

Cellular Respiration

Real World Energy
Learner Activity Instructions
Grade Level: 9-12



What you will learn:

You will understand the role of cellular respiration in providing cells with the energy required to complete life's processes such as movement and growth. Respiration harvests the chemical energy from the glucose molecules. There are two types of cellular respiration: aerobic (with oxygen) and anaerobic (without oxygen).

What you will need:

For this activity, you will need to print the learner worksheet and backgrounder (or ask your educator to print it for you).

Background

An example of aerobic respiration is a germinating plant seed. From photosynthesis, the plant has stored its glucose as starch in the seed. The plant seed can store the starch for long periods of time. When plant seeds come in contact with moisture, they will begin to germinate, converting the starch back to glucose. Through cellular respiration (oxygen and glucose), the glucose molecule is taken apart and the chemical energy is passed on to other substances in the cell. In the plant seed, the cells use the chemical energy to grow. Once the seed has sprouted and grown leaves, it will create its own glucose through photosynthesis. With the presence of oxygen and glucose, cellular respiration continues, allowing the plant to get chemical energy for the many life processes required for the plant to survive.

How to do it

1. Read the backgrounder on cellular respiration.
2. Answer the questions on the student worksheet.