Parent Guide – Cells Unit

During this unit students will be learning about cells and their functions as well as macromolecules, photosynthesis, and cellular respiration. Students will be expected to explain how the cell structures and organelles interact to maintain homeostasis. Homeostasis is a term that students will continue to see throughout the semester so they need to be sure that they are familiar with this term. In simple terms, homeostasis is the ability of a system to maintain balance. For example, when the body gets too hot it begins to sweat; this is an example of the body trying to maintain a constant temperature and is a perfect example of homeostasis. Students will be learning about the organelles found within cells; The organelles that students will be responsible for knowing include the nucleus, cytoplasm, cell membrane, cell wall, chloroplasts, lysosome, Golgi apparatus, endoplasmic reticulum, vacuoles, ribosomes, and mitochondria. Additionally, students will be learning about cellular reproduction as well as cell transport. Students will need to be able to differentiate between binary fission, mitosis, and meiosis and identify the roles of each of these types of cell reproduction. Students should also be familiar with the four major macromolecules by the end of this unit, which include carbohydrates, proteins, lipids, and nucleic acids. Lastly, students will need to be familiar with both photosynthesis and cellular respiration.