

# Example Decomposers Explanations Handout

## ***Cellular Respiration***

- A. The fungus' food is broken down. The glucose is broken down into CO<sub>2</sub> and water. The glucose makes heat and motion energy allowing the fungus to move and function.
- B. A fungus gets energy to move and function from the foods and air it takes in. In a fungus' cells, glucose in the food breaks down and the energy stored in glucose is released as heat and motion. CO<sub>2</sub> and water are released by the chemical reaction. The fungus breathes out the CO<sub>2</sub> and releases the water.

## ***Digestion***

- A. A fungus gets food to a cell in its mushroom by taking in food, which is made of large organic molecules as well as water. The large organic molecules are broken down outside the fungus by enzymes that it releases. The small organic molecules enter the fungus and travel to the mushroom through the hyphae. The energy starts as chemical energy in the high energy bonds in the large organic molecules. After the chemical change, the energy is still chemical energy, but it is in the small organic molecules.
- B. The fungus eats food and grows. It gets food to the cell of its mushroom by digesting the polymers into monomers. Then, the monomers are carried to the cells in the mushroom. Energy allows this all to happen.

## ***Biosynthesis***

- A. The fungus grows because it is taking in nutrients and atoms over time causing it to increase in mass. The food and carbon make more fungus. Chemical energy in the food stays the same then leaves the cell and goes out of the fungus.
- B. After digestion, the small organic molecules are used to make more mushroom cells by being put together into different large organic molecules and staying in the fungus' cells. The cells may divide as they get larger from the additional large organic molecules. The energy starts as chemical energy in the high energy bonds and stays as chemical energy, since no high energy bonds are broken.