

# DAY 4 EXPERIMENT

## Blood Sample

### Materials

- ☐ Heavy duty, leakproof plastic bags, 1 per child (see Tip Corner)
- ☐ Clear corn syrup, such as Karo,  $\frac{1}{4}$  c. per child
- ☐ Cinnamon imperials, such as Red Hots,  $\frac{1}{4}$  c. per child
- ☐ Large bowls, 1 per table
- ☐ Medium bowls, 2 per table
- ☐ Spoons, 2 per table
- ☐  $\frac{1}{4}$  c. measuring cups, 1 per table
- ☐ Dry lima beans, 2 per child
- ☐ Sprinkles or nonpareils, a pinch per child
- ☐ Optional: three 2-liter bottles (see Tip Corner)

### Pre-prep

Put the clear corn syrup in each bag and seal, squeezing out as much air as possible. Store the bags upright in a storage container so they don't lay flat. Before the activity, set one bag at each child's spot, keeping it upright.



For each table, place one large bowl with cinnamon imperials and a  $\frac{1}{4}$  c. measuring cup. Also place two medium bowls, one with sprinkles and one with beans, along with two spoons.

### Class Time Directions and Dialogue

Take a look at the back of your hands and at your wrists. Do you see any bluish lines under your skin? What do you think those are? *Take responses.* Today, we're learning a little about our blood. Blood is very important in the Bible! Before Jesus came to earth, God required his chosen people, the Israelites, to sacrifice animals as a payment for their sins. We no longer need to do that. Do you know who died on a cross and shed his blood once and for all so we can be forgiven of our sins? *Take responses.* Yes, Jesus! So blood has a lot of meaning to us spiritually. *You may want to go on to share the gospel here.*

But blood is also very important to us physically. The Bible tells us the life of a person is in their blood (*Leviticus 17:11*). So we need our physical blood to live life here, and we need Jesus' blood and to believe in him to live for eternity.

Our blood moves around in our body through little tubes. It's kind of like how water moves around in our house through pipes. Blood moves oxygen and nutrients to all parts of our body. It also fights infections, and it even carries waste to our lungs, kidneys, and digestive system to be taken out of our bodies.

Take a guess at how much blood we have in our bodies. *Take guesses.* Newborn babies only have about a cup, but grown-ups have about 5 liters! That's equivalent to 2  $\frac{1}{2}$  two-liter soda bottles. *Show them if you have them.* Clearly, a lot of oxygen can be carried around inside our bodies by the blood and can get to the cells that need it.

Let's find out more about our blood as we make our own blood samples. This sample will show us what blood might look like if we were to zoom in so we could see the actual cells. Let's get started!

1. The liquid part of blood is called *plasma*. It's like the swimming pool that your blood cells swim in. The corn syrup in your baggie represents plasma.

2. Next, open your bag and pour the cinnamon imperials in the corn syrup. These represent the *red blood cells* we talked about. Red blood cells carry oxygen all around our body.
3. Now, take 2 beans out of the bowl in the middle of the table and put them in. These represent the *white blood cells*, which are important for fighting off infections. They're like the good soldiers of your blood, looking out for foreign invaders.
4. Next, take a pinch of sprinkles and add them to the bag. These represent the *platelets*, which help to stop us from bleeding when we have a cut. God thought of everything when he made our blood!
5. After all the ingredients are in the bag, remove the excess air and seal it. Double check to make sure it is well sealed.
6. Gently massage the bag to mix the ingredients.

## Tip Corner

- Whirl-Pak bags work great and don't leak! We highly suggest using them. Find them online.
- Leakproof bags are necessary. Or double bag the blood sample so it will not leak at the corners.
- If you prefer not having bowls in the middle of the table for kids to share, portion out individual kits with needed items.
- Give kids a cup or bowl to place the plasma bag in while it is open so it won't tip over and spill.
- To represent 5 liters of blood, fill 2 two-liter bottles all the way and a third bottle halfway. If desired, color the water red to make it look like blood.
- Science terms introduced today are *red and white blood cells*, *plasma*, and *platelets*.