

Strand: Earth Science

Topic: 4.ESS.3 Weathering and Erosion

Level: 4th Grade

Score		Description		Sample Tasks
Score 4.0		In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.		<ul style="list-style-type: none"> Given two or more examples (i.e. Grand Canyon, a prairie, Indiana Dunes, etc.) students analyze and explain the difference between the causes of the landforms. Explain the relationship between weathering, erosion, and deposition on a given landform (i.e. Grand Canyon, a prairie, Indiana Dunes, etc.).
	3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.		
Score 3.0		<p>The student:</p> <ul style="list-style-type: none"> Describes how geological forces change the shape of the land suddenly and over time. <p>The student exhibits no major errors or omissions.</p>		<ul style="list-style-type: none"> Demonstrate and describe how smaller rocks come from the breakage and weathering of larger rocks in a process that occurs over a long period of time. Describe how wind, water, and glacial ice shape and reshape earth's land surface by eroding rock and soil in some areas and depositing them in other areas in a process that occurs over a long period of time. Describe how wind, water and glacial ice shape and reshape earth's land surface by eroding rock and soil in some areas and depositing them in other areas in a process that occurs over a long period of time.
	2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.		
Score 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"> erosion, weathering, deposition, landforms, glacial ice performs basic processes, such as: <ul style="list-style-type: none"> recognizes and recalls how wind, water and glacial ice cause surface changes that shape and/or reshape Earth's surface. identifies a key list of landforms (mountain, valley, canyon, plateau, plain, cave, sand dune, peninsula, delta, island) <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>		<ul style="list-style-type: none"> Describe or give an example of the key vocabulary Given a picture students can identify different landforms
	1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.		
Score 1.0		With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.		
	0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.		
Score 0.0		Even with help, no understanding or skill demonstrated.		

Strand: Physical Science

Topic: 4.PS.4 Forms of Energy

Level: 4th Grade

Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.		Sample Tasks
	3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p>The student:</p> <ul style="list-style-type: none"> ● Describes and investigates the different ways in which energy can be generated and/or converted from one form of energy to another form of energy. <p>The student exhibits no major errors or omissions.</p>		<ul style="list-style-type: none"> ● Construct a complete circuit through which an electrical current can pass as evidenced by the lighting of a bulb or ringing of a bell. (verbally or written). ● Experiment with materials to identify conductors and insulators of heat and electricity. ● Investigate the variety of ways in which heat can be generated and moved from one place to another. Explain the direction the heat moved.
	2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 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"> ○ electrical energy, conductor, insulator, switch, sockets, circuit, resistor ● performs basic processes, such as: <ul style="list-style-type: none"> ○ identifies heat, light and sound as forms of energy ○ identifies each part of a circuit (conductor, insulator, sockets, switch) <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>		<ul style="list-style-type: none"> ● When a diagram is given (illustration of a circuit), the student can label the heat, light and sound source and flow of the energy, as well as each part of the circuit (conductor, insulator, sockets, and switch). ● Give examples of heat, light, and sound energy.
	1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.		
	0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.		

Strand: Earth Science

Topic: 4.ESS.4 Natural Resources

Level: 4th Grade

Score	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
Score 4.0		<ul style="list-style-type: none"> ● Given a problem and solution students will analyze a proposed solution, evaluate, and determine if the solution has possible errors or is a viable option to solve the problem <ul style="list-style-type: none"> ○ The student is able to justify the options and is able to explain the reasoning behind their thinking
3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p>The student:</p> <ul style="list-style-type: none"> ● Develop solutions that could be implemented to reduce the impact of humans on the natural environment and the natural environment on humans. <p>The student exhibits no major errors or omissions.</p>	<ul style="list-style-type: none"> ● Describe how humans can lessen their negative impact on the earth. ● https://climatekids.nasa.gov/review/how-to-help/
2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 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"> ○ natural resources: fossil fuels (coal, oil, natural gas), solar, soil, wood, water, wind ○ renewable energy, nonrenewable energy, wind turbine, reduce, reuse, recycle, conserve ● performs basic processes, such as: <ul style="list-style-type: none"> ○ identifies natural resources and label them as renewable or nonrenewable ○ states examples of daily uses of natural resources <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<ul style="list-style-type: none"> ● Sort a list of natural resources as renewable and non-renewable ● Have students explain why coal, oil, and natural gas are fossil fuels.
1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Science

Topic: 4.PS.1 & 4.PS.2 Force and Motion

Level: 4th Grade

Score	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
4.0		<ul style="list-style-type: none"> Students will explain how a NASCAR team could modify their car in order to increase its performance and why it would work. Conduct an experiment using an inclined plane to calculate the speed of an object when given the formula for speed. (Speed = Distance/Time)
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p>The student:</p> <ul style="list-style-type: none"> 4.PS.1 Investigates transportation systems and devices that operate on or in land, water, air and space and recognize the forces (lift, drag, friction, thrust and gravity) that affect their motion. 4.PS.2 Investigates the relationship of the speed of an object to the energy of that object. <p>The student exhibits no major errors or omissions.</p>	<ul style="list-style-type: none"> Speed: Have the student use an inclined plane to demonstrate how the change in height (force of gravity) creates a change in speed and explain why. Direction: Have the student use a ball to demonstrate a change in direction (kick, throw, hit) and explain why. Water: Have the students explain how a ship stays afloat. Have the students explain how a submarine changes its buoyancy in the water. Air: Have the students explain how thrust, drag, lift, and gravity affect an airplane. Calculate speed given distance and time (Speed = Distance/Time)
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 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"> gravity, force, motion, kinetic energy, potential energy, velocity, distance, inclined plane, speed, friction, thrust, lift, drag, buoyancy performs basic processes, such as: <ul style="list-style-type: none"> Demonstrates changes in speed or direction are caused by forces: the greater the force exerted on an object, the greater the change Identifies how systems and devices operate on or in water and air. <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<ul style="list-style-type: none"> Students can define terminology (listed on left) when given choices (multiple choice or matching). Speed: Have the student use an inclined plane to demonstrate how the change in height (force of gravity) creates a change in speed. Direction: Have the student use a ball to demonstrate a change in direction (kick, throw, hit). Label a diagram of an airplane to show the forces acting upon it.
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Life Science

Topic: 4.LS.3 – Animal Adaptations

Level: 4th Grade

Score	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.		Sample Tasks
4.0			<ul style="list-style-type: none"> ● Research an invasive species (purple loosestrife, kudzu, pythons in the Everglades) and explain why that species has been able to thrive/take over an existing ecosystem. ● Given current trends in climate change, predict what adaptations are likely to occur to a chosen animal or plant. ● Explain how an animal would have to adapt to live in a new environment.
	3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p>The student:</p> <ul style="list-style-type: none"> ● Constructs an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction in different ecosystems. <p>The student exhibits no major errors or omissions.</p>		<ul style="list-style-type: none"> ● Explain the adaptation of a teacher selected animal or plant and how it helps the animal or plant survive in their environment. ● Given one environment and two animals and/or plants, student will justify which animal/plant will thrive in that environment.
	2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 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"> ○ characteristics, adaptations, inherent, environment, competition, advantage, camouflage, stimulus ● performs basic processes, such as: <ul style="list-style-type: none"> ○ Observes, describes and records the physical characteristics of living plants or animals from widely different environments. <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>		<ul style="list-style-type: none"> ● Ask the students to describe the physical characteristics an animal (snow hare, poison dart frog, etc.) or a plant (cactus, Venus Fly Trap, climbing ivy, etc.).
	1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	<p>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</p>		
	0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	<p>Even with help, no understanding or skill demonstrated.</p>		