Lesson 2.2: The Science of Food – Key Terms

Adenosine tri-phosphate (ATP)	A compound composed of adenosine and three phosphate groups that supplies energy for many biochemical cellular processes by undergoing enzymatic hydrolysis.
Amino Acid	An organic monomer which serves as a building block of proteins.
Calorie	The amount of heat energy required to raise the temperature of 1 g of water by 1°C; also the amount of heat energy that 1 g of water releases when it cools by 1°C. The Calorie (with a capital C), usually used to indicate the energy content of food, is a kilocalorie.
Carbohydrate	A sugar in the form of a monosaccharide, disaccharide or polysaccharide.
Chemical Bond	An attractive force that holds together the atoms, ions, or groups of atoms in a molecule or compound.
Chemical Indicator	A substance (as a dye) used to show visually usually by its capacity for color change, the condition of a solution with respect to the presence of free acid or alkali or some other substance.
Chemical Reaction	Chemical transformation or change; the interaction of chemical entities.
Compound	A substance consisting of two or more elements in a fixed ratio.
Covalent bond	A type of strong chemical bond in which two atoms share one or more pairs of valence electrons.
Dehydration Synthesis	A chemical reaction in which two molecules are bonded together with the removal of a water molecule.
Disaccharide	A double sugar molecule made of two monosaccharides bonded together through dehydration synthesis.
Element	The smallest particle of a substance that retains all the properties of the substance and is composed of one or more atoms.
Glucose	A monomer of carbohydrate, simple sugar.
Homeostasis	The maintenance of relatively stable internal physiological conditions (as body temperature or the pH of blood) in higher animals under fluctuating environmental conditions.
Hydrolysis	A chemical process that splits a molecule by adding water.
Ionic bond	A chemical bond resulting from the attraction between oppositely charged ions.
Lipid	One of a family of compounds including fats, phospholipids, and steroids that is insoluble in water.
Macromolecule	A type of giant molecule formed by joining smaller molecules which includes proteins, polysaccharides, lipids, and nucleic

	acids.
Molecule	Two or more atoms held together by covalent bonds.
Monomer	The subunit that serves as the building block of a polymer.
Monosaccharide	A single sugar molecule such as glucose or fructose, the simplest type of sugar.
Nutrient	A substance that is needed by the body to maintain life and health.
Polymer	A large molecule consisting of many repeating chemical units or molecules linked together.
Polysaccharide	A polymer of thousands of simple sugars formed by dehydration synthesis.
Protein	A three dimensional polymer made of monomers of amino acids.