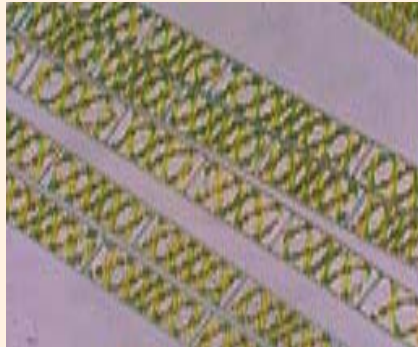
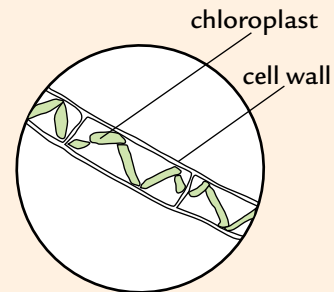


### Part B: Microscopy Drawing Made Easy

Below is a picture taken through a microscope of the alga *Spirogyra*. The diagram to the right shows what a biologist or biological illustrator might draw and how he or she would label the drawing. Did you know that some artists draw only scientific illustrations?



SPIROGYRA (ALGAE) X 400

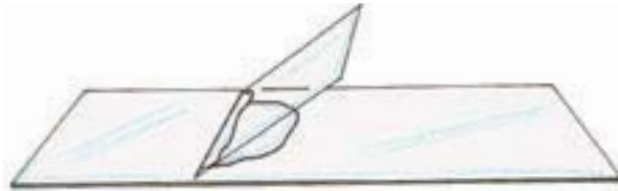


#### Some tips for better drawings:

- Use a sharp pencil and have a good eraser handy.
- Try to relax your eyes when looking through the eyepiece. You can cover one eye or learn to look with both eyes open. Try not to squint.
- Use a compass to draw a circle on your paper. Everything that you see on your slide will go in the circle.
- Look through your microscope at the same time as you do your drawing. Look through the microscope *more* than you look at your paper.
- Don't draw every small thing on your slide. Just concentrate on one or two of the most common or interesting things.
- You can draw things larger than you actually see them. This helps you show all of the details you see.
- Keep written words outside the circle.
- Use a ruler to draw the lines for your labels. Keep lines parallel—do not cross one line over another.
- Remember to record the level of magnification next to your drawing.

### Part C: Using the Microscope

- Clean your microscope slide and coverslip by rinsing them with water and gently wiping them dry.
- With your partner, look at the materials list posted by your teacher and decide what you will examine under the microscope.



PLACING THE COVERSIP

- Place the material (or a small piece of the material) flat on the center of your microscope slide.
- Use a dropper to place a drop of water directly onto your material. Carefully touch one edge of the coverslip to the water at an angle (as shown in the figure above). Slowly allow the coverslip to drop into place.
- Be sure that your microscope is set on the lowest power (shortest objective) before placing your slide onto the microscope stage. Center the slide so that the material is directly over the light opening and adjust the microscope settings as necessary.
 

**Hint:** To check that you are focused on the material that is on the slide, move the slide slightly while you look through the eyepiece—the material that you are focused on should move at the same time you move the slide.
- Begin by observing the sample with low power (usually the 4x objective). On Student Sheet 35.1, “Microscopy Drawings,” draw what you observe. When you find an area you would like to explore at higher magnification, use the stage clips to secure the slide.
 

**Hint:** If material on the slide is too bright to see, reduce the amount of light on the slide by slightly closing the diaphragm under the stage.
- Without moving the slide, switch to medium power (usually the 10x objective). Adjust the microscope settings as necessary, and prepare another drawing of what you observe.
 

**Hint:** If material on the slide is too dark to see, increase the amount of light on the slide by slightly opening the diaphragm under the stage.
- When you have finished using the microscope, turn off the microscope light and set the microscope back to low power (usually the 4x objective).