



Trinity Lutheran School Fourth Grade Science Essential Standards Chart

Essential Standards Chart: At Trinity Lutheran, we expect children to learn?

Grade: 4th Grade		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 proficiency 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 demonstrate understanding and provide evidence that energy can be transferred from place to place by sound, light, heat and electric current.	4-PS3-2	Students can provide evidence that energy can be transferred from place to place by sound, light, heat, and electric current.	Students need to understand how energy is transferred. Understanding vocabulary such as waves, electric current, etc.	Measurement Assessment	CKSci Unit 1: Energy Transfer and Transformation.	I can solve word problems with my understanding of the transfer of energy.
I can apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	4-PS3-4	I can design, test, and refine a device that converts energy from one form to another.	Students need to understand how energy is transferred. Students need to have examples of scientific designs already used to convert energy from	Project Rubric	CKSci Unit 1: Energy Transfer and Transformation.	I can collect more information and create a more detailed design, test, and refine a device that converts energy from one form to another.

			form to another.			
I can develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	4-PS4-1	Students can create a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	Understanding vocabulary such as model, waves, amplitude, and wavelength.	Project Rubric	CKSci Unit 2- Investigating Waves	I can create different models of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
I can develop a model of how eyes work	4-PS4-2	Students can create a model of how eyes work.	Understanding how eyes work as well as the parts in the eye.	Project Rubric	CKSci Unit 3: Structures and Functions of Living Things	I can start to explore and collect knowledge of other parts of the human body.
I can make observations and measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, or vegetation.	4-ESS2-1	Students can measure the effects of weathering or the rate of erosion by water, ice, or vegetation.	Understanding vocabulary such as weathering, erosion, and vegetation. Students need to know what tools to use to make these measurements.	Measurement Assessment	CKSci Unit 4: Process that Shape Earth.	I can collect more evidence and make more observations and measurements to provide more evidence of the effects of weathering or the rate of erosion by water, ice, or vegetation.
I can plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	3-5-ETS1-3	Students can plan and carry out fair tests where variables are controlled and failure points are considered to identify improvements of a prototype.	Understanding vocabulary such as variables, controlled and failure points, and models. Students need to know how to test this as well as how to make this test fair.	Project Rubric	CKSci Unit 5- Using Natural Resources for Energy	I can plan and carry out more complex fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
I can generate and compare multiple solutions to reduce	4-ESS3-2	Students can generate and compare multiple	Students need to know what natural Earth processes	Measurement Assessment or Project Rubric	CKSci Unit 5- Using Natural Resources for Energy	I can collect more information and generate and

impacts of natural Earth processes on humans		solutions to reduce impacts of natural Earth processes on humans.	impact humans as well as the vocabulary that goes along with that.			compare multiple solutions to reduce impacts of natural Earth processes on humans.
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