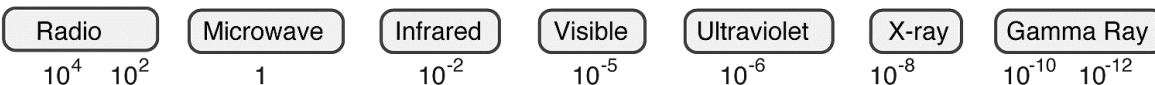
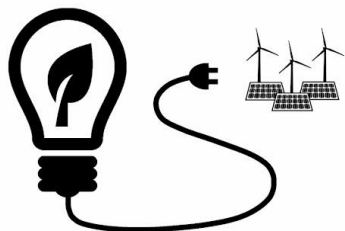
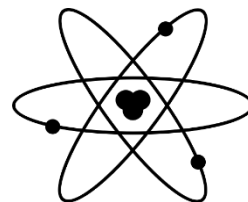




# Florida NGSSS Physical Science 8<sup>th</sup> Grade Checklist



Wavelength in centimeters

About the size of...



Buildings



Humans



Honey Bee



Pinhead



Protozoans



Molecules



Atoms



Atomic Nuclei

Benchmark	Unit	Date Covered	Date Covered	Date Covered
SC.8.N.1.1: Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	1			
SC.8.N.1.2: Design and conduct a study using repeated trials and replication.	1			
SC.8.N.1.3: Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.	1			
SC.8.N.1.4: Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.	1			
SC.8.N.1.5: Analyze the methods used to develop a scientific explanation as seen in different fields of science.	1			
SC.8.N.1.6: Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.	1			
SC.8.N.2.1: Distinguish between scientific and pseudoscientific ideas. <b>NOT ASSESSED</b>	1			
SC.8.N.2.2: Discuss what characterizes science and its methods. <b>NOT ASSESSED</b>	1			
SC.8.N.3.1: Select models useful in relating the results of their own investigations. <b>NOT ASSESSED</b>	1			
SC.8.N.3.2: Explain why theories may be modified but are rarely discarded.	1			
SC.8.N.4.1: Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels. <b>NOT ASSESSED</b>	1			
SC.8.N.4.2: Explain how political, social, and economic concerns can affect science, and vice versa. <b>NOT ASSESSED</b>	1			

## Nature of Science: Unit 1

Benchmark	Unit	Date Covered	Date Covered	Date Covered
SC.8.P.8.1: Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.	2			
SC.8.P.8.2: Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.	2			
SC.8.P.8.3: Explore and describe the densities of various materials through measurement of their masses and volumes.	2			
<b>SC.8.P.8.4:</b> Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.	2			
<b>SC.8.P.8.5:</b> Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.	2			
SC.8.P.8.6: Recognize that elements are grouped in the periodic table according to similarities of their properties.	2			
SC.8.P.8.7: Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).	2			
SC.8.P.8.8: Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.	2			
SC.8.P.8.9: Distinguish among mixtures (including solutions) and pure substances.	2			
SC.8.P.9.1: Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.	2			
<b>SC.8.P.9.2:</b> Differentiate between physical changes and chemical changes.	2			
SC.8.P.9.3: Investigate and describe how temperature influences chemical changes.	2			

## Properties and Changes in Matter: Unit 2

Benchmark	Unit	Date Covered	Date Covered	Date Covered
<b>SC.7.P.10.1:</b> Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.	3			
SC.7.P.10.2: Observe and explain that light can be reflected, refracted, and/or absorbed.	3			
<b>SC.7.P.10.3:</b> Recognize that light waves, sound waves, and other waves move at different speeds in different materials.	3			
SC.7.P.11.1: Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	4			
<b>SC.7.P.11.2:</b> Investigate and describe the transformation of energy from one form to another.	4			
SC.7.P.11.3: Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.	4			
<b>SC.7.P.11.4:</b> Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.	4			
SC.6.P.11.1: Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.	5			
SC.6.P.12.1: Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.	5			
<b>SC.6.P.13.1:</b> Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.	5			
SC.6.P.13.2: Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.	5			
<b>SC.6.P.13.3:</b> Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both..	5			

**Waves and Light, Energy and Heat & Energy, Motion & Forces: Units 3, 4, & 5**