CHECKLIST FOR EIGHTH GRADE SCIENCE *CHECKS FOR UNDERSTANDING*

✓	date	Checks for Understanding
		Embedded Inquiry
		0807.Inq.1 Design and conduct an open-ended scientific investigation to answer a question that includes a control and appropriate variables.
		0807.Inq.2 Identify tools and techniques needed to gather, organize, analyze, and interpret data collected from a moderately complex scientific investigation.
		0807.Inq.3 Use evidence from a dataset to determine cause and effect relationships that explain a phenomenon.
		0807.Inq.4 Review an experimental design to determine possible sources of bias or error, state alternative explanations, and identify questions for further investigation.
		0807.Inq.5 Design a method to explain the results of an investigation using descriptions, explanations, or models.
		Embedded Technology & Engineering
		0807.T/E.1 Use appropriate tools to test for strength, hardness, and flexibility of materials.
		0807.T/E.2 Apply the engineering design process to construct a prototype that meets certain specifications.
		0807.T/E.3 Explore how the unintended consequences of new technologies can impact society.
		0807.T/E.4 Research bioengineering technologies that advance health and contribute to improvements in our daily lives.
		0807.T/E.5 Develop an adaptive design and test its effectiveness.
		Standard 1 - Cells ***Not addressed at this level***
		Standard 2 - Interdependence ***Not addressed at this level***
		Standard 3 - Flow of Matter and Energy ***Not addressed at this level***
		Standard 4 - Heredity ***Not addressed at this level***
		Standard 5 - Biodiversity and Change ***Not addressed at this level***
		0807.5.1 Select characteristics of plants and animals that serve as the basis for developing a classification key.
		0807.5.2 Create and apply a simple classification key to identify an organism.
		0807.5.3 Compare and contrast the ability of an organism to survive under different environmental conditions.
		0807.5.4 Collect and analyze data relating to variation within a population of organisms.
		0807.5.5 Prepare a poster that illustrates the major factors responsible for reducing the amount of global biodiversity.
		0807.5.6 Prepare graphs that demonstrate how the amount of biodiversity has changed in a particular continent or biome.
		0807.5.7 Create a timeline that illustrates the relative ages of fossils in sedimentary rock layers.
		Standard 6 - The Universe ***Not addressed at this level***
		Standard 7 – The Earth ***Not addressed at this level***
		Standard 8 - The Atmosphere ***Not addressed at this level***
		Standard 9 – Matter
		0807.9.1 Identify atoms as the fundamental particles that make up matter.
		0807.9.2 Illustrate the particle arrangement and type of motion associated with different states of matter.
		0807.9.3 Measure or calculate the mass, volume, and temperature of a given substance.
		0807.9.4 Calculate the density of various objects.

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		0807.9.5 Distinguish between elements and compounds by their symbols and formulas.
		0807.9.6 Differentiate between physical and chemical changes.
		0807.9.7 Describe how the characteristics of a compound are different than the characteristics of their component parts.
		0807.9.8 Determine the types of interactions between substances that result in a chemical change.
		0807.9.9 Explain how the chemical makeup of the atmosphere illustrates a mixture of gases.
		0807.9.10 Identify the atomic number, atomic mass, number of protons, neutrons, and electrons in an atom of an element using the periodic table.
		0807.9.11 Use investigations of chemical and physical changes to describe the Law of Conservation of Mass.
		0807.9.12 Differentiate between the reactants and products of a chemical equation.
		0807.9.13 Determine whether a substance is an acid or a base by its reaction to an indicator.
		Standard 10 – Energy ***Not addressed at this level***
		Standard 11 – Motion **Not addressed at this level**
		Standard 12 - Forces in Nature
		0807.12.1 Create a diagram to explain the relationship between electricity and magnetism.
		0807.12.2 Produce an electromagnet using a bar magnet and a wire coil.
		0807.12.3 Experiment with an electromagnet to determine how to vary its strength.
		0807.12.4 Create a chart to distinguish among the earth's magnetic field, and fields that surround a magnet and an electromagnet.
		0807.12.5 Explain the difference between mass and weight.
		0807.12.6 Identify factors that influence the amount of gravitational force between objects.
		0807.12.7 Explain how the motion of objects in the solar system is affected by gravity.