



Fifth Grade Science

Purpose

The rubrics help teachers and students authentically monitor growth and progress toward end-of-the-year learning standards. They support district consistency across teachers and grading practices. The rubrics provide a broad lens to the intricate and multifaceted learning that takes place throughout the school year. Additional ongoing assessments are utilized to provide detailed data regarding student progress.

Philosophy Statement

Waukee students will construct knowledge about the natural world through exploration, questions, and critical thinking. Learners will utilize process skills and innovative thinking to collaboratively participate in ongoing scientific inquiry for the future.

Fifth Grade Science

Statement	Exceeds	Secure	Developing	Beginning
Observes patterns through organization, classification and relationships. (Patterns)	Uses patterns to identify and interpret cause and effect relationships in additional real world settings.*	Uses patterns to identify cause and effect relationships and use graphs and charts to identify patterns in data.	Graphs and charts observable data to represent a pattern.	Analyzes and interprets data for evidence to identify patterns.
Investigates and explains causal relationships through mechanisms across contexts. (Cause and Effect)	Justifies and defends the analysis of the cause and effect investigation.*	Analyzes and creates multiple hypotheses by designing and conducting investigations where components (cause) are changed to create different results (effects).	Designs and conducts investigations with multiple hypotheses where components (cause) are changed to create different results (effects).	Conducts investigations where components (cause) are changed to create different results (effects).
Recognizes how changes in scale, proportion, or quantity impact a system's structure or performance. (Scale, Proportion and Quantity)	Creates a scale model of natural objects and observable phenomena.*	Analyzes natural objects and observable phenomena using standard units to measure and describe physical quantities on a large and small scale.	Identifies natural objects and observable phenomena using standard units to measure and describe physical quantities on a large and small scale.	Identifies natural objects and observable phenomena using standard units to measure and describe physical quantities on a small scale.
Examines systems and system models for components and their interactions. (Systems and System Models)	Assesses and evaluates how a change in a system's components can impact their interactions.*	Constructs a model that demonstrates interactions between components of multiple systems.	Identifies the components of a system and explains how they interact in a system.	Identifies the components of a system.

Tracks the transfer of energy and matter within, into, or out of any system. (Energy and Matter)	Compares and contrasts how energy and matter are transferred in various cycles.*	Constructs a cycle to demonstrate how energy and matter are transferred in living things and non-living things.	Identifies components of a cycle to demonstrate how energy and matter can be transferred in living and non-living things.	Identifies where energy and matter are found.
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The asterisk () denotes one possible way a student could demonstrate enrichment or extension that would be designated as Exceeds Standard.*