

Science Rubrics: Grade 6 Grade Level Focus – Scale & Structure

**Anchorage School District
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LIFE SCIENCE – There is No Away		
The student understands water, land use, and community issues relating to waste management.		
Grade 6		
Level 4.0	In addition to Level 3.0, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	<p>While engaged in tasks involving waste management, the student:</p> <ul style="list-style-type: none"> • identifies alternatives for waste disposal • describes pros and cons of landfills and dumps and the potential impacts on the local environment • develops personal, community and global solutions to reduce waste. <p>The student exhibits no major errors or omissions.</p>	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and details.
Level 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <ul style="list-style-type: none"> • recognizes or recalls specific terminology such as: <ul style="list-style-type: none"> ○ landfill ○ dump ○ impact ○ waste • performs basic processes such as: <ul style="list-style-type: none"> ○ recognizing and recalling basic differences between landfills and dumps ○ recognizing and recalling limited alternatives for waste disposal ○ recognizing and recalling some of the impacts of waste management <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	
	Level 1.5	Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	

LIFE SCIENCE – There is No Away		
The student understands that waste materials can change forms, but cannot be destroyed.		
Grade 6		
Level 4.0	In addition to Level 3.0 performance, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	<p>While engaged in tasks involving waste management, the student:</p> <ul style="list-style-type: none"> • compares and contrast organic and inorganic materials • observes waste materials in model dumps and landfills • keeps records over time of any changes of waste materials in model dumps and landfills • describes the process of decomposition <p>The student exhibits no major errors or omissions.</p>	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and details.
Level 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <ul style="list-style-type: none"> • recognizes or recalls specific terminology such as: <ul style="list-style-type: none"> ○ organic, inorganic, decomposition ○ trash, garbage, recyclable • performs basic processes such as: <ul style="list-style-type: none"> ○ recognizing or recalling examples of organic or inorganic ○ recognizing or recalling materials that decompose <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	
	Level 1.5	Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and process but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	

EARTH SCIENCE - Astronomy		
The student understands that eight planets of very different sizes, compositions and features move around the sun in nearly circular orbits.		
Grade 6		
Level 4.0	In addition to Level 3.0, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	<p>While engages in tasks involving the solar system, the student:</p> <ul style="list-style-type: none"> • compiles information about each planet’s size, surface, atmospheric conditions, and orbit • describes each planet’s unique features e.g., volcanoes, craters, canals, or human historic perspective • creates a solar system book of planets <p>The student exhibits no major errors or omissions.</p>	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes.
Level 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <ul style="list-style-type: none"> ○ recognizes or recalls specific terminology such as: <ul style="list-style-type: none"> ○ solar system ○ planet ○ orbit ○ atmosphere ○ performs a basic processes such as: <ul style="list-style-type: none"> ○ recognizing or recalling the names of planets in our solar system ○ recognizing or recalling accurate statements about the basic differences between each planet ○ recognizing or recalling statements about features that make a planet unique <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	
	Level 1.5	Partial knowledge of the simpler detail and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	

EARTH SCIENCE - Astronomy

The student understands that the moon orbits around the earth once in about 28 days which changes how much of the illuminated portion of the moon is visible from earth.

Grade 6

Level 4.0	In addition to Level 3.0 performance, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	While engaged in tasks involving the sun, earth, and moon, the student: <ul style="list-style-type: none">• records observations about the moon's cycle• demonstrates and communicates an understanding of lunar phases The student exhibits no major errors or omissions.	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes.
Level 2.0	There are no major errors or omissions regarding the simpler details and processes as the student: <ul style="list-style-type: none">• recognizes or recalls specific terminology such as:<ul style="list-style-type: none">○ new, full, half, gibbous, crescent○ lunar○ waxing, waning• performs basic processes such as:<ul style="list-style-type: none">○ recognizing or recalling examples of the moon's cycle○ recognizing correct or incorrect demonstrations of lunar phases However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	
	Level 1.5	Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	

PHYSICAL SCIENCE - Structures		
The student understands the form of an object or system is frequently related to its function.		
Grade 6		
Level 4.0	In addition to Level 3.0, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	While engaged in tasks involving structures, the student: <ul style="list-style-type: none"> • creates a structure to support the greatest live load as compared to the structures dead load • demonstrates how the shape of a beam or column will affect its strength • identifies shapes used in the construction of various structures and communicate why those shapes were selected • demonstrates and evaluates a structure based on its ability to support a live load 	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes.
Level 2.0	There are no major errors or omissions regarding the simpler details and processes as the student: <ul style="list-style-type: none"> • recognizes or recalls specific terminology such as: <ul style="list-style-type: none"> ○ live load, dead load ○ tension, compression • performs basic processes such as: <ul style="list-style-type: none"> ○ recognizing or recalling basic shapes used in many building structures ○ recognizing or recalling examples of characteristics of a structure which allow it to support a live load ○ recognizing accurate statements of how the shape of a beam or a column will affect its strength However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	
	Level 1.5	Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	

PHYSICAL SCIENCE - Structures		
The student understands that engineering principles and properties of materials must be taken into account in designing solutions to problems.		
Grade 6		
Level 4.0	In addition to Level 3.0, in-depth inferences and applications that go beyond what was taught.	
	Level 3.5	In addition to Level 3.0 performance, in-depth inferences and applications with partial success.
Level 3.0	<p>While engaged in tasks involving engineering solutions to problems, the student:</p> <ul style="list-style-type: none"> • compares and contrasts class structures and their ability to support a live load (i.e., compression, tension) • analyzes and critiques the properties of the materials used to build structures • designs and implements solutions to improve the ability of the structures built in class to support live load <p>The student exhibits no major errors or omissions.</p>	
	Level 2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes.
Level 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <ul style="list-style-type: none"> • Recognizes or recalls specific terminology such as: <ul style="list-style-type: none"> ○ Tension ○ Compression • Recognizes and recalls isolated details or performs basic processes such as: <ul style="list-style-type: none"> ○ Recognizing the properties of the materials used to build structures ○ Identifying possible solutions to improve the abilities of structures built in class to support live load <p>However, the student exhibits major errors or omission regarding the more complex ideas and processes.</p>	
	Level 1.5	Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and procedures.
Level 1.0	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.	
	Level 0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
Level 0	Even with help, no understanding or skill demonstrated.	