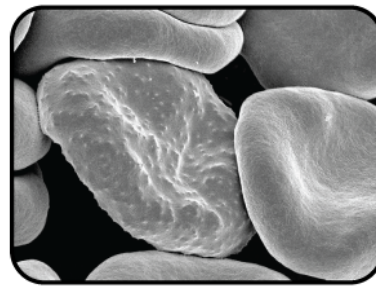
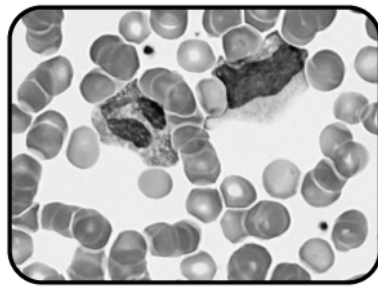


STUDENT PLAN

Activity 4: Virtual Electron Microscope

The microscope you have been using in this unit is known as a *light microscope* because it uses light to illuminate your slide. An *electron microscope* uses electrons to illuminate the object being examined. Compare the following images:



These are both images of red blood cells. The one on the left is from a light microscope. The one on the right is from an electron microscope. As you can see, electron microscopes provide a far more detailed image!

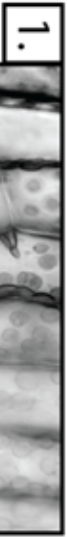
In this activity, you will try your hand at identifying plant and animal cells using electron microscope images. Use what you know about plant and animal cells and systems of cells to guess whether each image is from a plant or an animal. (You will not be able to see individual cells for one image — make your best guess according to the shape of the object.) Then, try to identify what each image is. Have fun!

If you get stuck, here are some clues:

1. These cells grow in water.
2. These cells provide a real lift.
3. This often needs a trim.
4. These cells may bring tears to your eyes.
5. You can eat the seeds, but this part isn't very tasty.
6. These cells are one big cover-up.

VIRTUAL ELECTRON MICROSCOPE

Directions: Examine these images and guess whether each image is from an animal or a plant. For plant, shade the number box green. For animal, use red. Then try to identify what each image is. Use the clues if you need help! Write your answer on the line.













- BEE WING
- HUMAN HAIR
- HUMAN SKIN CELLS
- SUNFLOWER STEM CROSS SECTION
- HYDRILLA PLANT CELLS
- ONION SKIN

Activity 4: Virtual Electron Microscope

In this activity your child will examine images taken by an electron microscope. She will determine first if each image is an animal cell or a plant cell (shading the number box red for an animal cell and green for a plant cell), and then identify the images based on their cellular structures and a series of clues. When she is done, ask her to share with you her favorite animal image and her favorite plant image.

Answer Key:

1. green, Hydrilla plant cells
2. red, bee wing
3. red, human hair
4. green, onion skin
5. green, sunflower stem cross section
6. red, human skin cells

PARENT PLAN