

The following questions may be utilized as a scaffold to the Unit Understandings and Questions.

What should be considered when appropriately conducting a scientific investigation and why?

What are some safe practices to use during lab and field investigations?

How do we determine when to use each type of safety equipment?

What is the proper procedure for using each piece of safety equipment?

Why is proper management of resources and proper disposal of materials important?

What considerations might be required, during a laboratory investigation, for the conservation of resources and proper disposal or recycling of materials?

In what ways can we analyze, critique, and evaluate scientific explanations?

Why should we analyze, critique, and evaluate scientific explanations?

In what ways can models represent the natural world?

In what ways are models useful?

What are some limitations of given models?

What are some advantages of given models?

In what ways can we collect data?

How do we determine which equipment and technology to use during an investigation?

How do we appropriately use given tools and equipment?

Why is it important for a scientist to maintain thorough documentation of all work?

What is a cell?

What is cell theory?

Where do all cells come from?

What functions are carried out by all living things?

What scientific contributions did Schleiden, Schwann, and Virchow make toward the cell theory?

What are the levels of organization in plants and animals?

How do the levels of organization increase in complexity?

What is a tissue?

What is an organ?

What is an organ system?

The following questions may be utilized as a scaffold to the Unit Understandings and Questions.

What determines that something is an organism?

What is an organelle?

What is meant by structure?

What is meant by function?

What are the structures of plant cells?

What are the structures of animal cells?

How do plant and animal cells differ in terms of structure and function?

What is the function of each of the following organelles?

- Cell membrane
- Cell wall
- Nucleus
- Cytoplasm
- Mitochondrion
- Chloroplast
- Vacuole

What is an organic compound?

How it be determined if a chemical compound is organic?