

Grade 6 LabLearner Final Study Guide

Cell 1: Properties of Matter

- Elements are the smallest components of matter. Compounds are composed of elements.
- All elements and compounds have properties; for example, density, color, and chemical reactivity.
- Compounds composed of similar elements may have similar properties.
- Compounds composed of the same element may have different properties.
- Density = Mass / Volume

Cell 2: Weathering and Erosion

- Weathering is caused by acid rain. (Chemical change)
- Erosion is caused by the movement of earth by wind and/or water. (Physical change)
- Weathering and erosion together form new soil.

Cell 3: Space

- The earth's tilted axis causes our seasons.
- Lunar (moon) phases occur because of the positioning of the sun, moon, and earth.
- Review the phases of the moon for 1st quarter and 3rd quarter.

Cell 4: Energy

- There are many forms of energy: chemical, electrical, mechanical, etc.
- Potential energy is stored energy.
- Kinetic energy is energy of movement.
- Objects move in a straight line unless acted upon by a force: gravity, push, pull
- The higher a pendulum, the greater the wattage, the greater the potential energy.
- An example of chemical potential energy is vinegar and baking soda.
- Energy is neither created nor destroyed – it changes form.

Cell 5: Photosynthesis

- Photosynthesis is a process by which plants make their own food.
- The process of chromatography allows us to see the colored pigments in a substance.
- Photosynthesis occurs where chloroplasts exist (leaves and stems)
- Photosynthesis requires carbon dioxide; oxygen is released.
- If a plant is placed in water to grow the dissolved oxygen in the water will increase.

Cell 6: Sound Waves

- Frequency and wavelength have an inverse relationship (as frequency decreases wavelength increases)
- The speed of sound is constant in a particular medium (water, oil, air) regardless of wavelength and frequency.

Cell 7: Light

- Light can be transmitted, absorbed, reflected or refracted.
- Transmittance and absorption have an inverse relationship.
- The darker a solution the more light it will absorb.
- Refraction is the bending of light; objects may appear larger in water.
- The angle of incidence = the angle of reflection
- If an object appears BLACK through a colored filter, the color of the filter absorbs the color of the object.