Directions: Read the information below.

Every living thing on the planet is made of cells. These cells are what make our skin, our organs, and even the plants we find in the garden. If it's living – it has cells. It is impossible to see cells with our bare eyes. Biologists must use a microscope to see cells. Humans have trillions of cells in our bodies, each one very small – smaller than even a speck of dust.

Cells are also the mechanism for how we grow. Our cells can divide and multiply, doing this constantly. When we generate new cells it allows us to grow and develop. Babies start out as a single cell but through the process of cell division they develop to become the babies we are used to seeing as newborns. Even as adults when we are done growing our cells are still going through a regeneration process. Old cells are seen by us as dead skin, which gets scrubbed off by us when we bathe or shower.

Plants also have cells because they are living organisms too. The cells of plants look somewhat different than human cells. That's because plants have different needs than humans, including the need to perform a process called photosynthesis (the process by which plants make their own food). Nevertheless, both plants and animals have many cells that make up their being.

One notable exception to the concept of many cells are single-celled organisms. An example of this is a prokaryote. A prokaryote could be bacteria, for example. Single-celled organisms are far more simple than multi-cellular organisms, but we know they can still affect us. This is why, even if they are only a single cell, we must wash our hands to stay free from harmful bacteria.

Directions: Answer the questions below.

- 1. Describe one way the text mentioned animals and plants are similar.
- 2. According to the text, how are we different than bacteria?
- 3. Explain how humans grow and develop. Consider the question that was asked at the beginning of class, how does our skin adapt to accommodate the growth of our bones?

4. As you explore through the online microscopes, record each object you observe as well as some traits of that object:

Object	Sketch of what it looked like under the Microscope	My Comments

