Activity at Home -

Make a Blood Sample

Activity takes approximately 15 minutes.

Make your own Blood Sample

First lets learn about the different parts of blood we are going to be adding to our sample today.

Plasma – Plasma is the liquid portion of the blood. Half of your blood is plasma, and it carries things around your body, such as nutrients, proteins, hormones, and waste products.

Red blood cells – red blood cells or erythrocytes are produced in our bone marrow. They carry oxygen from our lungs to the rest of our bodies. They have a lifespan of four months.

White blood cells – white blood cells or leukocytes are also produced in our bone marrow and have a lifespan of just three days. White blood cells help our bodies defend against disease and infection in the following ways:

1. By destroying harmful bacteria
2. By creating antibodies against bacteria and viruses
3. By fighting malignant disease

Platelets – platelets or thrombocytes are small cell fragments in our blood that form clots and prevent bleeding.

Materials

You will need:

- Test tube or bottle to put your blood sample in. You want something that is about 50mL in volume and that you can put a lid on.
- Oil
- Salt
- Sultanas
- Red food colouring
- Water
- Ground Coffee

Method

1. Fill your test tube or bottle halfway with oil. This is our plasma
2. Sprinkle in some salt. This represents the nutrients that our plasma carries around our body.
3. Add a couple of sultanas and some red food colouring. This will represent our red blood cells that carry the oxygen.
4. Next fill the remaining space with water. This is our white blood cells.
5. Finally sprinkle some coffee. This will represent our platelets.

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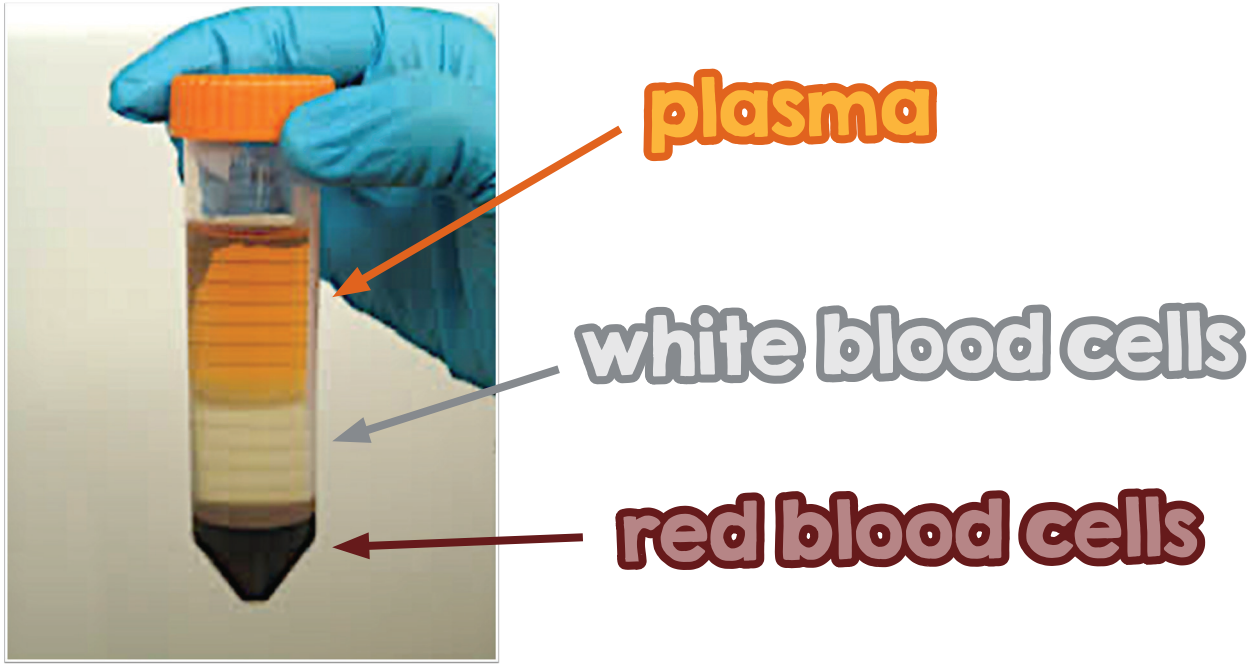

This is a blood sample that has been separated using a centrifuge. A centrifuge spins the blood samples around really fast so that the different components separate. If you shake your sample and mix all the components up it will look more like the blood you are used to seeing. If you then leave it a while the sample will separate again into its components.

At Telethon Kids Institute our researchers use white blood cells to research fighting things like cancer.