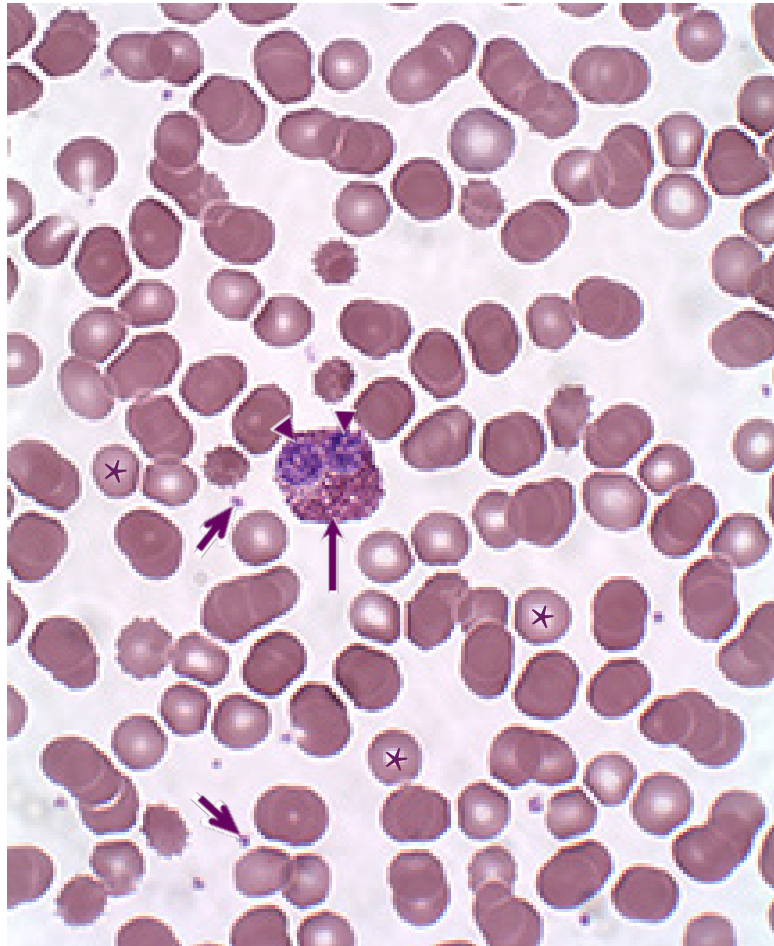


PST-blood-4: Eosinophil Visual Microscopy Kit



This poster shows one eosinophil among red blood cells and platelets. This sample was stained with Wright's stain. This photomicrograph was taken at 1000X magnification to ensure clarity of eosinophil. Specific items are indicated by each of the following arrows on this image:

- Indicates the eosinophil
- ▶ Indicates the two lobes of the nucleus
- Indicates platelets
- * Indicates red blood cells with a normal appearance

The Wright's stain turns any nuclei a dark purple. Only white blood cells, like eosinophils, contain nuclei. Eosinophils typically have a bilobed nucleus. The Wright's stain also reveals the acidic granules in the cytoplasm of eosinophils by staining them a bright reddish-pink. The platelets also turn a slight purple, but the red blood cells which lack nuclei do not stain. The color of the red blood cells in this micrograph is mainly due to the hemoglobin they contain. Note that some of the red blood cells appear ruffled, and this is merely an artifact from the slide preparation.

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. Lessons when pairing the use of this poster with microscopy:
 - Set up multiple microscopes so that different blood cells are indicated by the pointer in each scope. Have your students identify the microscope (or microscopes) that indicate the same cell type as in the poster. Try this with oil immersion microscopy as well as at high power.
 - Show your students the micrograph of an eosinophil and ask them to find a cell that looks the same in their microscopes. Also, ask them to find a cell that looks different, but still has a bilobed nucleus and granules, but with dark granules (a basophil).
 - If you do not use oil immersion objectives with your class, ask your students if they are able to see more detail in the micrograph, then ask them why they think more detail is visible in the micrograph. See if they can come up with the idea that they are using a lower magnification power.
 - Ask your students what the granules are for in the eosinophil. They do not have to know the full answer from just viewing the cells, but they may be able to generate the idea that they must be large vesicles for exocytosis.
2. Hand your students a dry erase marker and have them identify every item they can on the poster. Either leave it open ended (thus giving them an option to identify things that they cannot see) or give them a specific list.
3. 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 most of those other items are too small for light microscopy to resolve.

