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## Trinity Lutheran School Middle School Physical Science Science Essential Standards Chart

Essential Standards Chart: At Trinity Lutheran, we expect children to learn?						
Grade: Middle School		Subject: Science				
Standard Description	Common Core Standards	Proficiency	Prerequisite Skill	Assessment	When Taught?	Extension Standards
What is the essential standard to be learned? Written in I Can Statements		What does proficient look like? Provide an example and/or description.	What prior knowledge, skills, and/or vocabulary is/are needed for a student to master this standard?	What assessments will be used to measure student mastery?	When will this standard be taught?	What will we do when students have learned the essential standard(s)?
I can develop models to describe the atomic composition of simple molecules and extended structures.	MS-PS1-1	Students can create a model that describes the atomic composition of simple molecules and extended structures.		Lab Project Rubric		N/A
I can develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	MS-PS1-4	Students can create a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.		Lab Project Rubric		N/A

I can analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	MS-PS1-2	Students can observe substances before and after they interact to determine if a chemical reaction has occurred and then analyze and interpret data.		Lab Project Rubric		I can make inferences based on what I know of how substances interact to determine if a chemical reaction will occur.
I can construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	MS-PS2-4	Students can debate using evidence that gravitational interactions are attractive and depend on the masses of interacting objects.		Written Assessment		N/A
I can construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	MS-PS3-5	Students can use their knowledge of kinetic energy to construct, use and present arguments that the kinetic energy of an object changes, energy is transferred to or from the object. I can show understanding through completion of a lab.		Written Assessment		N/A
I can use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the	MS-PS4-1	Students can calculate the amplitude of a wave and discuss how it is related to the energy in a wave.		Written Assessment		N/A

energy in a wave.						
I can develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials	MS-PS4-2	Students can create a model to describe that waves are reflected, absorbed, or transmitted through various materials.		Lab Project Rubric		N/A