

Build Your Own 3-D Cell

Making a three-dimensional model of a cell will help you remember all the different parts of a cell and how they fit together.

Challenge

Design and build a three-dimensional model of a cell that features all the organelles a cell needs in order to function.

Safety Precautions

- Never eat or drink anything in the science laboratory.
- Wash your hands after completing this activity.

Materials

Everyday items of your choice, for example, gelatin, modelling clay, shoe box, styrofoam, pipe-cleaners, plastic film, hard candies, dried pasta, craft items, etc.

Design Criteria

- Your model cell may be either a plant cell or an animal cell.
- The organelles needed for the cell to function must be present.
- Your model cell must contain all the right parts in the right proportions, and the parts must be clearly visible. It should be no larger than a shoe box or a basketball.

Plan and Construct

- 1 With your group, decide whether to build a plant cell or an animal cell.
- 2 List the organelles that your cell needs in order to function.
- 3 Decide which materials would best represent your cell and each organelle in your cell. Write each item beside the matching organelle in the list of organelles you made in step 2.



- 4 Make a neat labelled sketch of your design. Make sure you include and label all the organelles.
- 5 Start building your cell!

Evaluate

Work together to examine and compare the model cells constructed by the various groups. In what way or ways could you modify your design to improve it?

INTERNET CONNECT

www.school.mcgrawhill.ca/resources/

Do you want to take an imaginary journey through a cell? Go to the above web site, then to **Science Resources**, and on to **SCIENCEPOWER 8** to find out where to go next.

You can zoom in, turn around, and check out different organelles inside a virtual cell.