

UNIT
8

ACTIVITY

Spirogyra Observation Lab

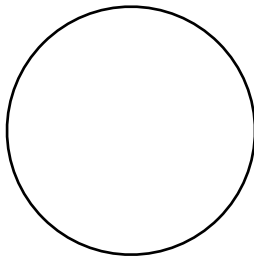
Purpose:

- To observe spirogyra and how they are organized

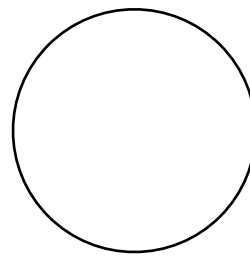
Procedure

1. Obtain your slide materials from the back of the room (slide and cover slip).
2. Bring these materials to the front. Ensure that the well side is facing in up so the water drop will be placed correctly on the slide.
3. Find a spirogyra on low power. They are easy to spot as they are long and green.
4. Sketch a drawing of the spirogyra on medium and high powers.

Title _____
Mag 100X



Title _____
Mag 400X



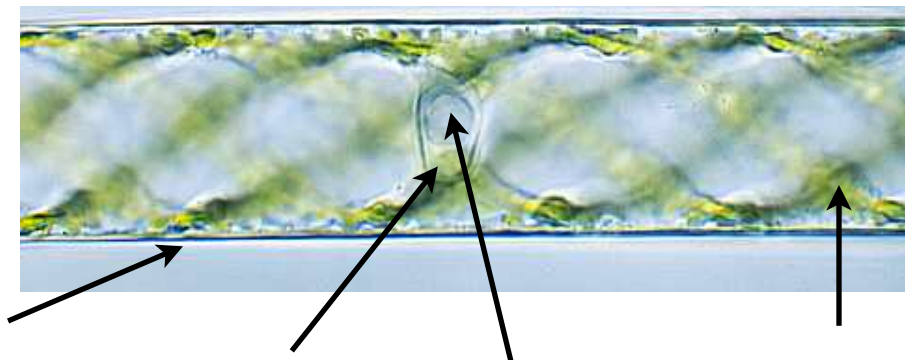
5. Spirogyra are considered to be algae because they _____

6. Their cells contain green organelles called _____ which allows them to carry out _____ and obtain energy from _____.
7. You can see these organelles arranged in a _____ pattern. This gives the organism its name. Most of the "empty space" in the cell is actually a _____ that stores water and other materials for the cell.
8. Spirogyra are _____ organisms. They are composed of many cells lined up end-to-end. (Hint: does this make it unicellular, multicellular, or a colony?)
9. To reproduce, spirogyra can use asexual reproduction or sexual reproduction. In sexual reproduction, the spirogyra will line up with another spirogyra, connect the cells with a "tube" and share genetic material with another it. This is known as _____.

10. Focus on an individual cell. You should notice a faint, egg-shaped (sunny side up) organelle. The inner part of this organelle is the nucleolus. Therefore, you know that this organelle is the _____.

Diagram

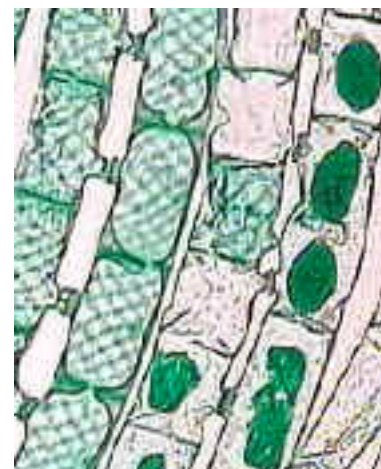
Label the following parts on the diagram: *cell wall*, *chloroplast*, *nucleus*, and *nucleolus*



Questions

1. Spirogyra feel slippery to the touch. Why do you think the surface is slippery?

2. The image below shows five filaments of spirogyra in conjugation. Circle two cells in conjugation. How do you know they are conjugating?



3. Predict what would happen if we placed this organism in a hypertonic environment (low water concentration outside the cells). Your answer should include the following words: *osmosis*, *shape*, *vacuole*.

4. Why do you think this organism is classified as a protist and not a plant?
