

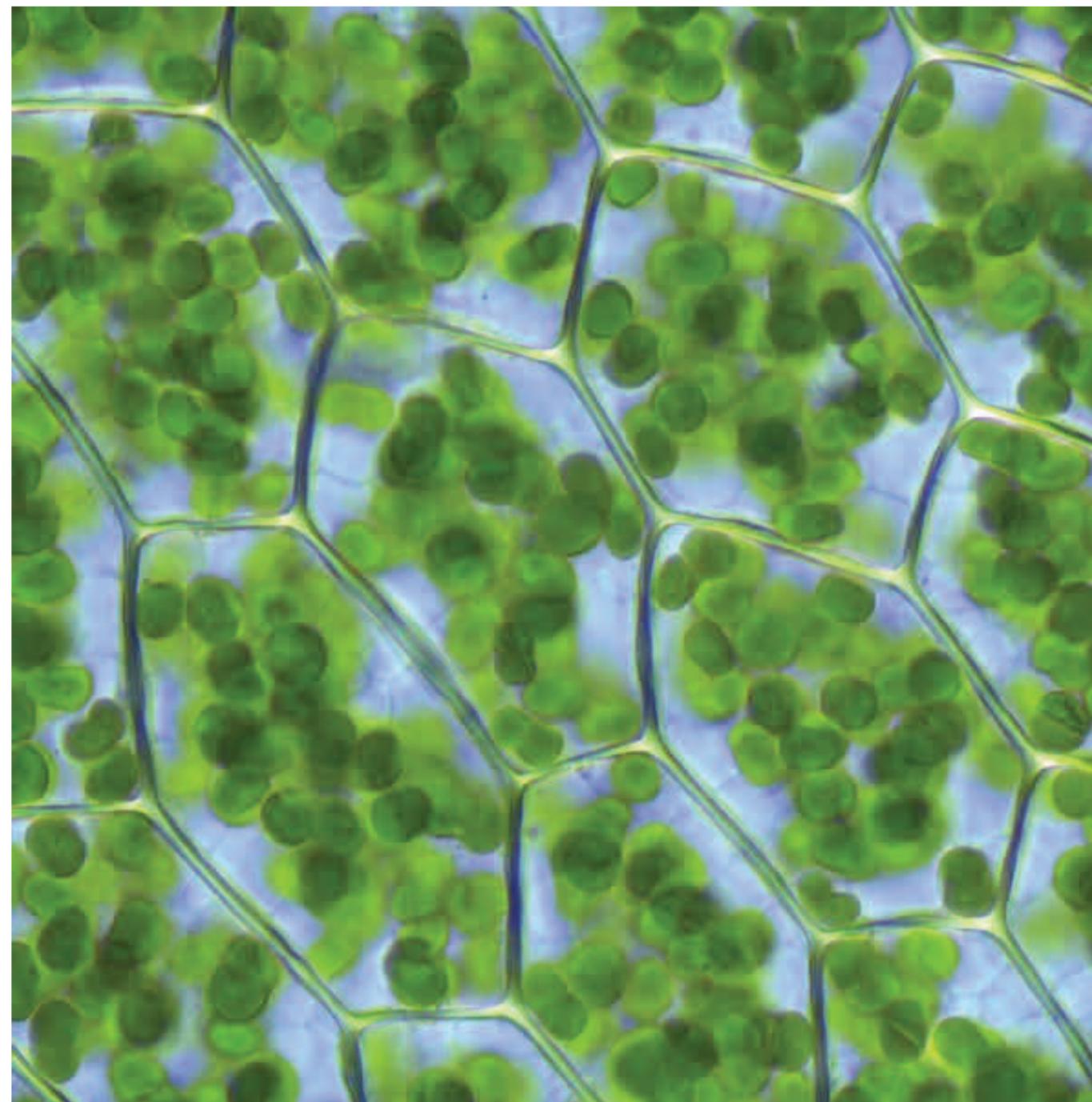
Notes/Reflections:



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Animal and Plant Cells • Embodying Science •



Help students learn about life science in a dramatic way!

Students will become a part of a cell by examining cell diagrams. Each student will use their body, voice and movement to become a particular part of the cell. After they own the character or cell, they are paired up to create dialogue between the different parts of the cell. Short, two part scenes explore the cell parts as well as their purpose and attributes as Cell Talk bring the cell to life before the students' very eyes. Through embodying the parts of animal and plant cells, students get a more in depth understanding of their functions. They explore the cell world from the point of view of its parts.

**Essential Question:** How can the process of acting increase comprehension in other subject areas?

**Process:**

REVIEW animal and plant cells

- Let's talk about cells. What's a cell? What kind of cells exist?
- Let's look at animal and plant cells.
- Let's talk about their parts and the function of each part.
- Give a movement and sound for each cell part. The movement/sound should reflect the function of each part.

CELL CHARACTERS

- Hand out diagrams of plant and animal cells.
- Each student gets one cell diagram.
- Each diagram should have one part circled on it.
- Ask the student to write down the type of cell that is pictured on their visual.
- Ask the students to study the circled part of their pictured cell.
- Write down the following:
  - Name of cell part
  - What shape are you?
  - What size are you?
  - What color are you?
  - What is your job?
  - Give their cell part a personal name (i.e., Vicky Vacuole)
- Ask students to use their body and a sound to become their cell part.
- Ask students to introduce themselves all at the same time using a voice different than their own voice.
- Now go around the room and ask some to introduce themselves to the rest of the class.
- Encourage them to use a different voice and their whole bodies with movement.
- Interview one student and get them to bring out the adjectives.

CELL TALK

- Pair students up to represent two different parts of the same cell (animal or plant).
- Ask them to introduce themselves as the cell part to each other and tell about themselves and their function based on the list above.
- Imagine that you are inside the cell and you bump into each other and start to talk.
- What would you talk about?
- I want you to introduce yourselves and then talk about what you do for the cell and why you are so important to its survival.
- Make sure that you let us know which type of cell that you are a part of.
- Now let's write that down in the form of dialogue.
- Give students 5 minutes to write a short scene and then ask each group to share their scenes.

**Assessment**

- Student accurately identifies and describes assigned cell type and cell part.
- Student portrays cell part with bodies and movement.
- Student writes cell talk dialogue with appropriate vocabulary and grammar.

**Materials**

- Cell review PowerPoint
- Cell Visuals – half the class needs the plant cell diagram, the other half needs the animal cell diagram. Each visual should have one part circled.
- Lined note pads
- Pencils

**Vocabulary**

**Animal Cell**

Animals are made up of these cells. They are round and do not have a cell wall.

**Plant Cell**

Rectangular with a cell wall. They make up all plants.

**Cell**

smallest unit of an organism that can carry on life functions

**Unicellular**

a type of organism that is made up of one cell

**Multicellular**

a type of organism that is made up of many cells

**Mitochondria**

Cell organelle that breaks down food into energy. It gives and stores energy.

**Vacuole**

Stores water and nutrients for the cell; very large in plant cells.

**Organelle**

a tiny cell structure that carries out a specific function within the cell

**Tissue**

a group of similar cells that perform the same function

**Organ**

groups of tissues that work together

**Chlorophyll**

a green chemical in plant cells that allow plants to use sun energy for making food

**Ribosomes**

The complex of RNA and protein molecules that can be found either floating freely or attached to the surface of rough endoplasmic reticulum. These are the sites of protein synthesis and are called protein factories of the cell.

**Cell Wall**

adds protection and hardness

**Nucleus**

organelle that controls all the activities of a cell; the cell's control center

**Cell Membrane**

Both cells contain this part. A thin, flexible barrier around a cell, it protects the cell while allowing food and waste to enter and leave the cell.

**Cell Wall**

A protective outer covering that lies just outside the cell membrane of PLANT cells

**Cytoplasm**

A liquid that fills the plant and animal cells. It is jelly-like and holds all the parts in place.

**Nucleus**

part in both cells that controls the cell like a brain

**Chloroplast**

A structure that contains chlorophyll and is found in plant cells; uses energy from sunlight to make energy-rich food. Responsible for making the plant green.

**Dialogue**

a conversation between two or more persons

**Scene**

a single situation or unit of dialogue in a play

## Georgia Performance Standards

**SCIENCE**

**GRADE 5**

**S5L3:** Students will diagram and label parts of various cells (plant, animal, single-celled, multi-celled).

b. Identify parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplasts) and of an animal cell (membrane, cytoplasm, and nucleus) and determine the function of the parts.

c. Explain how cells in multi-celled organisms are similar and different in structure and function to single-celled organisms.

**THEATER**

**GRADE 5**

**TAES5.2:** Developing scripts through improvisation and other theatrical methods

**TAES5.3:** Acting by developing, communicating, and sustaining roles within a variety of situations and environments

**TAES5.7:** Integrating various art forms, other content areas, and life experiences, to create theatre

**TAES5.11:** Engaging actively and appropriately as an audience member in theatre or other media experiences

## National Standards

**SCIENCE**

**NS.5-8.3:** As a result of their activities in grades 5-8, all students should develop an understanding of:

- Structure and function in living systems

**THEATRE ARTS**

**Standard 2:** Acting by assuming roles and interacting in improvisations

**Standard 5:** Researching by finding information to support classroom dramatizations