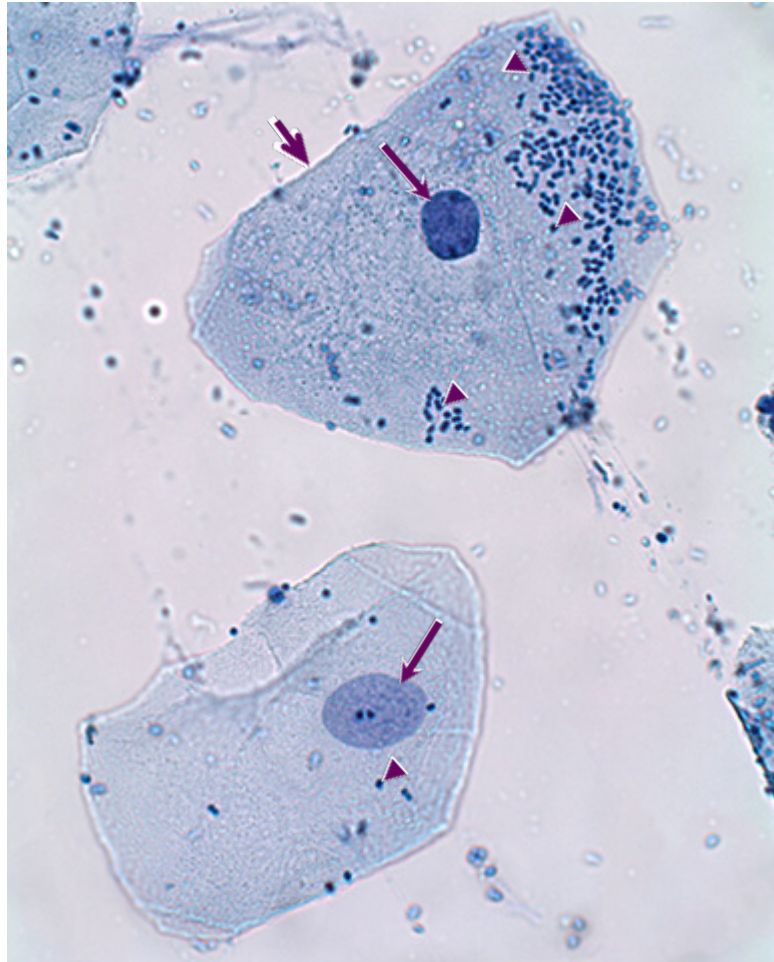


PST-cell-2: Cheek cell Visual Microscopy Kit



This poster shows two human cheek cells that were smeared from the inside of the cheek onto a slide and stained with methylene blue. This photomicrograph was taken at 1000X magnification to ensure visibility of bacteria. Specific items are indicated by each of the following arrows on this image:

- ➔ Indicates the nucleus of each cell
- ▶ Indicates visible bacteria on or under the cells
- ➔ Indicates the cell membrane

The methylene blue stains the nuclei and bacteria more darkly than the cytoplasm of the cell. The nuclei are inside the cells, while the bacteria lay on top of or under the cells. Since bacteria are found inside our mouths, it is typical to find them in these wet mount preparations. Note that it is difficult to spread cheek cells on a slide without folding them a little bit, so there are some ruffles on the cells as an artifact from smearing them.

For all Cell Zone®, Inc. posters

General Instructions:

- Move from room to room or maintain in one location
- Hang on any permanent or removable hook by the grommet
- Use a dry erase marker on the frame; erase the same day to ensure clarity
- Store multiple posters by stacking so that the grommet cannot scratch the front of a neighboring poster

Advantages with using posters:

- Hanging real cell micrographs makes your classroom or lab space look like a place where real science is done
- The posters can be hung as art or for learning
- The posters can be paired with microscopy or used separately
- You will always have a good example of what you want your students to see

Lessons for this specific poster

1. In combination with the Dynamic Cell Models from Cell Zone®, Inc., any student or group of students can choose one cell from within this poster to model. Once they have assembled their cheek cell model, they can then describe/defend their model to their classmates or to you.
2. Lessons when pairing the use of this poster with microscopy:
 - Put the microscope pointer on something within the microscope field and ask them to find something similar on the poster and identify it with their classmates.
 - Indicate an item on the poster by pointing or drawing on the frame with a dry erase marker and have your students find a similar thing in their microscope field; each student can do this or groups of students can do this and you can check.
 - If you do not use oil immersion objectives with your class, ask your students why they cannot see the bacteria in the microscope as clearly as on the poster. The reason is because they are just too small to see without further magnification.
3. Hand your students a dry erase marker and have them identify every part of a cheek cell that they can see clearly in the photomicrograph by writing on the poster frame. Either leave it open ended (thus giving them an option to identify things that they cannot see like the ER or ribosomes) or give them a specific list.
4. Ask your students if the bacteria in the poster are inside the cheek cells (no, they are not because they are separate cells).
5. Have your students compare this image to the standardized drawing or model of a typical animal cell. Ask them if they look the same. Have them identify all the things that they can see in both and figure out why they cannot see so many of the items indicated in the drawing or model; the reason is that those other items are too small for light microscopy to resolve.

