

Cells Lab 4: Animal Cells: Epithelial Cells Lining the Mouth

Biology A

Name _____ Per. _____

Lab Partner _____

Introduction

Up to the present, you have been studying plant cells. You will now be given the opportunity to observe animal cells. Since you are an animal, cells from your own body will work as specimens for study.

You have seen that surfaces of an onion bulb scale are covered by the flat layer of epidermal cells. Parts of animals, too, are covered with an epidermis. This is true of the surface inside your mouth and the external surfaces of your body.

For obvious reasons it would not be a good idea to peel off the epidermis from the lining of your mouth, as we stripped onion epidermis. However, you can, without any harm, gently scrape a few loose epidermal cells from inside your cheek.

Materials

Compound microscope	Slide
Flat toothpick	Cover slip
Methylene blue or iodine stain	Pipettes

Procedure

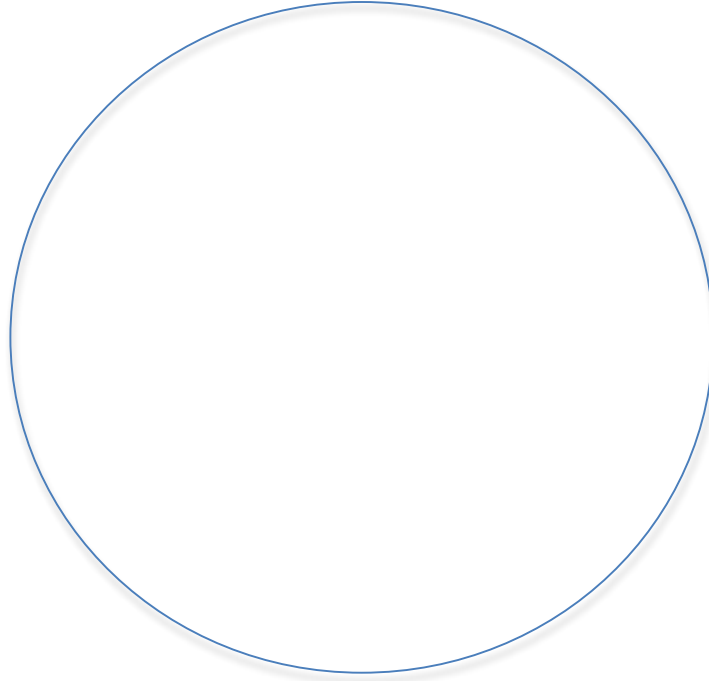
1. Place a very small drop of water on a clean slide.
2. With the broad end of a flat toothpick, *very gently* scrape the inside lining of your cheek and deposit a little of the scraping in the drop of water by rolling the toothpick in the water. Break up the mass by stirring and chopping with the toothpick until there is no longer a detectable mass but only a homogeneous milky drop.
3. Add a small drop of methylene blue or iodine to the material on your slide. Cover with a cover slip and observe under low power.
4. Locate a cell. You may find some cells creased or piled on top of one another, or some may be broken. Find one or two cells that are clearly visible, well isolated from any others, and quite flat. Center them for viewing under high power, then turn to the high-power objective. The nucleus of each cells should be clearly visible and , if you adjust (usually reduce) the light properly with the diaphragm, you may be able to see the cytoplasm.
5. Make a sketch of the cell or cells that you have located under high power.

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Results:

Title: _____



Total Magnification: _____

Estimated width of one cell: _____

For Lab Quiz: Be able to answer the following questions.

1. How does the external surface and covering of the cell compare with the walls of plant cells?
2. How does the shape of the cell compare with the shape of plant cells?