

Cheek Cell Investigation

Objectives:

Observe animal cells

Materials per student (or team):

- microscope
- clean microscope slide and cover slip
- clean flat toothpick for each student (never share toothpicks)
- eye dropper
- stain - methylene blue staining solution (iodine solution can be used as an alternative stain)
- paper towels

Procedures:

1. Use the eye dropper to put a drop of methylene blue stain on a slide. (Be careful as it will stain clothing.)
2. Take a flat toothpick and gently scrape the inside of your cheek to collect some epithelial cells.
3. Gently swirl the cells on the toothpick into the methylene blue drop on the slide. (Throw out the toothpick.)
4. Carefully place a coverslip over the cells on the slide at an angle to push out any air bubbles.
5. Observe the cells under the microscope at 40x, 100x and 400x. Start with low power to locate the cells. Then switch to higher power. Use the fine adjustment only.
6. Draw the cheek cells at three different magnifications.

Questions:

1. Describe what you can see: _____

2. Describe any organelles that are visible: _____

3. Can you see the cell boundaries? _____

4. How do the cells compare to each other – are they all the same size and shape? _____

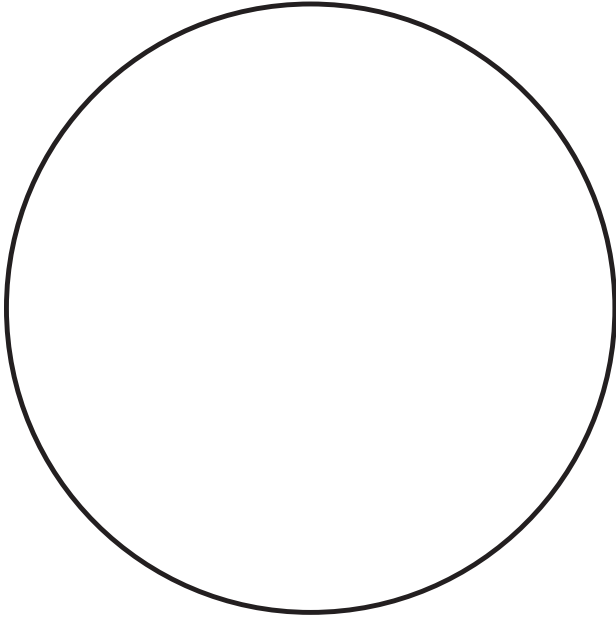
5. Why do you use stain on the slide? _____

MS-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. *[Clarification Statement: Emphasis is on developing evidence that living things are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells.]*

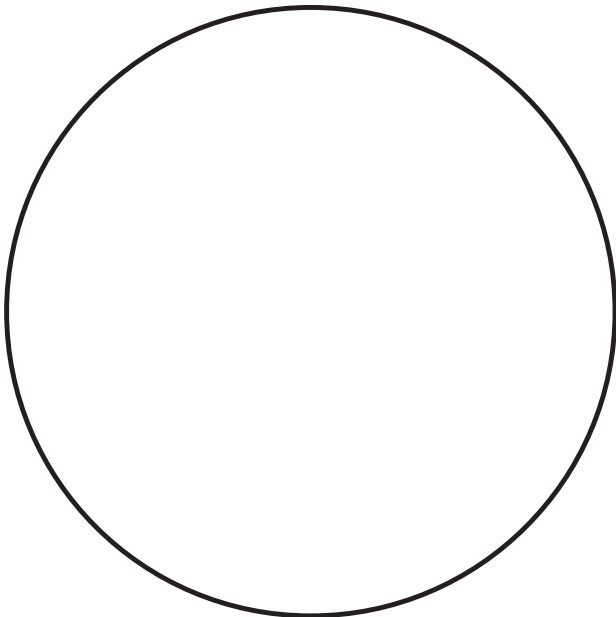
Cheek Cell Investigation Worksheet

Draw the cheek cells at three different magnifications.

40X



100X



400X

