

Westside Middle School 5th Grade Science Curriculum Map 2017-2018

Teacher: Still & Wann Revised: 10.19.17



Map is still under construction and will be revised throughout the year.

WESTSIDE MIDDLE SCHOOL 5TH GRADE SCIENCE CURRICULUM MAP

Teacher: Still & Wann

Quarter 1

Topic: Matter & Energy in Ecosystems

Essential Questions:

Students will consider.....

- Where do plants get the materials they need for growth?
- How can energy in animals' food be connected to the sun?
- What role do decomposers play in an ecosystem?

Students will.....

- Understand the rules and procedures that are to be followed while conducting a science lab.
- Understand the process of Claim, Evidence, and Reasoning.
- Understand energy is transported into, out of, and within systems.
- Understand plants acquire their material for growth mainly from air, water, and sunlight.
- Understand the role organisms play in a food web.
- Understand some organisms, such as fungi and bacteria, break down dead organisms.

AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

5-PS3-1 - Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams and flowcharts.]

5-LS1-1 - Support an argument that plants get the materials they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]

5-LS2-1 - Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

Science/Engineering Practices	Disciplinary Core Idea	Crosscutting Concepts:	
<p>Developing and Using Models Use models to describe phenomena. (5-PS3-1) Develop a model to describe phenomena. (5-LS2-1) Engaging in Argument from Evidence Support an argument with evidence, data, or a model. (5-LS1-1)</p> <p>-----</p> <p>Connections to Nature of Science Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena Science explanations describe the mechanisms for natural events. (5-LS2-1)</p>	<p>PS3.D: Energy in Chemical Processes and Everyday Life The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1) LS1.C: Organization for Matter and Energy Flow in Organisms Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1) Plants acquire their material for growth chiefly from air and water. (5-LS1-1)</p> <p>LS2.A: Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the</p>	<p>Systems and System Models A system can be described in terms of its components and their interactions. (5-LS2-1) Energy and Matter Matter is transported into, out of, and within systems. (5-LS1-1) Energy can be transferred in various ways and between objects. (5-PS3-1)</p>	

	<p>soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p>Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)</p>		
Activities/Skills	Assessments	Resources	Vocabulary/Terms
			<ul style="list-style-type: none"> ● Ecosystem ● Environment ● Food Chain ● Food Web ● Consumer ● Producer ● Decomposer ● Decomposition ● Photosynthesis ● Organism ● Predator ● Prey ● Matter ● Carbon Dioxide ● Oxygen

Quarter 2

Topic: Matter & Energy in Ecosystems &

Essential Questions:

Students will consider.....

I will.....

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AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

Science/Engineering Practices	Disciplinary Core Idea	Crosscutting Concepts:	
	LS2.A: Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple		

	<p>species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1) Crosscutting Concepts Systems and System Models A system can be described in terms of its components and their interactions. (5-LS2-1) Energy and Matter Matter is transported into, out of, and within systems. (5-LS1-1) Energy can be transferred in various ways and between objects. (5-PS3-1) 19 Grade 5: Matter and Energy in Organisms and Ecosystems Arkansas K-12 Science Standards Arkansas Department of Education 2015 LS2.B: Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)</p>		
Activities/Skills	Assessments	Resources	Vocabulary/Terms

<u>Quarter 3</u>	
Topic:	
Essential Questions:	

Students will consider.....

I will.....

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AR STANDARDS / SKILLS
CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

Science/Engineering Practices	Disciplinary Core Idea	Crosscutting Concepts:	
Activities/Skills	Assessments	Resources	Vocabulary/Terms

Quarter 4

Topic:

Essential Questions:

Students will consider.....

I will.....

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AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

Science/Engineering Practices	Disciplinary Core Idea	Crosscutting Concepts:	
Activities/Skills	Assessments	Resources	Vocabulary/Terms