Lungs Filter Our Air – Science Experiment

Materials:

- 1 coffee filter
- 1 handful of dirt
- 2 cups of water
- 1 container
- 1 funnel

Purpose This activity will help students understand the role and function of the lungs.

Experiment

1. Have the students explain the meaning of a 'filter' (some materials pass through it). Explain to the students that their lungs can be compared to a filter. The lungs allow air/oxygen to enter the lungs. The lungs in this experiment are represented by the filter. Have the students identify that humans have two lungs and have them demonstrate the location of them. Next, add a handful of dirt (explain that this represents tobacco) to two cups of water in a container and stir. Put the filter into the cone of the funnel.

2. Have the students predict what will happen when the dirty water is poured through the filter (some of the dirt will get caught in filter). Explain how this is similar to our lungs. The small particles in dust, air pollution and tobacco smoke are not filtered before entering our lungs. Over time, this can cause illness and disease.

3. Pour water through the filter. Examine the filter and the new container of water. Discuss if the students predictions were correct. What is left in the filter? How does the water look?

4. Have the students discuss how they think their lungs would look and feel if they were exposed to smoke over a period of time. (Lungs would be dirty, dark and full of tar. It would be difficult to breathe because the lungs would be damaged). Ask students what healthy and unhealthy behaviours affect the lungs. (e.g., unhealthy behaviour- smoking; healthy behaviour-exercising).