

# Paper Enzyme Activity

## Background

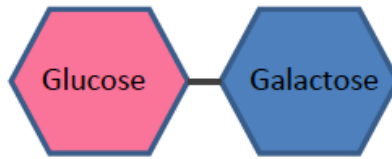
Enzymes are proteins that help chemical reactions occur faster by lowering the energy that is needed for the reaction to occur. The enzymes react with a substrate to form an enzyme-substrate complex. Once this complex is formed, the enzyme will break the bonds in the substrate and a product will be formed. The enzyme is then able to react with more of the substrates. The enzyme is shaped so that it will only react with a specific substrate. The substrate must fit into the enzyme for the reaction to occur.

## Purpose

Your job will be to cut out, manipulate, glue and explain the reactions that are occurring with the pieces provided.

## Procedure

1. Cut out all enzymes, products, and substrates.
2. Organize the cutouts so that all the pieces demonstrate the equation below.  
**Enzyme + substrate → enzyme-substrate complex → enzyme + product 1 + product 2**
3. Glue the cutouts in the appropriate places.
4. Label the cutouts.
  - a. Enzyme= Lactase
  - b. Substrate= Lactose
  - c. Products= glucose and galactose
5. With the above terms explain the reaction and what happened.



Lactose

