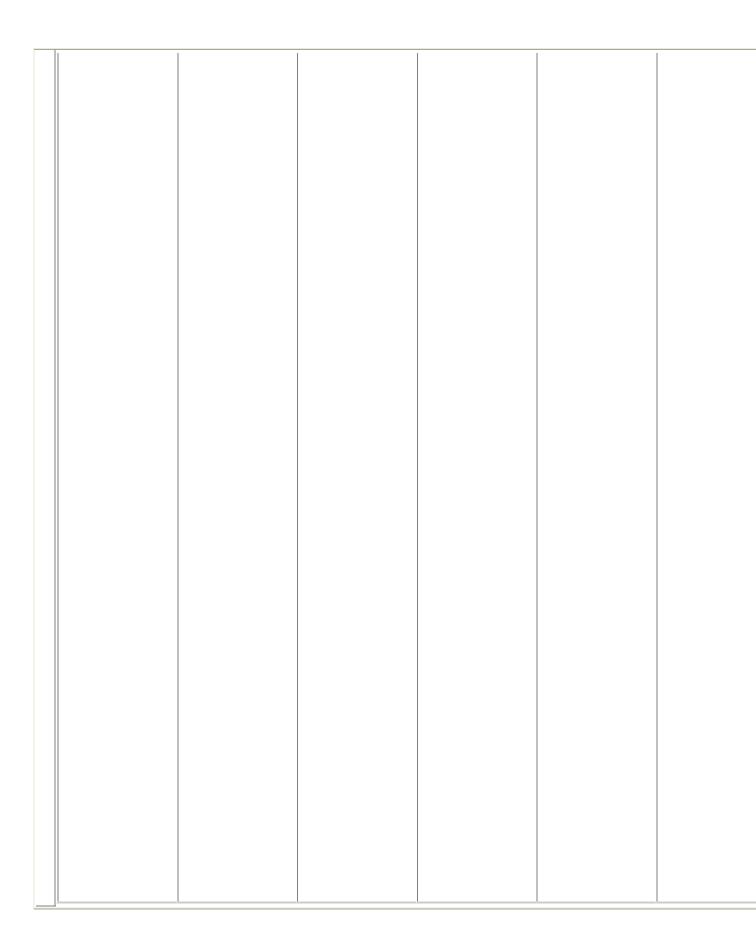
Teacher: Core Science Grade 4 Year: 2010-11

Course: Science Grade 4 Month: All Months

S	CHARACTERISTICS OF LIFE FUNCTIONS: CELLS/ORGANIZATION									
e p t	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons				
e m b e r		The Building Blocks of Life/ Cells  How are Plants Classified?	General Skill: Label parts of an animal cell and a plant cell verbally and in writing.  General Skill: Describe the jobs of cells orally and in writing.  General Skill: Differentiate between vascular and non-vascular plants in writing.  Science Skills: Describe patterns and relations both visually and in writing of both living and nonliving things. Science Skills: Describe patterns and relations both visually and in writing of both living and nonliving things. Science Skills: Describe patterns and relations both visually and in writing of both living and nonliving things. Science Skills: observe and describe interactions among components of							

		simple systems		
		• identify		
		common things		
		that can be		
		considered to be		
		systems (e.g., a		
		plant, a		
		transportation		
		system, human		
		beings) – Standard		
		beings)– Standard 6 Key Idea 1		
	1			



О	CHARACTERIST	TICS OF LIFE FU	NCTIONS: PLAN	ΓS/ANIMALS		
o	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons
b e r		Plant Characteristics Plant Parts Plant Reproduction Life Cycle of a Plant	Describe what plants need to survive orally or in writing.  Identify the parts of plants and state their function orally and in writing.			

Summarize the process of photosynthesis orally and in writing.

Summarize the

Summarize the plant reproduction process, and identify plant reproductive organs orally and in writing.

Sequence the life cycle of a plant orally and in writing.

## Science Skill:

observe and describe interactions among components of simple systems • identify common things that can be considered to be systems (e.g., a plant, a transportation system, human beings)

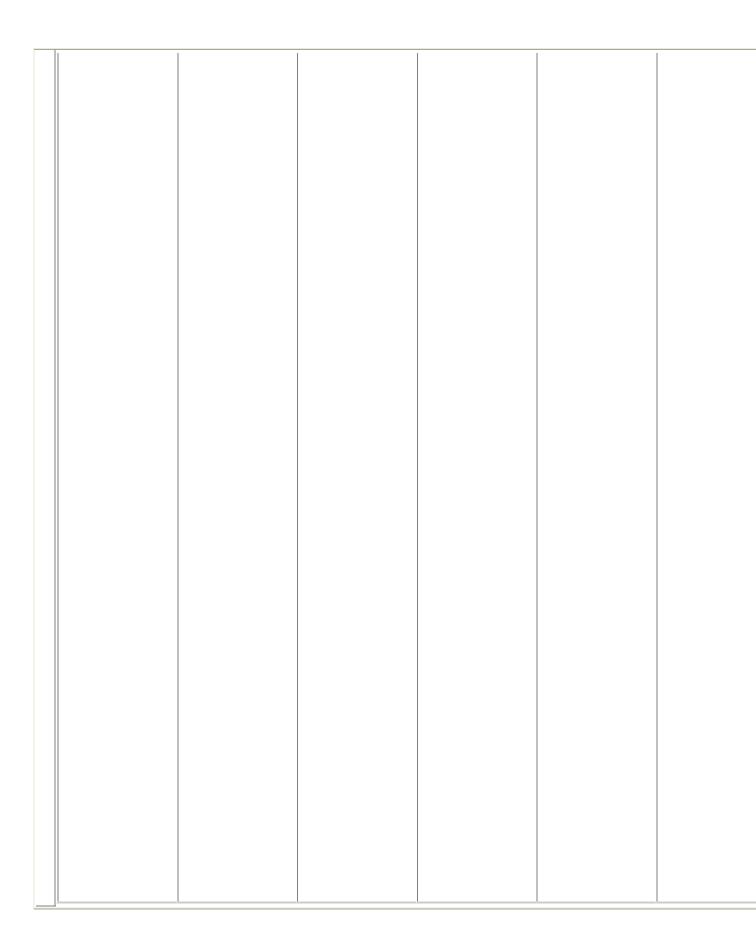
– Standard 6 Key Idea 1 Science Skills: Describe patterns and relations both visually and in writing of both living and nonliving things. Science Skill:

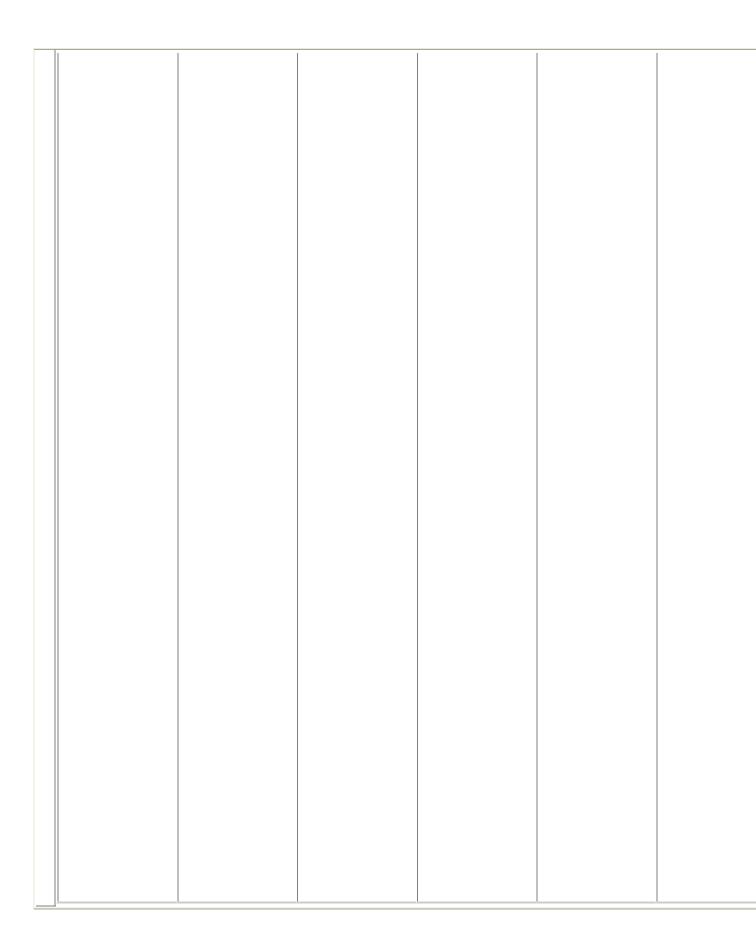
Observe, discuss,

	and record data		
	both visually and in writing		
	in writing		
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	l.	1		1	1					
${N}$										
0	ECOLOGY: ECOSYSTEMS									
v	Essential	G	G1 '11	<b>X</b> 7 1 1						
e	Questions	Content	Skills	Vocabulary	Assessments	Lessons				
m		Parts of	List living and							
b		Ecosystems	non-living parts							
e		Energy Flow in	of an ecosystem							
r		Ecosystems	in writing and							
		Matter/Energy	communicate							
		Flow in	them orally.							
		Ecosystems	- 44 44 44							
			Describe different							
			types of							
			ecosystems orally, visually,							
			and in writing.							
			and in writing.							
			Differentiate							
			between the							
			different parts of							
			ecosystems							
			verbally and							
			orally.							
			Contrast							
			consumers within							
			ecosystems in							
			writing, verbally,							
			and/or visually.							
			Determine energy							
			flow in							
			ecosystems using							
			food chains and							
			food webs							
			verbally, in							
			writing, and							
			visually.							
			Determine the							
			factors that							
	<u> </u>	<u>l</u>	raciois mai							

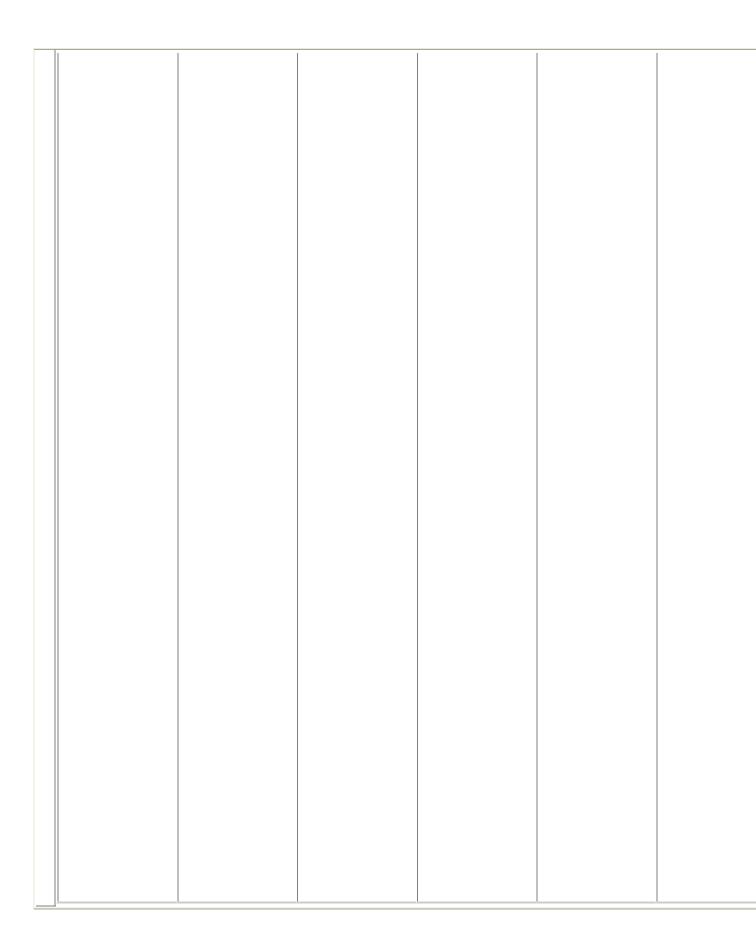
negatively and positively affect ecosystems verbally, in writing, and visually. Science Skill: Describe patterns and relations both visually and in writing of both living and nonliving things. Science Skill: Classify objects visually, kinesthetically, or in writing Science Skill: Interpret organized observations (using charts, diagrams, and tables) using measurements, recognizing simple patterns, sequences, and relationships. Science Skill: use different types of models, such as graphs, sketches, diagrams, and maps, to represent various aspects of the real world – Standard 6 Key Idea 2

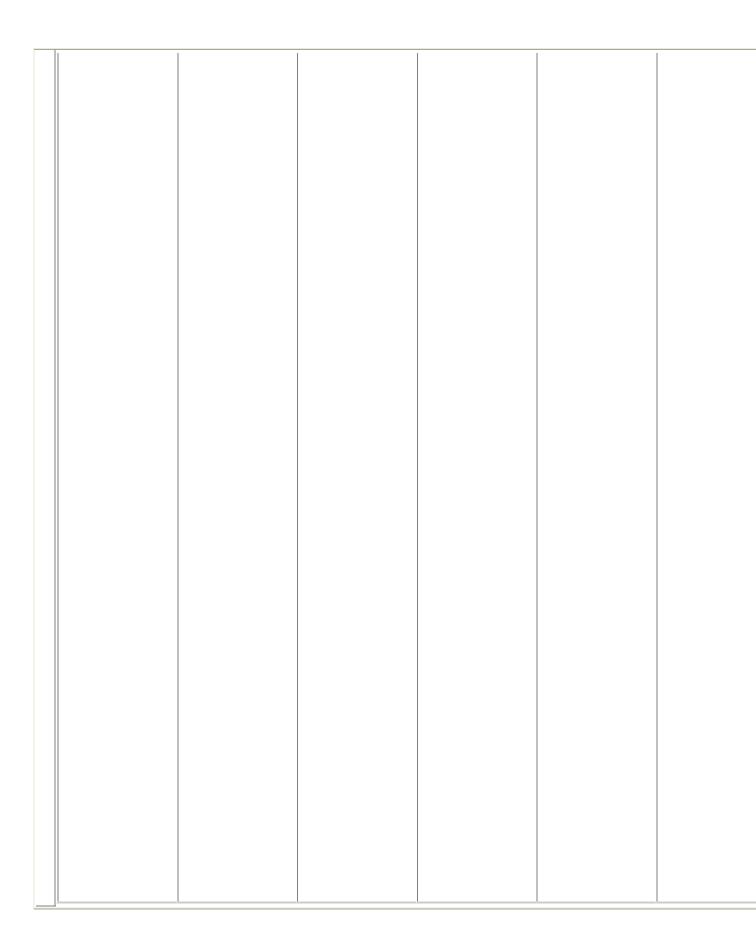


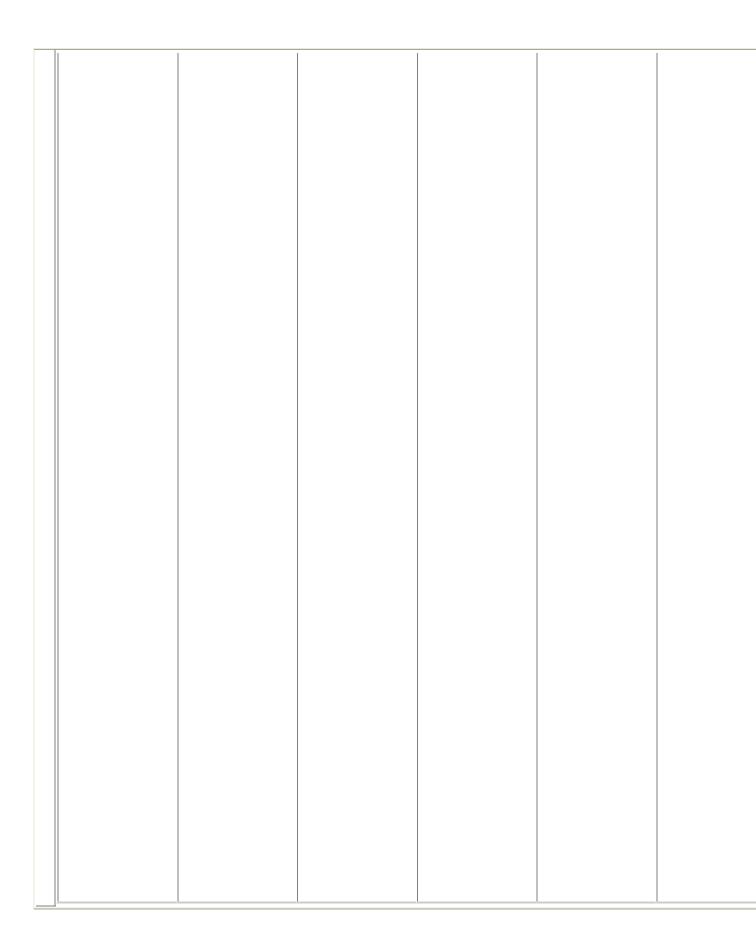


D e	ECOLOGY: ECO	SYSTEMS/COMF	 PETITION/RELAT	I TIONS OF LIVING	THINGS	
e	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons
m b e r		Organisms Interactions Changing Environments Humans Disturbing the	List the needs of all living things in writing.  Describe and contrast the way organisms interact in ecosystems			

Ec	cosystems	verbally and in		
	-	writing.		
		C		
		Explain the affect		
		of climate and		
		natural disasters		
		on ecosystems		
		verbally, and		
		describe these		
		effects in writing.		
		Express ways		
		humans disturb		
		the balance of		
		ecosystems and		
		the effects these		
		actions have on		
		the ecosystems		
		verbally and		
		describe these in		
		writing.		
		Science Skill:		
		Describe patterns		
		and relations both		
		visually and in		
		writing of both		
		living and		
		nonliving things.		
		Science Skill:		
		observe and		
		describe interactions		
		among components of		
		simple systems.		
		Identify common		
		things that can be		
		considered to be		
		systems (e.g., a		
		plant, a		
		transportation		
		system, human		
		beings)  — Standard		
		6 Key Idea 1		



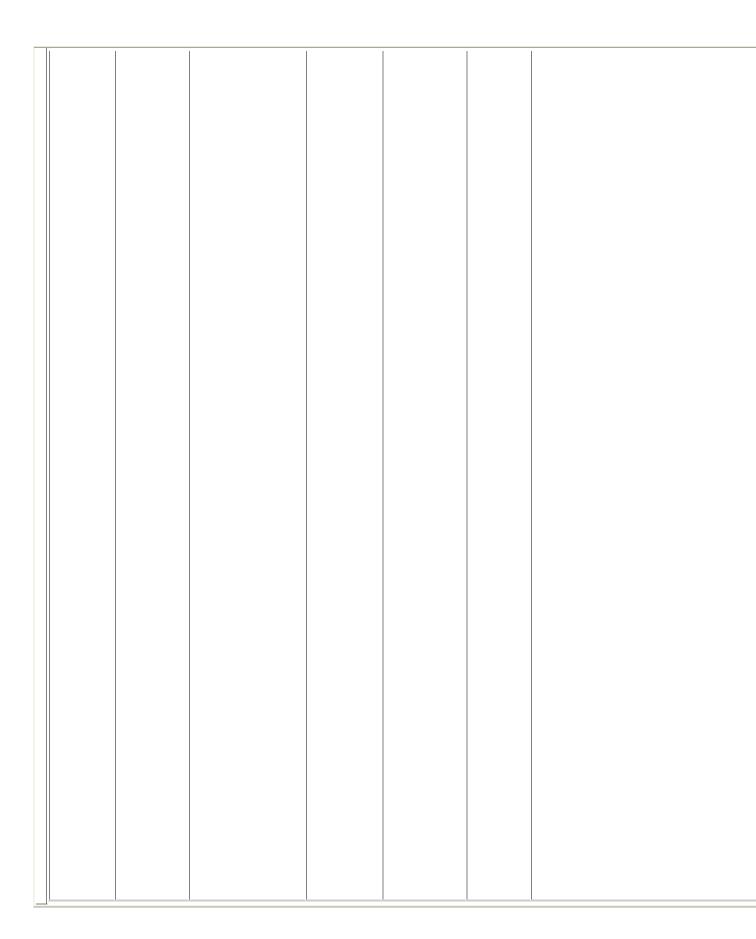




RENEW A		OURCES: ENERG	GY/MATTEI	R: STATES	OF MATT	ER/MIXTURES/PH	HYSICAL/CHE
 Essential Questions	What is Matter? How Matter is Measured How	Identify, compare and contrast the three states of matter (solid, liquid, gas) in writing, verbally, and visually.  Justify that all matter is made of tiny particles called atoms verbally.  Measure the mass of matter using a pan balance.  Measure the volume of matter using a graduated cylinder.  Compare/contrast the densities of matter using various liquids.		Assessments	States of Matter	Resources  Use pgs. 319-337 in http://phet.colorado The above link has use in the computer	o.edu/en/simulat interactive scien

Ti i		
	Identify the	
	behavior and	
	positioning of	
	particles in	
	different states of	
	matter verbally,	
	visually,	
	kinesthetically,	
	and in writing.	
	Compare and	
	contrast mixtures	
	and solutions	
	verbally,	
	kinesthetically,	
	and/or in writing.	
	Differentiate	
	between a	
	physical and	
	chemical change	
	in matter	
	verbally,	
	visually, and in	
	writing.	
	Science	
	Skill:Describe	
	patterns and	
	relations both	
	visually and in	
	writing of both	
	living and	
	nonliving things.	
	Science Skill:	
	Explore and	
	solve problems	
	generated from	
	school, home,	
	and community	
	situations, using	
	concrete objects	
	or manipulative	
	materials when	
	possible.	
	Science Skill:	
	Use appropriate	
	scientific tools,	
	such as metric	

	rulers, spring		
	scale, pan		
	balance, graph		
	paper,		
	thermometers		
	[Fahrenheit and		
	Celsius],		
	graduated		
	cylinder to solve		
	problems about		
	the natural world		
	Science Skill:		
	Observe, discuss,		
	and record date		
	both visually and		
	in writing.		
	Science Skill:		
	use simple		
	instruments to		
	measure such		
	quantities as		
	distance, size,		
	and weight and		
	look for patterns		
	in the data –		
	Standard 6 Key		
	Idea 5		
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F	ENERG	ENERGY TYPES AND TRANSFER/HEAT							

## F | ENERGY:TYPES AND TRANSFER/HEAT

e	ET (EROT: TTE									
b r	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons				
u		Why Matter has	Describe thermal							
a		Energy	energy and how							
r		How Heat	it affects the							
У		Moves	moving particles							
			in matter							
			verbally,							
			kinethetically							
			and in writing.							
			Measure							
			temperature							
			using a							
			thermometer.							
			Describe how a							
			thermometer							
			works by							
			explaining the							
			changes in							
			movement of the							
			particles in							

	matter based on		
	the addition or		
	subtraction of		
	heat.		
	Differentiate		
	between		
	conductors and		
	insulators		
	verbally,		
	visually, and in		
	writing.		
	Describe the		
	movement of		
	heat energy by		
	conduction,		
	convection, and		
	radiation		
	verbally,		
	visually, and in		
	writing.		





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M	ENERGY:TYPE	S AND TRANSF	ER/ELECTRICITY	AND MAGNET	ISM	
a		_				
r c	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons
h		How Matter Becomes	Diffentiate between static			
		Charged	electricity and			
		How Electric Charges Flow	electric current verbally and in			
		Magnetic Fields Electricity	writing. Explain how			
		Transformed to	charged particles			
		Magnetism Magnetism	behave in matter and how they are			
		Transformed to Electricity	able to move verbally and in			
		Dieculcity	writing.			
			Build a series and parallel			
			circuit. Describe the flow of			
			electric current			
			through both verbally and in			
			writing.			
			Differentiate between			
			conductors and insulators. Test			
			matter for			
			conductivity using a circuit.			
			Locate the north and south poles			
			of magnets, and			
			describe how like poles repel and			
			opposite poles			







A	FORCES IN MO	ΓΙΟΝ				
p r i	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons
		What is Motion How Force Affects Moving Objects How Force, Mass, and Energy are Related	Differentiate between different types of motion verbally, kinethetically, and in writing. Identify ways to measure motion verbally and in writing.			

M a y	Essential	cills Voc	cabulary Asse	essments Lesso	ns Reso

		NYS Exam Review							
J u	ENERGY: SIMPLE MACHINES								
n	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons			
		What is a Machine How Machines Work Together	SKIIIS	Vocabulary	Assessments	Lessons			

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