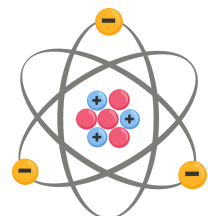


- In most cases, there are essentially no attractive forces between particles. This means that a gas has nothing to hold a specific shape or volume.
- A gas will change volume to fit the volume of the container. In general, solids are denser than liquids, which are denser than gases. . The particles in the solid are touching with very little space between them. The particles in a liquid usually are still touching but there are some spaces between them.
- Pure water transitions between the solid and liquid states at 32°F (0°C) at sea level. This temperature is referred to as the melting point when rising temperatures are causing ice to melt and change state from a solid to a liquid (water).
- The boiling point of water is 212 °F (100 °C)
- Familiar examples of physical properties include density, color, hardness, melting and boiling points, and electrical conductivity. We can observe some physical properties, such as density and color, without changing the physical state of the matter observed.
- Density is a word we use to describe how much space an object or substance takes up (its volume) in relation to the amount of matter in that object or substance (its mass).
- Matter is anything that takes up space and can be weighed.
- two or more substances that are mixed together but not chemically combined and that may vary in proportion.
- A molecule is two or more atoms connected by chemical bonds, which form the smallest unit of a substance that retains the composition and properties of that substance.
- properties are the qualities and characteristics of a substance that describe and identify it
- A substance that is dissolved in a solution is called a solute.
- A solution is a homogeneous mixture of one or more solutes dissolved in a solvent.
- solvent: the substance in which a solute dissolves to produce a homogeneous mixture.
- Energy is the ability to do work and a very important part of how we live. There are different types of energy like potential energy, kinetic energy, light energy, electrical energy, and even solar energy! For example, plants use energy from the sun to grow. Animals depend on these plants for their food.
- Potential energy is type of stored energy that an object or system of objects may have based on their size, shape, position, or even material they are made from.
- Kinetic energy is the energy of motion, observable as the movement of an object or subatomic particle.
- Atom nucleus (center) includes the protons (positively charged) and the neutrons (without charge). The atom's outermost regions are called electron shells and have the electrons (negative charged). Proton: Positively charged subatomic particle forms part of an atom's nucleus, and decides an element's atomic number.

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- The most significant difference between the static electricity and the current electricity is that in that static electricity the charges are at rest and they are accumulated on the surface of the insulator, whereas, in current electricity the electrons are in state of motion inside the conductor.
- An open circuit is one where the continuity has been broken by an interruption in the path for current to flow. A closed circuit is one that is complete, with good continuity throughout.
- An atom is a particle of matter that uniquely defines a chemical element. An atom consists of a central nucleus that is surrounded by one or more negatively charged electrons. The nucleus is positively charged and contains one or more relatively heavy particles known as protons and neutrons.
- to cause something to come toward something else,.
- A cable is a thick wire, or a group of wires inside a rubber or plastic covering, which is used to carry electricity or electronic signals.
- A conductor, or electrical conductor, is a substance or material that allows electricity to flow through it. In a conductor, electrical charge carriers, usually electrons or ions, move easily from atom to atom when voltage is applied.
- An electron is a negatively charged subatomic particle that can be either bound to an atom or free (not bound). An electron that is bound to an atom is one of the three primary types of particles within the atom -- the other two are protons and neutrons.
- Materials that do not allow electricity to pass through them are called insulators. Insulators oppose electric current and so they are used as a protection from the dangerous effects of electricity. Examples of insulators are glass, air, wood, plastic and rubber.
- A generator is a machine which produces electricity.
- A molecule is two or more atoms connected by chemical bonds, which form the smallest unit of a substance that retains the composition and properties of that substance.
- REPEL: to force someone or something to stop moving
- The highest surface part of a wave is called the crest, and the lowest part is the trough. The vertical distance between the crest and the trough is the wave height. The horizontal distance between two adjacent crests or troughs is known as the wavelength.
- The order of wavelengths can be remembered by the mnemonic "Roy G Biv" for red, orange, yellow, green, blue, indigo (the blue/violet border), and violet.
- A high energy wave is characterized by a high amplitude; a low energy wave is characterized by a low amplitude. As discussed earlier in Lesson 2, the amplitude of a wave refers to the maximum amount of displacement of a particle on the medium from its rest position.
- Transparent materials are materials that allow one or more of the frequencies of visible light to be transmitted through them; whatever color(s) is/are not transmitted by such objects, are typically absorbed by them.
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- Reflection is the act of light reflecting back when it hits a medium on a plane.  
Refraction is the process by which light shifts its path as it travels through a material, causing the light to bend.
- vibration, periodic back-and-forth motion of the particles of an elastic body or medium,
- We can define pitch simply as how high or low a note sounds.
- Volume is a measure of how loud or soft something sounds
- SHADOW a dark area or shape produced by a body coming between rays of light and a surface.
- transmit: cause (something) to pass on from one place or person to another.
- AMPLITUDE the maximum extent of a vibration or oscillation, measured from the position of equilibrium.