Tooth decay and cavities are the results of a process that begins on the enamel of teeth. The enamel on your teeth is the hardest and most mineralized substance in your body. It covers the outer layer of each tooth.

**Materials**

- 2 apples
- 2 paper bags
- A sharpened pencil
- A sharp knife

**Instructions:**

*Using the pencil, poke a hole in one of the apples. This represents a break in a tooth’s enamel.*
*Place each of the apples in a separate paper bag— the punctured apple and the control apple – and leave them there for at least 24 hours*  
*After letting the apples sit in the bags at least 24 hours, remove them and ask an adult to cut them in half. The control apple should appear normal, while the punctured apple has begun to decay.*

**Discussion:**

A cavity is a hole in your tooth most often caused by plaque that has not been cleaned off the tooth. The plaque germs mix with bacteria in your mouth and create acid which eats at the enamel. A cavity can grow bigger and deeper over time. A visit to the dentist will ensure that the tooth gets fixed.