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# Knob Noster R-VIII School District

We exist to empower learning through success for every student.

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## Science Curriculum

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## Science Curriculum

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[KG Year At-A-Glance:](#)

[Kindergarten](#)

[K.1 Make qualitative observations of the physical properties of objects \(i.e., size, shape, color, mass\).](#)

[I can observe by color, size, shape and mass](#)

[K.2 Use observations to describe patterns of what plants and animals \(including humans\) need to survive. \[Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.\]](#)

[K.3 Make observations during different seasons to relate the amount of daylight to the time of year. \[Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.\]](#)

[K.4 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.](#)

[1st Grade Year At-A-Glance:](#)

[1st Grade](#)

[1.1 The student will be able to use observations to describe patterns in the natural world.](#)

[1.2 The student will be able to demonstrate an understanding of the structure and function of plants and animals.](#)

[2nd Grade Year At-A-Glance:](#)

[2nd Grade](#)

[2.1 The student will be able to demonstrate an understanding of structure and properties of matter.](#)

[I can plan and conduct an investigation to describe and classify different materials and their properties](#)

[2.2 The student will be able to demonstrate an understanding of processes that shape Earth.](#)

[2.3 The student will be able to demonstrate an understanding of interdependent relationships in ecosystems.](#)

[3rd Grade Year At-A-Glance:](#)

[3rd Grade](#)

[3.1 The student will be able to interpret matter and its interactions.](#)

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[I can predict & investigate the three states of matter.](#)

[I can construct an argument with evidence that some changes caused by heating & cooling can be reversed & some cannot.](#)

[3.2 The student will be able to explain how living organisms carry out life processes in order to survive.](#)

[3.3 The student will be able to explain inheritance and variation of traits.](#)

[3.4 The student will be able to interpret forces and interactions.](#)

[3.5 The student will be able to defend a claim on weather and climate.](#)

[4th Grade Year At-A-Glance:](#)

[4th Grade](#)

[4.1 Provide evidence to construct an explanation of an energy transformation\(e.g. temperature change, light, sound, motion, and magnetic effects\)](#)

[I can explain and model how energy transforms such as magnetic effects, motion, and temperature change.](#)

[4.3 Use models to explain that simple machines change the amount of effort force and/or direction of force. \[Clarification Statement: memorization of a simple machine is not the focus, concept builds on the application of force and motion.\]](#)

[4.5 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. \[Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.\]](#)

[4.8 Plan and conduct scientific investigations or simulations to provide evidence how natural processes \(e.g. weathering and erosion\) shape Earth's surface.](#)

[4.12 Analyze and interpret data from maps to describe patterns of Earth's features. \[Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.\]](#)

[5th Grade Year At-A-Glance:](#)

[5th Grade](#)

[5.1. Identify steps and apply the scientific method to analyze given situations.](#)

[I can formulate a proper conclusion by restating my hypothesis, supporting with facts, and including whether my hypothesis was supported or not.](#)

[I can record and communicate quantitative data.](#)

[I can create logical, specific procedures for an experiment.](#)

[I can list required materials for a science lab.](#)

[I can write a hypothesis and support my reasoning.](#)

[5.2. Describe the variety of life forms on Earth using different characteristics and explain interactions between living organisms.](#)

[5.2. Describe the variety of life forms on Earth using different characteristics and explain interactions between living organisms.](#)

[5.3. Identify and explain the various Earth systems while analyzing the impact of human population.](#)

[5.4. Explain how energy impacts the properties of matter using Scientific language.](#)

[5.5 Identify the various parts of the universe and explain their relationships.](#)

[5.6 Evaluate and identify the forces that affect motion.](#)

[6th Grade Year At-A-Glance:](#)

[6th Grade](#)

[6.1 Construct a scientific explanation based on evidence that explains the internal systems of the earth.](#)

[6.2 Construct a scientific explanation based on evidence that explains the external systems of the earth.](#)

[6.3 Construct a scientific explanation based on evidence that explains distributions of resources found on earth, natural catastrophic events and how they impact human activity.](#)

[6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.](#)

[7th Grade Year At-A-Glance:](#)

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### 7th Grade

- 7.1 [Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in organisms.](#)
- 7.2 [Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.](#)
- 7.3 [Construct a scientific explanation based on evidence that describes evidence of common ancestry and diversity, natural selection, and adaptation.](#)
- 7.4 [Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.](#)

### 8th Grade Year At-A-Glance:

#### 8th Grade

- 8.1- [Gather, analyze, and present information describing the structure of matter, properties of matter, and chemical reactions](#)
- 8.2- [Apply physics principles to describe and investigate forces, motion and types of interactions.](#)
- 8.3- [Describe how energy is transferred from one object to another and how energy is conserved in a closed system.](#)
- 8.4- [Describe the properties of waves](#)
- 8.5 [Use a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.](#)

### Biology Year At-A-Glance:

#### Biology

- 9.1 [Students will be able to formulate testable questions, design and conduct valid experiments including analysis of data, and communicate the results with justification.](#)
- 9.2 [Students can communicate and model concepts of reproductive strategies using statistics and graphic representations to determine possible outcomes; determining how a change in genetics leads to a change in protein production which impacts possible short term and heritable effects.](#)
- 9.3 [Students will understand the interrelationship and interdependence of organisms and how they generate dynamic biological communities within the ecosystem; students can make stochastic cause and effect predictions pertaining to human impact and model a plan to mitigate effects.](#)
- 9.4 [Students will be able to evaluate claims, evidence, and reasoning to support the concepts of evolution by natural selection as a scientific explanation for the history and diversity of life on Earth; students can connect and predict how natural selection results in advantages adaptations, which lead to a change in gene frequency and evolution.](#)
- 9.5 [Students can model and explain the concept of conservation of matter and energy within the biotic and abiotic components of an ecosystem; the cycling of matter and energy are important to maintaining the health and sustainability of an ecosystem.](#)

### Physical Science Year At-A-Glance:

#### Physical Science

- 1 [Forces and Motion will be supported by Newton's laws, the understanding of momentum, and the importance of energy transfer.](#)
- 2 [Energy is a form of energy that is neither created nor destroyed but transferred into different forms which we use in our daily lives.](#)
- 3 [Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.](#)
- 4 [The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.](#)
- 5 [Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.](#)

### Chemistry Year At-A-Glance:

#### Chemistry

- 1 [The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.](#)
- 2 [Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.](#)
- 3 [Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.](#)
- 4 [Rates of chemical reactions are determined by the details of the molecular collisions.](#)

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5 [The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.](#)

6 [Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.](#)

### [Adv/AP/Dual Credit Chemistry Year At-A-Glance:](#)

#### [Adv/AP/Dual Credit Chemistry](#)

1 [The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.](#)

2 [Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.](#)

3 [Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.](#)

4 [Rates of chemical reactions are determined by the details of the molecular collisions.](#)

5 [The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.](#)

6 [Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.](#)

### [AP Physics Year At-A-Glance:](#)

#### [AP Physics](#)

[Phys.1 Objects and systems have properties such as mass and charge. Systems may have internal structure.](#)

[Phys.2 Fields existing in space can be used to explain interactions.](#)

[Phys.3 The interactions of an object with other objects can be described by forces.](#)

[Phys.4 Interactions between systems can result in changes in those systems.](#)

[Phys.5 Changes that occur as a result of interactions are constrained by conservation laws](#)

### [AP Environmental Science Year At-A-Glance:](#)

#### [AP Environmental Science](#)

[Env 1. The energy available on Earth is derived from the sun and moves over time and space through various ecosystems](#)

[Env 2. Climate is influenced by chemical, physical, atmospheric, and human interactions.](#)

[Env. 3 Biological components are required through the biogeochemical cycles and are recycled through space and time based on physical and chemical properties of matter.](#)

[Env 4. Ecosystem services have intrinsic value and need to be preserved through sustainability practices which are integral to the decision making process](#)

[Env 5. Human activities have chemical and biological consequences and need to be considered for the magnitude of perturbation they cause on the environment](#)

### [AP Biology Year At-A-Glance:](#)

#### [AP Biology](#)

1 [The process of evolution drives the diversity and unity of life.](#)

2 [Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.](#)

3 [Living systems store, retrieve, transmit and respond to information essential to life processes.](#)

4 [Biological systems interact, and these systems and their interactions possess complex properties.](#)

### [Anatomy and Physiology At-A-Glance:](#)

#### [Anatomy and Physiology](#)

1 [The student will explore methods of scientific inquiry as they relate to the study of the anatomy and physiology of the human body.](#)

2 [The student will explore the chemical, microscopic, and organizational structures of the body and will relate explore their role in human anatomy and physiology.](#)

3 [The student will explore systems that relate to the support and movement of the human body.](#)

4 [The student will explore systems that relate to integration, sensation, and control of the human body.](#)

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5 The student will investigate the structure and function of body systems that relate to transportation, respiration, and defense.

Earth Science At-A-Glance:

Earth Science

ES.1 Students will be able to describe the cycles of matter and energy, such as the water and carbon cycle, that impacts Earth's systems.

ES.2 Students will investigate the scientific view of how the earth's surface is formed through dynamic processes.

ES.3 Students will study how Earth is composed of interdependent and interacting systems and will be able to understand processes, such as how the distribution of land and oceans affects climate and weather.

ES.4 Students will investigate Earth's history by investigating evidence left from past events. Students will understand the importance of rocks and fossils which provide evidence of how our environment has evolved over time.

ES.5 Students will study and understand how humans and the environment impact each other over a range of spatial and temporal scales.

<u>Science Priority Standards (Quick Look)</u>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<u>KG</u>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Make qualitative observations of the physical properties of objects (i.e., size, shape, color, mass).	I												
Use observations to describe patterns of what plants and animals (including humans) need to survive. Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.	I												
Make observations during different seasons to relate the amount of daylight to the time of year. Clarification Statement: Emphasis is on relative comparisons of the amount of	I												

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daylight in the winter to the amount in the spring or fall.													
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	I												
<b>1st Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
The student will be able to use observations to describe patterns in the natural world.	I	R,M											
The student will be able to demonstrate an understanding of the structure and function of plants and animals.	I	R	R	R	R								
<b>2nd Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
The student will be able to demonstrate an understanding of structure and properties of matter.	I		R	R									
The student will be able to demonstrate an understanding of processes that shape Earth.	I	R	R	R	R								
The student will be able to demonstrate an understanding of interdependent relationships in ecosystems.		I	R	R	R								
<b>3rd Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
The student will be able to interpret matter and its interactions.	I		R	R	R								
The student will be able to explain how living organisms carry out life processes in order to survive.	I	R	R	R	R								

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The student will be able to explain inheritance and variation of traits.				I									
The student will be able to interpret forces and interactions.	I	R	R	R	R								
The student will be able to defend a claim on weather and climate.	I	R	R	R	R								
<b>4th Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
4.1 Provide evidence to construct an explanation of an energy transformation(e.g. temperature change, light, sound, motion, and magnetic effects)	I	R	R	R	R								
4.3 Use models to explain that simple machines change the amount of effort force and/or direction of force. Clarification Statement: memorization of a simple machine is not the focus, concept builds on the application of force and motion.	I	R	R	R	R								
4.5 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.	I	R	R	R	R								
4.8 Plan and conduct scientific investigations or simulations to provide evidence how natural processes (e.g. weathering and erosion) shape Earth's surface.			I	R	R								

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4.12 Analyze and interpret data from maps to describe patterns of Earth's features. Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.					I								
<b>5th Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
5.1. Identify steps and apply the scientific method to analyze given situations.	I	R	R	R	R	R, M							
5.2. Describe the variety of life forms on Earth using different characteristics and explain interactions between living organisms.	I	R	R	R	R	R, M							
5.3. Identify and explain the various Earth systems while analyzing the impact of human population.						I, R							
5.4. Explain how energy impacts the properties of matter using Scientific language.	I	R	R	R	R	R							
5.5 Identify the various parts of the universe and explain their relationships.						I, R							
5.6 Evaluate and identify the forces that affect motion.	I	R	R	R	R	R, M							
5.7. Describe and explain technology, tools and use of measurements used to analyze data.	I	R	R	R	R	R							
<b>6th Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
6.1 Construct a scientific							I, R, M						

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explanation based on evidence that explains the internal systems of the earth.													
6.2 Construct a scientific explanation based on evidence that explains the external systems of the earth.							I,R,M						
6.3 Construct a scientific explanation based on evidence that explains distributions of resources found on earth, natural catastrophic events and how they impact human activity.							I,R,M						
6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.							I,R,M						
<b>7th Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
7.1 Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in organisms.								I,R,M					
7.2 Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.								I,R,M					
7.3 Construct a scientific explanation based on evidence that describes evidence of common ancestry and diversity, natural selection, and adaptation.								I,R,M					
7.4 Use a method of scientific practices to investigate and								I,R,M					

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define problems, develop possible solutions, and optimize the solution process using models.													
<b>8th Grade</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
8.1- Gather, analyze, and present information describing the structure of matter, properties of matter, and chemical reactions									I, R, M				
8.2- Apply physics principles to describe and investigate forces, motion and types of interactions.									I, R, M				
8.3- Describe how energy is transferred from one object to another and how energy is conserved in a closed system.									I, R, M				
8.4- Describe the properties of waves									I, R, M				
8.5 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.									I, R, M				
<b>Biology</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
9.1 Students will be able to formulate testable questions, design and conduct valid experiments including analysis of data, and communicate the results with justification.	I	R	R	R	R					R, M			
9.2 Students can communicate and model concepts of reproductive strategies using statistics and graphic representations to determine possible outcomes; determining how a change in genetics leads to a change in protein production which impacts possible short term and										I, R			

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heritable effects.													
9.3 Students will understand the interrelationship and interdependence of organisms and how they generate dynamic biological communities within the ecosystem; students can make stochastic cause and effect predictions pertaining to human impact and model a plan to mitigate effects.										I,R			
9.4 Students will be able to evaluate claims, evidence, and reasoning to support the concepts of evolution by natural selection as a scientific explanation for the history and diversity of life on Earth; students can connect and predict how natural selection results in advantages adaptations, which lead to a change in gene frequency and evolution.										I,R			
9.5 Students can model and explain the concept of conservation of matter and energy within the biotic and abiotic components of an ecosystem; the cycling of matter and energy are important to maintaining the health and sustainability of an ecosystem.										I,R			
<b>Physical Science</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1 Forces and Motion will be supported by Newton's laws, the understanding of momentum, and the importance of energy transfer.	I	R	R	R	R					R,M			
2 Energy is a form of energy that is neither created nor destroyed but transferred into											R,M		

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different forms which we use in our daily lives.													
3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.											R, M		
4 The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.											I, R		
5 Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.										I, R			
<b>Chemistry</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1 The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.											R		
2 Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.											R		
3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.											R		
4 Rates of chemical reactions are determined by the details of the molecular collisions.											R		
5 The laws of thermodynamics describe the essential role of											R		

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energy and predict the direction of changes in matter.														
6 Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.											R			
<b>Adv/AP/Dual Credit Chemistry</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	
1 The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.												R, M		
2 Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.												R, M		
3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.												R, M		
4 Rates of chemical reactions are determined by the details of the molecular collisions.												R, M		
5 The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.												R, M		
6 Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial												R, M		

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	K	1	2	3	4	5	6	7	8	9	10	11	12
conditions and external perturbations.													
<b>AP Physics</b>													
Phys.1 Objects and systems have properties such as mass and charge. Systems may have internal structure.												R,M	
Phys.2 Fields existing in space can be used to explain interactions.												R,M	
Phys.3 The interactions of an object with other objects can be described by forces.												R, M	
Phys.4 Changes that occur as a result of interactions are constrained by conservation laws.												R,M	
Phys.5 Interactions between systems can result in changes in those systems.												R,M	
<b>AP Environmental Science</b>													
Env 1. The energy available on Earth is derived from the sun and moves over time and space through various ecosystems												R,M	
Env 2. Climate is influenced by chemical, physical, atmospheric, and human interactions.												R,M	

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Env 3. Biological components are required through the biogeochemical cycles and are recycled through time and space based on physical and chemical properties of matter												R,M	
Env 4. Ecosystem services have intrinsic value and need to be preserved through sustainability practices which are integral to the decision making process												R,M	
Env 5. Human activities have chemical and biological consequences and need to be considered for the magnitude of perturbation they cause on the environment												R,M	
<b>AP Biology</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1 The process of evolution drives the diversity and unity of life.												R,M	
2 Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.												R,M	
3 Living systems store, retrieve, transmit and respond to information essential to life processes.												R,M	
4 Biological systems interact, and these systems and their interactions possess complex properties.												R,M	

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<u>Anatomy and Physiology</u>	K	1	2	3	4	5	6	7	8	9	10	11	12
1 The student will explore methods of scientific inquiry as they relate to the study of the anatomy and physiology of the human body.												R, M	
2 The student will explore the chemical, microscopic, and organizational structures of the body and will relate explore their role in human anatomy and physiology.												R,M	
3 The student will explore systems that relate to the support and movement of the human body.												R,M	
4 The student will explore systems that relate to integration, sensation, and control of the human body.												R,M	
5 The student will investigate the structure and function of body systems that relate to transportation, respiration, and defense.												R,M	
<u>Earth Science</u>	K	1	2	3	4	5	6	7	8	9	10	11	12
ES.1 Students will be able to describe the cycles of matter and energy, such as the water and carbon cycle, that impacts Earth's systems. Students will recognize the significant role of water in earth processes. Students will understand that matter goes through various never-ending cycles that are produced by the transformation of energy.												R, M	

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<p>ES.2 Students will investigate the scientific view of how the earth's surface is formed through dynamic processes. Students will understand the impacts that the positions of the earth, moon and sun have on Earth's surface. Students will understand how tectonism, weathering processes, and energy transfer shape and order the Earth.</p>											R, M	
<p>ES.3 Students will study how Earth is composed of interdependent and interacting systems and will be able to understand processes, such as how the distribution of land and oceans affects climate and weather.</p>											R, M	
<p>ES.4 Students will investigate Earth's history by investigating evidence left from past events. Students will understand the importance of rocks and fossils which provide evidence of how our environment has evolved over time.</p>											R, M	
<p>ES.5 Students will study and understand how humans and the environment impact each other over a range of spatial and temporal scales. Students will understand how environmental consequences are derived from human activities.</p>											R, M	

*I – Introduce      R – Reinforce    M – Mastery    O – Optional for grade level*

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KG Year At-A-Glance:

<b>Quarter 1</b>	<b>Quarter 2</b>
<ul style="list-style-type: none"> <li>Physical Properties: K.1,K.2,K.3K.7,K.8,K.9,K.10</li> </ul>	<ul style="list-style-type: none"> <li>Weather and Climate: K.6</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>
<ul style="list-style-type: none"> <li>Plants and Animals: K.4</li> </ul>	<ul style="list-style-type: none"> <li>Push and Pull: K.5,K.11,K.12.K.13,K.14</li> </ul>

Kindergarten

Last Revised (Date & Name):  
 Nov 2017, 12/11/17 Dove, Lavender  
 Oct 2018, Dec 2018, Jan 2019 Neahr, Schibi

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)

Prerequisite Standards:

Learning Target:

Assessment Methods:

Instructional Activities & Assignments

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K.1 Make qualitative observations of the physical properties of objects (i.e., size, shape, color, mass).	N/A	<ul style="list-style-type: none"> <li>I can observe by color, size, shape and mass</li> </ul>	<ul style="list-style-type: none"> <li>Have children sort items</li> </ul>	<ul style="list-style-type: none"> <li>Have children sort items</li> </ul>
K.2 Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]	N/A	<ul style="list-style-type: none"> <li>I can observe patterns of plants and animals</li> </ul>	<ul style="list-style-type: none"> <li>Students will write what a plant or animal need to survive</li> </ul>	<ul style="list-style-type: none"> <li>Teacher will read various books about plants and animals</li> </ul>
K.3 Make observations during different seasons to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.]	N/A	<ul style="list-style-type: none"> <li>I can make observations about the four seasons</li> </ul>	<ul style="list-style-type: none"> <li>Students will draw a picture of what a tree will look like during the seasons</li> </ul>	<ul style="list-style-type: none"> <li>Take a nature walk during the different seasons</li> </ul>
K.4 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	N/A	<ul style="list-style-type: none"> <li>I can express to help the environment</li> </ul>	<ul style="list-style-type: none"> <li>Students will draw a picture and write about how they can help the Earth</li> <li><a href="#">Objective 4 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>Students will sing songs to help them learn about the 3 R's</li> </ul>

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1st Grade Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Patterns in the day and night sky: 1.1,1.6,1.7</li> </ul>	<ul style="list-style-type: none"> <li>Light and Sound: 1.2,1.3,1.4,1.8,1.9</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Structure and function of plants: 1.5,1.11</li> </ul>	<ul style="list-style-type: none"> <li>Structure and function of animals: 1.10</li> </ul>

<b>1st Grade</b>			Last Revised (Date & Name):11/19/17, 12/11/2017, 11/27/18, Colliver, Lavender	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
1.1 The student will be able to use observations to describe patterns in the natural world.			<ul style="list-style-type: none"> <li><a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">See Document</a></li> </ul>
1.2 The student will be able to demonstrate an understanding of the structure and function of plants and animals.			<ul style="list-style-type: none"> <li><a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">See Document</a></li> </ul>

2nd Grade Year At-A-Glance:

Quarter 1	Quarter 2
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<ul style="list-style-type: none"> <li>Science Structure and Properties of Matter: 2.1,2.2,2.6,2.11</li> </ul>	<ul style="list-style-type: none"> <li>2.3,2.10,2.13</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>
<ul style="list-style-type: none"> <li>Earth's Systems: 2.4,2.8,2.9</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystems: 2.5,2.7,2.12</li> </ul>

<h2 style="margin: 0;">2nd Grade</h2>			Last Revised (Date & Name): 12/11/17 Lavender	
			Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:
2.1 The student will be able to demonstrate an understanding of structure and properties of matter.		<ul style="list-style-type: none"> <li>I can plan and conduct an investigation to describe and classify different materials and their properties</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>
2.2 The student will be able to demonstrate an understanding of processes that shape Earth.		<ul style="list-style-type: none"> <li>I can use information from various sources to show evidence that Earth events can happen quickly or slowly</li> <li>I can compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>
2.3 The student will be able to demonstrate an understanding of interdependent relationships in ecosystems.		<ul style="list-style-type: none"> <li>I can plan and conduct investigations on plants with different conditions</li> <li>I can develop a model that functions like an animal dispersing or pollinating plants</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Proficiency Scale</a></li> </ul>

**3rd Grade Year At-A-Glance:**

<b>Quarter 1</b>	<b>Quarter 2</b>
<ul style="list-style-type: none"> <li>Matter</li> <li>Energy</li> </ul>	<ul style="list-style-type: none"> <li>Life Cycles (animals)</li> <li>Ecosystems</li> <li>Adaptations</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>

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- Plants

- Weather & Climate
- Force & Motion

3rd Grade

Last Revised (Date & Name): 11/27/18 Katie Stehle & Ashley Sleeper

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)

Prerequisite Standards:

Learning Target:

Assessment Methods:

Instructional Activities & Assignments

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3.1 The student will be able to interpret matter and its interactions.		<ul style="list-style-type: none"> <li>• I can predict &amp; investigate the three states of matter.</li> <li>• I can construct an argument with evidence that some changes caused by heating &amp; cooling can be reversed &amp; some cannot.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>
3.2 The student will be able to explain how living organisms carry out life processes in order to survive.		<ul style="list-style-type: none"> <li>• I can construct an argument with evidence that in a particular ecosystem some organisms can survive &amp; some cannot.</li> <li>• I can explain the needs &amp; characteristics of organisms &amp; the habitats involved.</li> <li>• I can develop a model to compare &amp; contrast observations on the life cycles of different plants &amp; animals.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>
3.3 The student will be able to explain inheritance and variation of traits.		<ul style="list-style-type: none"> <li>• I can explain that some characteristics of organisms are inherited from parents &amp; some influenced by the environment.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>
3.4 The student will be able to interpret forces and interactions.		<ul style="list-style-type: none"> <li>• I can investigate the relationship of electric or magnetic interactions between two objects.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>
3.5 The student will be able to defend a claim on weather and climate.		<ul style="list-style-type: none"> <li>• I can represent data in tables &amp; graphs to describe typical weather conditions.</li> <li>• I can make a claim about the merit of an existing design solution (i.e. levies, tornado shelters, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">See Document</a></li> </ul>

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4th Grade Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Scientific Inquiry</li> </ul>	<ul style="list-style-type: none"> <li>Earth's Systems</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Interactions among organisms and their environment</li> </ul>	<ul style="list-style-type: none"> <li>Energy</li> </ul>

4th Grade

Last Revised (Date & Name): 12/11/17, Lavender

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)

Prerequisite Standards:

Learning Target:

Assessment Methods:

Instructional Activities & Assignments

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<p>4.1 Provide evidence to construct an explanation of an energy transformation(e.g. temperature change, light, sound, motion, and magnetic effects)</p>		<ul style="list-style-type: none"> <li>I can explain and model how energy transforms such as magnetic effects, motion, and temperature change.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Formative Assessment:</a> The teacher will formatively assess student participation during the <a href="#">Ball Roll Experiment</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Hook: <a href="#">Video</a></li> <li>Activity: Ball Roll Experiment</li> <li>Quizlet: <a href="#">Energy Transformation Quizlet</a></li> <li>Activity: <a href="#">Energy Activity</a></li> </ul>
<p>4.3 Use models to explain that simple machines change the amount of effort force and/or direction of force. [Clarification Statement: memorization of a simple machine is not the focus, concept builds on the application of force and motion .]</p>		<ul style="list-style-type: none"> <li>I can use models to explain how an object’s motion is affected by the force applied and the mass of the object.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will formatively assess students participation during the <a href="#">Forces and Motion Golf Experiment</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Hook: <a href="#">Video</a></li> <li><a href="#">Lesson</a></li> <li><a href="#">Cars in Motion Experiment</a></li> <li>Note: add weight and force applied to experiment</li> </ul>
<p>4.5 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.]</p>		<ul style="list-style-type: none"> <li>I can compare different structures of plants and animals and explain how they help them grow, survive, and reproduce.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher will observe students as they conduct research on an animal and complete the project linked below.</li> <li><a href="#">Animal Adaptations Poster Project</a></li> </ul>	<ul style="list-style-type: none"> <li>Hook: <a href="#">Adaptation Video</a></li> <li>Quiz: <a href="#">Socrative Quiz for Adaptations</a></li> <li><a href="#">Lesson</a></li> </ul>
<p>4.8 Plan and conduct scientific investigations or simulations to provide evidence how natural processes (e.g. weathering and erosion) shape Earth’s surface.</p>		<ul style="list-style-type: none"> <li>I can explain how natural processes such as weathering and erosion change earth’s surfaces.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will observe student answers as they complete the <a href="#">Weathering and Erosion Sort</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Hook: <a href="#">Brain Pop Weathering Video</a></li> <li><a href="#">Brain Pop Erosion Video</a></li> <li>Experiment: <a href="#">Weathering and Erosion Experiment</a></li> </ul>
<p>4.12 Analyze and interpret data from maps to describe patterns of Earth’s features. [Clarification Statement: Maps can include topographic maps of Earth’s land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]</p>		<ul style="list-style-type: none"> <li>I can analyze maps to help locate patterns such as earthquakes, borders, and volcanoes.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will observe student answers as they play the linked <a href="#">Game</a>.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Instructional Resources</a></li> <li><a href="#">Website Resource</a></li> <li><a href="#">Concept Vocabulary and Lesson Ideas</a></li> </ul>

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5th Grade Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>5-1, 5-2, 5-7</li> </ul>	<ul style="list-style-type: none"> <li>5-2, 5-7</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>5-4, 5-5, 5-6</li> </ul>	<ul style="list-style-type: none"> <li>5-1, 5-3, 5-7</li> </ul>

5th Grade

Last Revised (Date & Name):  
11-29-2017, 12/11/17, 11/25/18  
Taylor Honkala, Lavender, T. Eschliman

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)

Prerequisite Standards:

Learning Target:

Assessment Methods:

Instructional Activities & Assignments

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<p>5.1. Identify steps and apply the scientific method to analyze given situations.</p>		<ul style="list-style-type: none"> <li>I can formulate a proper conclusion by restating my hypothesis, supporting with facts, and including whether my hypothesis was supported or not.</li> <li>I can record and communicate quantitative data.</li> <li>I can create logical, specific procedures for an experiment.</li> <li>I can list required materials for a science lab.</li> <li>I can write a hypothesis and support my reasoning.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Lab reports for experiments</a></li> <li><a href="#">Science CFA on Socrative</a></li> <li><a href="#">5.1 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>Prediction, inference, and observation ppt</li> <li>Scientific Method Foldable</li> <li>Paper Lily Lab</li> <li>Gobstopper Lab</li> <li>Paper Airplane Lab</li> </ul>
<p>5.2. Describe the variety of life forms on Earth using different characteristics and explain interactions between living organisms.</p>		<ul style="list-style-type: none"> <li>I can compare and contrast camouflage and mimicry.</li> <li>I can explain the impact an invasive species has on a habitat.</li> <li>I can analyze the importance of owl pellets for the body systems of the owl species.</li> <li>I can explain the difference between external and internal stimuli.</li> <li>I can explain the difference between physical and behavioral adaptations.</li> <li>I can identify the different body systems and their importance.</li> <li>I can describe all the major classifications of animals.</li> <li>I can compare and contrast vertebrates and invertebrates.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Animal adaptations unit test on Socrative</a></li> <li>Invasive species wanted poster</li> <li><a href="#">Lab report for owl pellet experiment</a></li> <li><a href="#">Google slides food web</a></li> <li><a href="#">5.1 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>Animal classification sorting venn diagram</li> <li>Behavioral/physical adaptations foldable</li> <li>Internal/external stimuli foldable</li> <li>Camouflage/mimicry foldable</li> </ul>
<p>5.2. Describe the variety of life forms on Earth using different characteristics and explain interactions between living organisms.</p>		<ul style="list-style-type: none"> <li>I can describe the life cycle of a plant using Scientific terms.</li> <li>I can explain that plants receive their needs for growth mostly from air and water.</li> <li>I can analyze the process and importance of pollination in plants.</li> <li>I can explain the purpose of fruit and the movement of seeds.</li> <li>I can describe the purpose of internal and external structures of plants.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Plant life cycle unit test</a></li> <li><a href="#">Celery lab report</a></li> <li><a href="#">5.1 Proficiency Scale</a></li> </ul>	

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<p>5.3. Identify and explain the various Earth systems while analyzing the impact of human population.</p>		<ul style="list-style-type: none"> <li>• I can formulate a diagram describing interactions between the geosphere, biosphere, hydrosphere, and/or atmosphere.</li> <li>• I can describe the amounts and distribution of saltwater and freshwater on Earth.</li> <li>• I can trace the 4 main levels of the Earth's atmosphere.</li> <li>• I can describe the 3 main features found in the troposphere that make life possible on Earth.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Spheres interactions group project</a></li> <li>• <a href="#">Earth systems unit test on Socrative</a></li> <li>• <a href="#">5.1 Proficiency Scale</a></li> </ul>	
<p>5.4. Explain how energy impacts the properties of matter using Scientific language.</p>		<ul style="list-style-type: none"> <li>• I can describe that matter is made of particles too small to be seen.</li> <li>• I can explain how the density of an object determines whether it will float or sink in a given substance.</li> <li>• I can explain matter in the world around me.</li> <li>• I can compare and contrast mass and weight of an object.</li> <li>• I can determine whether the combining of two or more substances results in new substances.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Matter unit test on Socrative</a></li> <li>• <a href="#">Density snow globe lab</a></li> <li>• <a href="#">Mixtures/ solution lab</a></li> <li>• <a href="#">5.1 Proficiency Scale</a></li> </ul>	
<p>5.5 Identify the various parts of the universe and explain their relationships.</p>		<ul style="list-style-type: none"> <li>• I can describe the 4 basic cloud formations: cirrus, cumulus, cumulonimbus, stratus.</li> <li>• I can formulate a diagram showing the water cycle in all its phases.</li> <li>• I can explain and trace all the factors that create weather: air temperature, wind speed, direction of wind, precipitation, and cloud cover.</li> <li>• I can describe the water sources found on the Earth.</li> <li>• I can analyze a weather map.</li> <li>• I can explain how Earth's orbit affects the seasons.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Weather forecast video</a></li> <li>• <a href="#">Weather unit test on Socrative</a></li> <li>• <a href="#">5.1 Proficiency Scale</a></li> </ul>	
<p>5.6 Evaluate and identify the forces that affect motion.</p>		<ul style="list-style-type: none"> <li>• I can compare and contrast balanced and unbalanced forces.</li> <li>• I can describe all 6 simple machines.</li> <li>• I can explain how friction affects the amount of work needed to move something.</li> <li>• I can analyze how the amount of force applied to an object or mass affects its motion.</li> <li>• I can explain the 3 Newton's Laws of Motion.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Force and motion unit test on Socrative</a></li> <li>• <a href="#">Friction lab report</a></li> <li>• <a href="#">5.1 Proficiency Scale</a></li> </ul>	

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**6th Grade Year At-A-Glance:**

<b>Quarter 1</b>	<b>Quarter 2</b>
<ul style="list-style-type: none"> <li>6.1 Construct a scientific explanation based on evidence that explains the internal systems of the earth.</li> <li>6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</li> </ul>	<ul style="list-style-type: none"> <li>6.1 Construct a scientific explanation based on evidence that explains the internal systems of the earth.</li> <li>6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</li> <li>6.2 Construct a scientific explanation based on evidence that explains the external systems of the earth.</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>
<ul style="list-style-type: none"> <li>6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</li> <li>6.2 Construct a scientific explanation based on evidence that explains the external systems of the earth.</li> </ul>	<ul style="list-style-type: none"> <li>6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</li> <li>6.3 Construct a scientific explanation based on evidence that explains distributions of resources found on earth, natural catastrophic events and how they impact human activity.</li> </ul>

<h2 style="margin: 0;">6th Grade</h2>			Last Revised (Date & Name): 1/8/2019 Lavender	
Priority Standards: (Based on Missouri Learning Standards)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
6.1 Construct a scientific explanation based on evidence that explains the internal systems of the earth.		<ul style="list-style-type: none"> <li><a href="#">6th Grade Science Learning Targets Priority Standard 1</a></li> </ul>	<ul style="list-style-type: none"> <li>Online Assessment (PDF <a href="#">Pre Post Test Copy</a>)</li> <li>Online Assessment (PDF <a href="#">Pre/Post Test Copy</a>)</li> <li>Online Assessment Pre-post copy</li> <li><a href="#">Prof Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">6.1.1 Lessons</a> Earth Plates with activities</li> <li><a href="#">Handout 1</a></li> <li>Lesson 6.1.2 -Minerals to Rocks Tutorial</li> <li><a href="#">Day 1 &amp; 2</a></li> <li><a href="#">Day 2 Lab</a></li> <li>Lesson 2 <a href="#">Day 3</a></li> <li>Lesson 2 <a href="#">Day 4</a></li> <li><a href="#">Lesson 5</a></li> </ul>

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				<ul style="list-style-type: none"> <li>• <a href="#">R.A.F.T</a></li> <li>• <a href="#">Activity</a> rubric</li> <li>• <a href="#">Lesson Plan</a> 6.1.3 -Fossils with activities:</li> <li>• <a href="#">Lesson 1</a></li> <li>• <a href="#">Lesson 2</a></li> </ul>
6.2 Construct a scientific explanation based on evidence that explains the external systems of the earth.		<ul style="list-style-type: none"> <li>• <a href="#">6th Grade Science Learning Targets Priority Standard 2</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Scoring Guide</a></li> <li>• <a href="#">Prof Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>• Lesson 6.2.1 <a href="#">Lesson 1</a></li> <li>• Modeling Presentation</li> <li>• <a href="#">Student Activity 1</a></li> <li>• Team Assignment</li> <li>• <a href="#">Sample of work</a></li> <li>• Presentation</li> <li>• <a href="#">Activity 2</a></li> <li>• Note Taking</li> <li>• <a href="#">Activity 3</a></li> <li>• <a href="#">Answer Sheet</a></li> <li>• Student Millionaire Game</li> <li>• <a href="#">Activity 4</a></li> <li>• Blank Presentation with Guiding Questions</li> <li>• Lesson 6.2.2</li> <li>• <a href="#">Wind</a></li> <li>• <a href="#">Clouds</a></li> <li>• <a href="#">Humidity</a></li> <li>• <a href="#">Water Cycle</a></li> <li>• <a href="#">Forecasting</a> Weather</li> </ul>
6.3 Construct a scientific explanation based on evidence that explains distributions of resources found on earth, natural catastrophic events and how they impact human activity.		<ul style="list-style-type: none"> <li>• <a href="#">6th Grade Science Learning Targets Priority Standard 3</a></li> </ul>	<ul style="list-style-type: none"> <li>• Online Pre-post Assessment</li> <li>• <a href="#">PDF Copy</a></li> <li>• <a href="#">Prof. Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>• Lesson 1:</li> <li>• <a href="#">ERH 6.3. 04</a></li> <li>• Performance:</li> <li>• Active Recycling</li> </ul>

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<p>6.4 Using a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</p>		<ul style="list-style-type: none"> <li>• <a href="#">6th Grade Science Learning Targets Priority Standard 4</a></li> </ul>	<ul style="list-style-type: none"> <li>• Online Assessment</li> <li>• <a href="#">CFA</a></li> <li>• Password Game</li> <li>• <a href="#">SI 6.4 10a</a></li> <li>• Scoring Rubric</li> <li>• <a href="#">Prof Scale</a></li> </ul>	<ul style="list-style-type: none"> <li>• Lessons 6.4</li> <li>• Lesson 1</li> <li>• <a href="#">Science Practices</a></li> <li>• <a href="#">SI 6.4 05</a> Question Activity</li> <li>• <a href="#">SI 6.4 05</a></li> <li>• <a href="#">SI 6.4 06</a></li> <li>• Lesson 2: Hypothesis</li> <li>• <a href="#">SI 6.4 03</a></li> <li>• <a href="#">SI 6.4 10</a></li> <li>• Lesson 3: Lab Report for Bread Lab</li> <li>• <a href="#">SI 6.4 10b table</a></li> <li>• Lesson 4: Gathering Data</li> <li>• Lesson 5: Writing a Conclusion</li> </ul>

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7th Grade Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>7.2 Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.</li> <li>7.4 Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.</li> </ul>	<ul style="list-style-type: none"> <li>7.2 Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.</li> <li>7.1 Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in organisms.</li> <li>7.4 Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>7.1 Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in organisms.</li> <li>7.2 Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.</li> <li>7.4 Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.</li> </ul>	<ul style="list-style-type: none"> <li>7.3 Construct a scientific explanation based on evidence that describes evidence of common ancestry and diversity, natural selection, and adaptation.</li> <li>7.1 Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in organisms.</li> <li>7.4 Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.</li> </ul>

<b>7th Grade</b>		Last Revised (Date & Name): 01/07/19, Grigsby		
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standard	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
7.1 Construct a scientific explanation using models to describe the structure and function, growth and development, and organization for matter and energy flow in		<ul style="list-style-type: none"> <li><a href="#">7th Grade Science Learning Targets Priority Standard 1</a></li> </ul>	<ul style="list-style-type: none"> <li>Online Pre/Post-Test/ CFA</li> </ul>	

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organisms.				
7.2 Construct a scientific explanation to describe interdependent relationships, cycles of matter and transfer of energy, and the dynamics, functioning, and resilience in ecosystems.		<ul style="list-style-type: none"> <li>• <a href="#">7th Grade Science Learning Targets Priority Standard 2</a></li> </ul>	<ul style="list-style-type: none"> <li>• Online Pre/Post-Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Exploring the "systems" in ecosystems</a></li> <li>• <a href="#">The Habitable Planet Simulation:</a></li> </ul>
7.3 Construct a scientific explanation based on evidence that describes evidence of common ancestry and diversity, natural selection, and adaptation.		<ul style="list-style-type: none"> <li>• <a href="#">7th Grade Science Learning Targets Priority Standard 3</a></li> </ul>	<ul style="list-style-type: none"> <li>• Online Pre/Post-Test</li> </ul>	<ul style="list-style-type: none"> <li>• Earthworm Behavior Lab</li> <li>• Lizard Reproduction Activity</li> </ul>
7.4 Use a method of scientific practices to investigate and define problems, develop possible solutions, and optimize the solution process using models.		<ul style="list-style-type: none"> <li>• <a href="#">7th Grade Science Learning Targets Priority Standard 4</a></li> </ul>	<ul style="list-style-type: none"> <li>• Online Pre/Post-Test/ CFA</li> </ul>	<ul style="list-style-type: none"> <li>• Tragedy in the Making (NIMSI): <a href="#">Laying the Foundation Login</a></li> </ul>

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**8th Grade Year At-A-Glance:**

<b>Quarter 1</b>	<b>Quarter 2</b>
<ul style="list-style-type: none"> <li>8.5 Use a logical method of investigation to define problems and evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.</li> <li>8.2- Apply physics principles to describe and investigate forces, motion and types of interactions.</li> </ul>	<ul style="list-style-type: none"> <li>8.2- Apply physics principles to describe and investigate forces, motion and types of interactions.</li> <li>8.3- Describe how energy is transferred from one object to another and how energy is conserved in a closed system.</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>
<ul style="list-style-type: none"> <li>8.1- Gather, analyze, and present information describing the structure of matter, properties of matter, and chemical reactions.</li> </ul>	<ul style="list-style-type: none"> <li>8.1- Gather, analyze, and present information describing the structure of matter, properties of matter, and chemical reactions.</li> <li>8.4- Describe the properties of waves</li> <li>Review for MAP Testing</li> </ul>

<h2 style="margin: 0;">8th Grade</h2>			Last Revised (Date & Name): 1/7/19: McClelland	
			Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:
8.1- Gather, analyze, and present information describing the structure of matter, properties of matter, and chemical reactions		<ul style="list-style-type: none"> <li><a href="#">8th Grade Science Learning Targets Priority Standard 1</a></li> </ul>	<ul style="list-style-type: none"> <li>Online Assessments</li> <li>Pre/Post Test/CFA</li> </ul>	<ul style="list-style-type: none"> <li>Phet Simulation: <a href="#">Molecule Builder</a></li> <li>Physical and Chemical Changes Lab and Demonstrations</li> <li><a href="#">Conservation of Matter Lab</a></li> <li>Analysis of Alternative and Fossil Fuels, New Medicines and Foods</li> <li><a href="#">Natural and Synthetic Materials Activities</a></li> <li><a href="#">Matter Performance Task</a>: Changes in</li> </ul>

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				<ul style="list-style-type: none"> <li>Thermal and Kinetic Energy</li> <li>Phet Simulation <a href="#">Balancing Chemical Equations</a></li> </ul>
8.2- Apply physics principles to describe and investigate forces, motion and types of interactions.		<ul style="list-style-type: none"> <li><a href="#">8th Grade Science Learning Targets Priority Standard 2</a></li> </ul>	<ul style="list-style-type: none"> <li>Pre and Post Tests, Quizzes,</li> <li>Daily Exit Tickets/Bellwork to check for understanding</li> <li>Pre and Post Tests</li> <li>Daily Exit Tickets/Bellwork to check for understanding</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Project Skydive</a>- Students design and create a parachute that will deliver a skydiver safely to the ground (minimizing the collision)</li> <li><a href="#">Balloon Rocket Lab</a></li> <li>Electricity and Magnetism Lab stations</li> <li><a href="#">Gravity Webquest</a></li> <li><a href="#">Electric Fields and Forces Online Activity</a></li> <li>Phet Simulation: <a href="#">Gravity and Orbits</a></li> </ul>
8.3- Describe how energy is transferred from one object to another and how energy is conserved in a closed system.		<ul style="list-style-type: none"> <li><a href="#">8th Grade Science Learning Targets Priority Standard 3</a></li> </ul>		<ul style="list-style-type: none"> <li><a href="#">Energy Skate Park</a></li> <li><a href="#">Marble Run Lab</a></li> <li><a href="#">Putt Putt Boats</a> or Solar Oven</li> <li><a href="#">Thermal Equilibrium Lab</a></li> </ul>
8.4- Describe the properties of waves		<ul style="list-style-type: none"> <li><a href="#">8th Grade Science Learning Targets Priority Standard 4</a></li> </ul>	<ul style="list-style-type: none"> <li>Pre and Post Tests</li> <li>Daily Exit Tickets/Bellwork to check for understanding</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">PHET Wave on a String Simulation</a></li> <li>Parts of a Wave Notes</li> <li><a href="#">Parts of a Wave Webquest</a></li> </ul>
8.5 Use a logical method of investigation to define problems, evaluate solutions by analyzing data from tests to develop models with possible improvements/answers.		<ul style="list-style-type: none"> <li><a href="#">8th Grade Science Learning Targets Priority Standard 5</a></li> </ul>	<ul style="list-style-type: none"> <li>Pre and Post Tests</li> <li>Daily Exit Tickets/Bellwork to check for understanding</li> </ul>	<ul style="list-style-type: none"> <li>Straw Rockets</li> <li><a href="#">Pringle Project</a></li> <li>Project Skydive</li> <li><a href="#">Water Bottle Flip Challenge</a></li> <li>Whirligig lollapalooza Lab- NMSI</li> </ul>

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Biology Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Characteristic of life, Biochemistry</li> </ul>	<ul style="list-style-type: none"> <li>Cells, Photosynthesis and Cellular Respiration</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Genetics</li> </ul>	<ul style="list-style-type: none"> <li>Evolution, Ecology</li> </ul>

<b>Biology</b>				Last Revised (Date & Name):K. Dorsey 9/26	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments	
9.1 Students will be able to formulate testable questions, design and conduct valid experiments including analysis of data, and communicate the results with justification. (MLS: Ties into all the standards.)	Ties into all the 6-8 science standards. (EX: 6-8.LS1.A.1-4, 6-8.LS1.B.1-2, 6-8.LS1.C.1, 6-8.LS4.A.1, 6-8.LS4.C.1)	<ul style="list-style-type: none"> <li>I can use the scientific method develop design a well organized experiment.</li> <li>I can analyze and communicate results from an experiment test.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">9.1 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plans</a></li> <li><a href="#">Biology Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Scientific Method</a></li> </ul>	
9.2 Students can communicate and model concepts of reproductive strategies using statistics and graphic representations to determine possible outcomes; determining how a change in genetics leads to a change in protein production which impacts possible short term and heritable effects. (MLS: 9-12.LS3.A.1) (MLS: 9-12.LS1.A.1)	6-8.LS1.A.1	<ul style="list-style-type: none"> <li>I can develop and analyze a graph to properly match my experimental results.</li> <li>I can accurately model a DNA and RNA structure.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">9.2 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plans</a></li> <li><a href="#">Biology Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Genetics</a></li> </ul>	

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<p>9.3 Students will understand the interrelationship and interdependence of organisms and how they generate dynamic biological communities within the ecosystem; students can make stochastic cause and effect predictions pertaining to human impact and model a plan to mitigate effects. (MLS: 9-12.LS2.C.1, C.2)</p>	<p>6-8.LS2.C.1 6-8.LS2.C.2</p>	<ul style="list-style-type: none"> <li>I can explain how biotic and abiotic factors influence an ecosystem.</li> <li>I can describe the methods used to study ecology.</li> <li>I can define primary producers.</li> <li>I can describe how consumers obtain energy and nutrients.</li> <li>I can trace the flow of energy through living systems.</li> <li>I can identify the three types of ecological pyramids.</li> <li>I can describe how matter cycles among the living and nonliving parts of an ecosystem.</li> <li>I can describe how water cycles through the biosphere.</li> <li>I can explain why nutrients are important in living systems.</li> <li>I can describe how the availability of nutrients affects the productivity of ecosystems.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">9.3 Proficiency Scale</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plans</a></li> <li><a href="#">Biology Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Ecology</a></li> </ul>
<p>9.4 Students will be able to evaluate claims, evidence, and reasoning to support the concepts of evolution by natural selection as a scientific explanation for the history and diversity of life on Earth; students can connect and predict how natural selection results in advantages adaptations, which lead to a change in gene frequency and evolution. (MLS: 9-12.LS4.C.1, C.2, C.3)</p>	<p>6-8.LS4.C.1</p>	<ul style="list-style-type: none"> <li>I can discuss the theory of evolution and support it with scientific evidence.</li> <li>I can explain how life on Earth has changed over the years.</li> <li>I can connect the adaptations of certain species to the environment in which they live.</li> </ul>		<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plans</a></li> <li><a href="#">Biology Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Evolution</a></li> </ul>
<p>9.5 Students can model and explain the concept of</p>	<p>6-8.LS2.A.1 6-8.LS2.A.2</p>	<ul style="list-style-type: none"> <li>I can model and explain the conservation of matter and</li> </ul>		<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plans</a></li> <li><a href="#">Biology Folder</a></li> </ul>

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conservation of matter and energy within the biotic and abiotic components of an ecosystem; the cycling of matter and energy are important to maintaining the health and sustainability of an ecosystem. (MLS: 9-12.LS2.A.1) (MLS: 9-12.LS2.B.1, B.2, B.3)	6-8.LS2.B.1	energy in a biotic and abiotic factors in an ecosystem. <ul style="list-style-type: none"> <li>I can explain how matter and energy cycles through an ecosystem.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Warm-Up</a></li> <li><a href="#">Ecology</a></li> </ul>
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### Physical Science Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Methods of Science, Physical and Chemical Properties of matter (Chemistry)</li> </ul>	<ul style="list-style-type: none"> <li>Atoms and the Periodic Table, Covalent and Ionic Bonding (Chemistry)</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Forces of Motion, Work and Energy (Physics)</li> </ul>	<ul style="list-style-type: none"> <li>Waves, Electricity and Magnetism (Physics)</li> </ul>

<b>Physical Science</b>				Last Revised (Date & Name): Harding 11/8/17	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments	
1 Forces and Motion will be supported by Newton's laws, the understanding of momentum, and the importance of energy transfer. (MLS: 9-12.PS2.A.1, 9-12.PS2.A.2, 9-12.PS2.A.3)	6-8.PS2.A.1 6-8.PS2.A.2	<ul style="list-style-type: none"> <li>I can describe and demonstrate newton's law (including inertia).</li> <li>I can connect forces and motion to "real life" and describe how it is used in our daily life.</li> <li>I can design an experiment to demonstrate how energy is transferred through forces and motion.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">PS Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Forces and Motion</a></li> </ul>	

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<p>2 Energy is a form of energy that is neither created nor destroyed but transferred into different forms which we use in our daily lives. (MLS: 9-12.PS3.A.1, 9-12.PS3.A.2, 9-12.PS3.A.3)</p>	<p>6-8.PS3.A.1 6-8.PS3.A.2 6-8.PS3.A.3 6-8.PS3.A.4</p>	<ul style="list-style-type: none"> <li>I can explain and model how energy is not destroyed but transferred into different forms of energy.</li> <li>I can identify and describe the difference types of energy and give examples of how they are used in our daily lives.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>- Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>-worksheets</li> <li><b>Summative Assessment</b></li> <li>-Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">PS Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Work and Energy</a></li> </ul>
<p>3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons. (MLS: 9-12.PS1.A.1 9-12.PS1.A.2)</p>	<p>6-8.PS1.A.1 6-8.PS1.A.2</p>	<ul style="list-style-type: none"> <li>I can discuss basic chemical reactions and how it impacts the arrangement of atoms.</li> <li>I can describe how electrons are transferred/shared during basic chemical reactions.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">PS Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Atoms</a></li> </ul>
<p>4 The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter. (MLS: 9-12.PS1.A.3)</p>	<p>6-8.PS1.A.4</p>	<ul style="list-style-type: none"> <li>I can identify and explain the different states of matter, include plasma.</li> <li>I can describe the molecules and their formation when they are in different states.</li> <li>I can discuss the laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">PS Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Matter and Energy</a></li> </ul>
<p>5 Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media. (MLS: 9-12.PS4.A.1)</p>	<p>6-8.PS4.A.1 6-8.PS4.A.2</p>	<ul style="list-style-type: none"> <li>I can calculate the frequency, wavelength, and speed of waves.</li> <li>I can design an experiment to figure out various types frequencies, wavelengths, and speed of waves.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">PS Folder</a></li> <li><a href="#">Warm-Up</a></li> <li><a href="#">Waves</a></li> </ul>

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Chemistry Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Introduction to Chemistry: Safety, Physical/Chemical Properties, Math of Chemistry</li> <li>Components of Matter, Chemical Names &amp; Formulas</li> </ul>	<ul style="list-style-type: none"> <li>Stoichiometry</li> <li>Introduction to Solutions</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Major Classes of Reactions</li> <li>Gas Laws &amp; Equilibria</li> </ul>	<ul style="list-style-type: none"> <li>Quantum Theory, Electron Configuration, Periodicity</li> <li>Bonding &amp; Molecular Geometry</li> </ul>

Chemistry			Last Revised (Date & Name): Becky Forest 4/11/19	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
1 The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.	<a href="#">Chemistry Prerequisite Standards Priority Standard 1</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 1</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>worksheets</li> <li>Worksheets, projects, labs, online activities, virtual labs/simulations</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> <li><a href="#">Kahoot!</a></li> <li><a href="#">Projects</a></li> <li><a href="#">Lab</a></li> <li><a href="#">Online Practice</a></li> <li><a href="#">Virtual labs/simulations</a></li> <li><a href="#">Quizzes</a></li> <li><a href="#">Exam</a></li> </ul>
2 Chemical and physical properties of materials can be explained by the structure and the arrangement of	<a href="#">Chemistry Prerequisite Standards Priority Standard 2</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 2</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> </ul>

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atoms, ions, or molecules and the forces between them.			<ul style="list-style-type: none"> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Kahoot!</a></li> <li><a href="#">Projects</a></li> <li><a href="#">Lab</a></li> <li><a href="#">Online Practice</a></li> <li><a href="#">Virtual labs/simulations</a></li> <li><a href="#">Quizzes</a></li> <li><a href="#">Exam</a></li> </ul>
3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.	<a href="#">Chemistry Prerequisite Standards Priority Standard 3</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 3</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> <li><a href="#">Kahoot!</a></li> <li><a href="#">Projects</a></li> <li><a href="#">Lab</a></li> <li><a href="#">Online Practice</a></li> <li><a href="#">Virtual labs/simulations</a></li> <li><a href="#">Quizzes</a></li> <li><a href="#">Exam</a></li> </ul>
4 Rates of chemical reactions are determined by the details of the molecular collisions.	<a href="#">Chemistry Prerequisite Standards Priority Standard 4</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 4</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> <li><a href="#">Kahoot!</a></li> <li><a href="#">Projects</a></li> <li><a href="#">Lab</a></li> <li><a href="#">Online Practice</a></li> <li><a href="#">Virtual labs/simulations</a></li> <li><a href="#">Quizzes</a></li> <li><a href="#">Exam</a></li> </ul>
5 The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.	<a href="#">Chemistry Prerequisite Standards Priority Standard 5</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 5</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> <li><a href="#">Kahoot!</a></li> <li><a href="#">Projects</a></li> <li><a href="#">Lab</a></li> <li><a href="#">Online Practice</a></li> <li><a href="#">Virtual labs/simulations</a></li> <li><a href="#">Quizzes</a></li> <li><a href="#">Exams</a></li> </ul>
6 Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic	<a href="#">Chemistry Prerequisite Standards Priority Standard 6</a>	<ul style="list-style-type: none"> <li><a href="#">Chemistry Learning Objectives Priority Standard 6</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">All Instructional Activities &amp; Assignments</a></li> <li><a href="#">Worksheets</a></li> <li><a href="#">Kahoot!</a></li> </ul>

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competition, sensitive to initial conditions and external perturbations.			<ul style="list-style-type: none"><li>worksheets</li><li><b>Summative Assessment</b></li><li>Test</li></ul>	<ul style="list-style-type: none"><li><a href="#">Projects</a></li><li><a href="#">Lab</a></li><li><a href="#">Online Practice</a></li><li><a href="#">Virtual labs/simulations</a></li><li><a href="#">Quizzes</a></li><li><a href="#">Exams</a></li></ul>
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### Adv/AP/Dual Credit Chemistry Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>• Chemical Foundations Atoms, Molecules, Ions, Stoichiometry,</li> <li>• Reactions &amp; Solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Electrochemistry</li> <li>• Thermochemistry</li> <li>• Thermodynamics</li> <li>• Kinetics</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>• Equilibrium: Kc, Kp, Ksp - General Equilibrium, Solubility Equilibrium</li> <li>• Equilibrium: Ka, Kb, Kw, Buffers</li> <li>• Atomic Structure &amp; Periodicity</li> </ul>	<ul style="list-style-type: none"> <li>• Bonding</li> <li>• States of Matter and IMF</li> <li>• Gases</li> </ul>

<u>Adv/AP/Dual Credit Chemistry</u>				Last Revised (Date & Name): Becky Forest 4/11/19	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments	
1 The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.	<a href="#">Prerequisite Standards Adv/AP/Dual Credit Chemistry Priority Standard 1</a>	<ul style="list-style-type: none"> <li>• <a href="#">Learning Targets Adv/AP/Dual Credit Chemistry Priority Standard 1</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> <li>• <a href="#">Virtual labs/simulations</a></li> <li>• <a href="#">Quizzes</a></li> <li>• <a href="#">Exam</a></li> </ul>	
2 Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.	<a href="#">Adv/AP/Dual Credit Chemistry Prerequisite Standards Priority Standard 2</a>	<ul style="list-style-type: none"> <li>• <a href="#">Adv/AP/Dual Credit Chemistry Learning Objectives Priority Standard 2</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> </ul>	

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			<ul style="list-style-type: none"> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Virtual labs/simulations</a></li> <li>• <a href="#">Quizzes</a></li> <li>• <a href="#">Exam</a></li> </ul>
3 Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.	<a href="#">Adv/AP/Dual Credit Chemistry Prerequisite Standards Priority Standard 3</a>	<ul style="list-style-type: none"> <li>• <a href="#">Adv/AP/Dual Credit Chemistry Learning Objectives Priority Standard 3</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> <li>• <a href="#">Virtual labs/simulations</a></li> <li>• <a href="#">Quizzes</a></li> <li>• <a href="#">Exam</a></li> </ul>
4 Rates of chemical reactions are determined by the details of the molecular collisions.	<a href="#">Adv/AP/Dual Credit Chemistry Prerequisite Standards Priority Standard 4</a>	<ul style="list-style-type: none"> <li>• <a href="#">Adv/AP/Dual Credit Chemistry Learning Objectives Priority Standard 4</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> <li>• <a href="#">Virtual labs/simulations</a></li> <li>• <a href="#">Quizzes</a></li> <li>• <a href="#">Exam</a></li> </ul>
5 The laws of thermodynamics describe the essential role of energy and predict the direction of changes in matter.	<a href="#">Adv/AP/Dual Credit Chemistry Prerequisite Standards Priority Standard 5</a>	<ul style="list-style-type: none"> <li>• <a href="#">Adv/AP/Dual Credit Chemistry Learning Objectives Priority Standard 5</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> <li>• <a href="#">Virtual labs/simulations</a></li> <li>• <a href="#">Quizzes</a></li> <li>• <a href="#">Exam</a></li> </ul>
6 Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.	<a href="#">Adv/AP/Dual Credit Chemistry Prerequisite Standards Priority Standard 6</a>	<ul style="list-style-type: none"> <li>• <a href="#">Adv/AP/Dual Credit Chemistry Learning Objectives Priority Standard 6</a></li> <li>• <a href="#">AP Chemistry Curriculum w/Vocab</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">All Instructional Activities &amp; Assignments</a></li> <li>• <a href="#">Worksheets</a></li> <li>• <a href="#">Kahoot!</a></li> <li>• <a href="#">Projects</a></li> <li>• <a href="#">Lab</a></li> <li>• <a href="#">Online Practice</a></li> <li>• <a href="#">Virtual labs/simulations</a></li> </ul>

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				<ul style="list-style-type: none"><li>• <a href="#">Quizzes</a></li><li>• <a href="#">Exam</a></li></ul>
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AP Physics Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Kinematics and Dynamics of Motion</li> </ul>	<ul style="list-style-type: none"> <li>Conservation of Energy, Circular Motion and Gravitation</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Momentum, Torque and Rotational Motion</li> </ul>	<ul style="list-style-type: none"> <li>Electrical Circuits and Fundamentals of Waves and Sound</li> </ul>

AP Physics

Last Revised (Date & Name): Harding 11/8/17

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)

Prerequisite Standards:

Learning Target:

Assessment Methods:

Instructional Activities & Assignments

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Phys.1 Objects and systems have properties such as mass and charge. Systems may have internal structure.	MLS: 9-12.PS1.A.1 9-12.PS1.A.2	<ul style="list-style-type: none"> <li>• <a href="#">Learning Objective #1</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Physics Instructional Activities</a></li> <li>• <a href="#">Physics Folder</a> - Ch. 20</li> </ul>
Phys.2 Fields existing in space can be used to explain interactions.	MLS: 9-12.PS3.A.1, 9-12.PS3.A.2, 9-12.PS3.A.3	<ul style="list-style-type: none"> <li>• <a href="#">Learning Objective #2</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Physics Instructional Activities</a></li> <li>• <a href="#">Physics Folder</a> - Ch. 7</li> </ul>
Phys.3 The interactions of an object with other objects can be described by forces.	MLS: 9-12.PS1.A.1 9-12.PS1.A.2	<ul style="list-style-type: none"> <li>• <a href="#">Learning Objective #3</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Physics Instructional Activities</a></li> <li>• <a href="#">Physics Folder</a> - Ch. 3, 4 and 5</li> </ul>
Phys.4 Interactions between systems can result in changes in those systems.	MLS: 9-12.PS2.A.1, 9-12.PS2.A.2, 9-12.PS2.A.3	<ul style="list-style-type: none"> <li>• <a href="#">Learning Objective #4</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Physics Instructional Activities</a></li> <li>• <a href="#">Physics Folder</a> - Ch. 1-20</li> </ul>
Phys.5 Changes that occur as a result of interactions are constrained by conservation laws	MLS: 9-12.PS3.A.1, 9-12.PS3.A.2, 9-12.PS3.A.3	<ul style="list-style-type: none"> <li>• <a href="#">Learning Objective #5</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Physics Instructional Activities</a></li> <li>• <a href="#">Physics Folder</a> - Ch. 9 and 11</li> </ul>

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AP Environmental Science Year At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Ecology and Evolution, Population</li> </ul>	<ul style="list-style-type: none"> <li>Renewable and Nonrenewable forms of Energy, Biodiversity and Biogeography</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Weather and Climate, Land and Soil</li> </ul>	<ul style="list-style-type: none"> <li>Water, Waste and Resources</li> </ul>

<b>AP Environmental Science</b>			Last Revised (Date & Name): Harding 11/8/17	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
Env 1. The energy available on Earth is derived from the sun and moves over time and space through various ecosystems	MLS: 9-12.PS1.A.3	<ul style="list-style-type: none"> <li>I can understand how energy is not created, but is transferred from one thing to another in Earth systems.</li> </ul>	<ul style="list-style-type: none"> <li>Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Energy Folder/Assessments</a></li> </ul>
Env 2. Climate is influenced by chemical, physical, atmospheric, and human interactions.	MLS: 9-12.LS2.C.1, C.2	<ul style="list-style-type: none"> <li>I can understand how climate is the average weather over a long period of time and how humans influence climate through the emitting of greenhouse</li> </ul>	<ul style="list-style-type: none"> <li>Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Climate and Atmosphere Assessments</a></li> </ul>
Env. 3 Biological components are required through the biogeochemical cycles and are recycled through space and time based on physical and chemical properties of matter.	MLS: 9-12.LS2.A.1 MLS: 9-12.LS2.B.1, B.2, B.3	<ul style="list-style-type: none"> <li>I can see how are elements are recycled in the Carbon, Nitrogen, Water, Phosphorus, and Sulfur Cycle.</li> </ul>	<ul style="list-style-type: none"> <li>Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Ecology and Biogeochemical Cycles</a></li> </ul>

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		<ul style="list-style-type: none"> <li>• These cycles can be changed through human and natural impacts.</li> </ul>		
Env 4. Ecosystem services have intrinsic value and need to be preserved through sustainability practices which are integral to the decision making process	MLS: 9-12.LS2.A.1 MLS: 9-12.LS2.B.1, B.2, B.3	<ul style="list-style-type: none"> <li>• I can understand how sustainability is fundamental to human survival. Resources are used through human activities and need to be monitored in regards to lumber, agriculture, livestock, and mining.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Sustainability and Environmental Science practices</a></li> </ul>
Env 5. Human activities have chemical and biological consequences and need to be considered for the magnitude of perturbation they cause on the environment	MLS: 9-12.PS3.A.1, 9-12.PS3.A.2, 9-12.PS3.A.3	<ul style="list-style-type: none"> <li>• I can see how human activities can change the water, air, land, and ecology of an area. This can make this location more vulnerable to extinctions and can lead to a greater amount of biological disturbance.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative: Quizlet, Quizziz, Kahoot, Warm-ups, Labs Projects, Worksheets</li> <li>• Summative: Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Biodiversity and Human Perturbation</a></li> </ul>

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**AP Biology Year At-A-Glance:**

<b>Quarter 1</b>	<b>Quarter 2</b>
<ul style="list-style-type: none"> <li>Foundations of Biology, Biochemistry, Cells and cell communication</li> </ul>	<ul style="list-style-type: none"> <li>Genetics,</li> </ul>
<b>Quarter 3</b>	<b>Quarter 4</b>
<ul style="list-style-type: none"> <li>Evolution(Macro and Micro)</li> </ul>	<ul style="list-style-type: none"> <li>Ecology,Animal Form and Function,Plant Form and Function</li> </ul>

<h2 style="margin: 0;"><u>AP Biology</u></h2>			Last Revised (Karen Dorsey) 9/18	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:  Essential knowledge	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
1 The process of evolution drives the diversity and unity of life.	<a href="#">AP Biology Essential Knowledge</a>	<ul style="list-style-type: none"> <li><a href="#">AP Biology Learning Targets</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li>Summative Assessment</li> <li>NMSI unit exam</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AP Biology Instructional Activities and Assignments</a></li> </ul>
2 Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.	<a href="#">AP Biology Essential Knowledge</a>	<ul style="list-style-type: none"> <li><a href="#">AP Biology Learning Targets</a></li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li>Summative Assessment</li> <li>NMSI unit exam</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AP Biology Instructional Activities and Assignments</a></li> </ul>

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<p>3 Living systems store, retrieve, transmit and respond to information essential to life processes.</p>	<p><a href="#">AP Biology Essential Knowledge</a></p>	<ul style="list-style-type: none"> <li>• <a href="#">AP Biology Learning Targets</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>• worksheets</li> <li>• Summative Assessment</li> <li>• NMSI unit exam</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">AP Biology Instructional Activities and Assignments</a></li> </ul>
<p>4 Biological systems interact, and these systems and their interactions possess complex properties.</p>	<p><a href="#">AP Biology Essential Knowledge</a></p>	<ul style="list-style-type: none"> <li>• <a href="#">AP Biology Learning Targets</a></li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>• worksheets</li> <li>• Summative Assessment</li> <li>• NMSI unit exam</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">AP Biology Instructional Activities and Assignments</a></li> </ul>

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Science Curriculum

Anatomy and Physiology At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Terminology, Body System, Cells, Tissues,</li> </ul>	<ul style="list-style-type: none"> <li>Integumentary, Skeletal, Muscle systems</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Nervous system, Cardiovascular, Respiratory system</li> </ul>	<ul style="list-style-type: none"> <li>Digestion, Urinary, Reproductive systems</li> </ul>

Anatomy and Physiology

Last Revised (Date & Name): K. Dorsey 1/7/19

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
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<p>1 The student will explore methods of scientific inquiry as they relate to the study of the anatomy and physiology of the human body.</p>		<ul style="list-style-type: none"> <li>• I can explain how anatomy and physiology are related.</li> <li>• I can list the levels of organization in the human body and the characteristics of each.</li> <li>• I can identify the major body cavities and identify the organs located in each cavity.</li> <li>• I can name the major organ systems, list the organs associated with each, and describe the general function of each system.</li> <li>• I can properly use the terms that describe relative positions, body sections, and body regions.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Quia quiz (paid subscription unable to link)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Biologycorner Chapter 1: Introduction to Anatomy</a></li> <li>• <a href="#">Biointeractive Anatomy/Physiology</a></li> <li>• <a href="#">OpenStax Anatomy and Physiology</a></li> <li>• OpenStax chapters 1-3</li> <li>• <a href="#">youtube Introduction to Anatomy &amp; Physiology: Crash Course A&amp;P #1</a></li> </ul>
<p>2 The student will explore the chemical, microscopic, and organizational structures of the body and will relate explore their role in human anatomy and physiology.</p>		<ul style="list-style-type: none"> <li>• I can explain the importance of homeostasis.</li> <li>• I can use anatomical terms to describe body sections, body regions, and relative positions.</li> <li>• I can identify the major body cavities and their subdivisions.</li> <li>• I can list and explain important substances in living systems.</li> <li>• I can describe how cells are organized into tissues.</li> <li>• I can describe the structure, function and characteristics of epithelial tissue.</li> <li>• I can identify, compare and contrast the six different kinds of connective tissue.</li> <li>• I can describe and identify the four different kinds of membranes.</li> <li>• I can distinguish among the three different kinds of muscle tissue.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizzz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Quia quiz (paid subscription unable to link)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">opentext Chapter 2. The Chemical Level of Organization</a></li> <li>• <a href="#">opentext Chapter 4. The Tissue Level of Organization</a></li> <li>• <a href="#">Biointeractive anatomy/physiology</a></li> <li>• <a href="#">www.haspi.org</a></li> <li>• <a href="#">Anatomy Corner</a></li> <li>• <a href="#">Biointeractive anatomy/physiology</a></li> <li>• <a href="#">Bozeman Anatomy &amp; Physiology</a></li> </ul>

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<p>3 The student will explore systems that relate to the support and movement of the human body.</p>		<ul style="list-style-type: none"> <li>I can distinguish between the axial and appendicular skeletons.</li> <li>I can list and describe the main functions of the skeletal system.</li> <li>I can classify bone types according to shape and function.</li> <li>I can identify bones of the appendicular and axial skeletons.</li> <li>I can discuss the living tissues found in bone even though bone appears to be inert.</li> <li>I can describe the effects of sunlight, nutrition, hormonal secretions, and exercise on bone development and growth.</li> <li>I can discuss the major functions of bones.</li> <li>I can make a skeleton model and label the major bones.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Quia quiz (paid subscription unable to link)</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">OpenStax Anatomy and Physiology</a></li> <li>Open stax chapter 6-9</li> <li><a href="#">Health and Science Pipeline Initiative (HASPI)</a></li> <li><a href="#">Anatomy Corner</a></li> <li><a href="#">Bozeman Anatomy &amp; Physiology</a></li> </ul>
<p>4 The student will explore systems that relate to integration, sensation, and control of the human body.</p>		<ul style="list-style-type: none"> <li>I can describe the general characteristics and functions of nervous tissue.systems.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Quia quiz (paid subscription unable to link)</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">OpenStax Anatomy and Physiology</a></li> <li>Open stax chapters 12-16</li> <li><a href="#">Health and Science Pipeline Initiative (HASPI)</a></li> <li><a href="#">Anatomy Corner</a></li> </ul>
<p>5 The student will investigate the structure and function of body systems that relate to transportation, respiration, and defense.</p>		<ul style="list-style-type: none"> <li>I can define the term organ.</li> <li>I can describe the structure and function of the skin.</li> <li>I can determine what factors determine skin coloration.</li> <li>I can describe how the skin helps regulate body temperature.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">OpenStax Anatomy and Physiology</a></li> <li>Open stax chapter 5, 18-25</li> <li><a href="#">Health and Science Pipeline Initiative (HASPI)</a></li> <li><a href="#">Anatomy Corner</a></li> <li><a href="#">Bozeman Anatomy &amp; Physiology</a></li> </ul>

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		<ul style="list-style-type: none"><li>I can distinguish between the types of burns, and illustrate the healing process</li></ul>	<ul style="list-style-type: none"><li>Quia quiz (paid subscription unable to link)</li></ul>	
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Science Curriculum

Earth Science At-A-Glance:

Quarter 1	Quarter 2
<ul style="list-style-type: none"> <li>Mapping our World</li> <li>Inside the Earth (ES.2, ES. 4)</li> <li>Rocks and Minerals (ES.2, ES.4)</li> </ul>	<ul style="list-style-type: none"> <li>Rocks and Minerals (ES.2, ES.4)</li> <li>Weather and Erosion (ES.3)</li> </ul>
Quarter 3	Quarter 4
<ul style="list-style-type: none"> <li>Water in Earth's Processes (ES.1)</li> <li>Climate and Weather (ES.3)</li> </ul>	<ul style="list-style-type: none"> <li>Universe and Solar System (ES.2)</li> <li>Earth, Moon, and Sun (ES.2)</li> <li>Human Impact (ES. 5)</li> </ul>

Yearly Lesson Plan

<b>Earth Science</b>			Last Revised (Date & Name): 9/26/2018 Taylor	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards:	Learning Target:	Assessment Methods:	Instructional Activities & Assignments
ES.1 Students will be able to describe the cycles of matter and energy, such as the water and carbon cycle, that impacts Earth's systems. (MLS: 9-12.ESS2.D)	ESS2	<ul style="list-style-type: none"> <li>I can be able to describe the cycles of matter and energy that impacts Earth's systems.</li> <li>I can recognize the significant role of water in earth processes.</li> <li>I can understand that matter goes through various never-ending cycles that are produced by the transformation of energy.</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> <li><b>Summative Assessment</b></li> <li>Test</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">ES Folder</a></li> <li><a href="#">Water Cycle File</a></li> </ul>
ES.2 Students will investigate the scientific view of how the earth's surface is formed through dynamic processes. (MLS 9-12.ESS1.C.1, 9-12.ESS1.C.2)	ESS1	<ul style="list-style-type: none"> <li>I can understand the impacts that the positions of the earth, moon and sun have on Earth's surface.</li> <li>I can understand how tectonism, weathering processes, and energy</li> </ul>	<ul style="list-style-type: none"> <li>Formative Assessment</li> <li>Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>worksheets</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Yearly Lesson Plan</a></li> <li><a href="#">ES Folder</a></li> <li><a href="#">Earth, Moon, and Sun</a></li> <li><a href="#">Tectonic Plates</a></li> </ul>

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		transfer shape and order the Earth.	<ul style="list-style-type: none"> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	
ES.3 Students will study how Earth is composed of interdependent and interacting systems and will be able to understand processes, such as how the distribution of land and oceans affects climate and weather. (MLS: 9-12.ESS2.D)	ESS3	<ul style="list-style-type: none"> <li>• I can connect how land and oceans impact the climate and weather.</li> <li>• I can predict the weather (patterns of change in the atmosphere) at designated location using weather maps (including map legends) and/or weather data (e.g., temperature, barometric pressure, cloud cover and type, wind speed and direction, precipitation)</li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Yearly Lesson Plan</a></li> <li>• <a href="#">ES Folder</a></li> <li>• <a href="#">Climate and Weather</a></li> <li>• <a href="#">Severe Weather</a></li> </ul>
ES.4 Students will investigate Earth's history by investigating evidence left from past events. Students will understand the importance of rocks and fossils which provide evidence of how our environment has evolved over time. (MLS: 9-12.ESS1.C.1, 9-12.ESS1.C.2)	ESS2	<ul style="list-style-type: none"> <li>• I can understand the importance of rocks and fossils which provide evidence of how our environment has evolved over time.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Yearly Lesson Plan</a></li> <li>• <a href="#">ES Folder</a></li> <li>• <a href="#">Rocks and Minerals</a></li> </ul>
ES.5 Students will study and understand how humans and the environment impact each other over a range of spatial and temporal scales. (MLS: 9-12.ESS3.A.1, 9-12.ESS3.C.1, 9-12.ESS3.C.2, 9-12.ESS3.D.2)	ESS3	<ul style="list-style-type: none"> <li>• I can compare how humans and the environment impact each other over time.</li> <li>• Students will understand how environmental consequences are derived from human activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Formative Assessment</li> <li>• Online resources (kahoot, quizizz, quizlet, etc...)</li> <li>• worksheets</li> <li>• <b>Summative Assessment</b></li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Yearly Lesson Plan</a></li> <li>• <a href="#">ES Folder</a></li> <li>• <a href="#">Human Impact Simulation</a></li> <li>•</li> </ul>

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