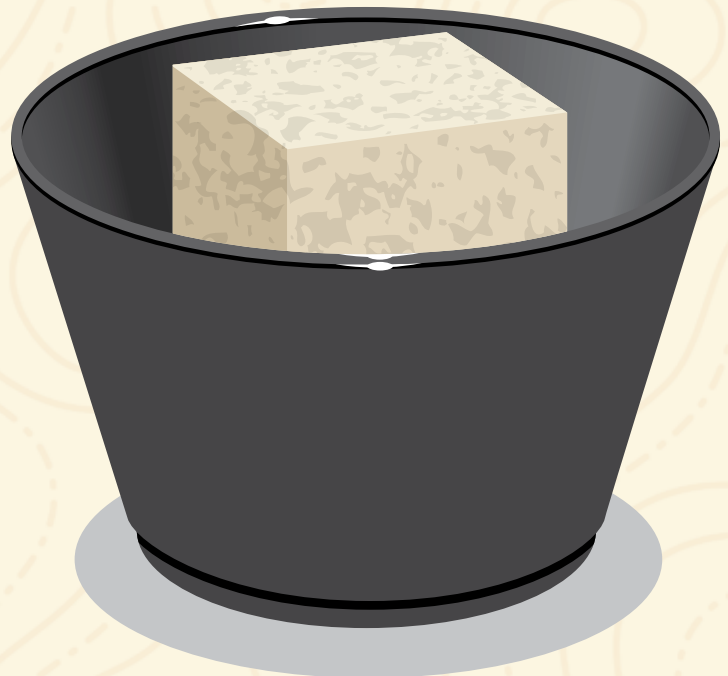
Now, did you know your brain and the Milky Way galaxy have something in common? There are approximately one hundred billion stars in the Milky Way.

And guess what else has one hundred billion of something? *Take responses.* Your brain has about one hundred billion neurons. *Neurons* are the cells in your brain that send messages to other cells, and these neurons aren't wasting any time! They pass their messages along at about 250 miles per hour. That's much faster than the fastest computer! There's no way our brains just evolved. God is the Maker.

Another cool thing to think about is that your memory never gets filled up, unlike the memory storage in your computer, which has limits. God is truly an amazing designer!

Even with such an amazing brain that remembers so much, we can never know *everything*, however. There's only one who can. Do you know who? *Take responses.* 1 John 3:20 tells us God knows all things. We should never get over what an amazing God he is!

In just a minute, we're going to experience how our brain might feel if we were able to touch it. But before we do, here's one more thought. Did you know that exercise is good for your brain? Exercising increases blood flow to the brain, which helps deliver more oxygen, which your brain needs. Let's stand up and do a couple exercises to benefit our brains! *Do a couple*



exercises, such as five jumping jacks, sit-ups, squats, burpees, or push-ups. Ask the kids for suggestions!

**Okay, it's time to check out our samples. Are you ready?**

Before mates explore the tofu, show the Brain Picture and discuss the following.

**Our samples don't look just like brains. What's missing? Does anyone know? Take responses. All of the folds are missing! These folds create ridges and depressions called *gyri* and *sulci*. They increase the surface area so more neurons can fit on the surface of the brain. They're what makes a brain look wrinkled.**

**Now we're going to touch some tofu samples. Many doctors have said that soft tofu has a consistency very similar to the brain.**

Allow everyone to have some time to touch the tofu samples.

## Tip Corner

- If you don't have enough tofu samples for every child, you can have a few larger samples per table and have mates explore the texture of the tofu in groups.
- Cut individual samples with dental floss.
- This is a quick experiment, so you will most likely have time to do another experiment.
- Science terms introduced today are *neurons*, *gyri* and *sulci*.

