DAY 1 - 8th Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5A (R), 8.5B (R), 7.5C (S), 7.6A (S), 7.6B (S)

Use this model to answer the questions on this page.	<ul> <li>2. How does the mass of location y compare to the mass at location x?</li> <li>A Location y has a mass multiple thousand times larger than location x.</li> <li>B Location y has a mass only slightly larger than location x.</li> <li>C Location x and y have the same mass.</li> <li>D Location x has a mass twice as large as location y.</li> </ul>
1. Which of the following statements best describes the subatomic particle at location X?	3. What are the names of the two subatomic particles located at y?
<ul> <li>A It has a very large mass and is negatively charged.</li> <li>B It has almost no mass and no charge.</li> </ul>	<ul> <li>A protons and electrons</li> <li>B poutrons and protons</li> </ul>
<ul> <li>It has almost no mass and no charge.</li> <li>The charge of the subatomic particle at location x is</li> </ul>	<ul> <li>B neutrons and protons</li> <li>C neutrons and electrons</li> </ul>
opposite of the charge at location y.	<ul> <li>D protons and neutrinos</li> </ul>
It has a positive charge similar to location y.	

DAY 1 - 8 <sup>th</sup> Grade Science STAAR Review Name Matter and Energy - TEKS 8.5A (R), 8.5B (R), 7.5C (S), 7.6A (S), 7.6	
4. Which of the particles in the chart below is a neutron?       Particle    Mass    Charge    Location	6. In question 5, what identifies the atom on the left as sodium (Na)?
A1+1nucleusB10nucleusC0-1outside nucleus	Sodium always has an equal balance of neutrons and electrons.
<ul> <li>A Particle A</li> <li>B Particle B</li> </ul>	B No other atom can have only one valence electron.
© Particle C	C Only sodium can chemically react and bind with chlorine.
D None of the above	$^{\textcircled{D}}$ Sodium is the only element with 11 protons.
5. Sara creates a chemical reaction between sodium and chlorine. How many valence electrons are transferred between the two atoms in the model below?	7. Which of these atoms will be more reactive and why? $ \begin{array}{c}                                     $
A 1 electron	Atom A, because it has fewer electrons.
B 2 electrons	<sup>B</sup> Atom A, because it has unequal charges.
© 3 electrons	$\odot$ Atom B, because it gives up a valence electron.
D 4 electrons	D Atom B, because it more neutrons.

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DAY 1 - 8th Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5A (R), 8.5B (R), 7.5C (S), 7.6A (S), 7.6B (S)	
8. Michael eats a cookie at lunch. Which of the following actions during the digestive process is a chemical change?	10. What term describes the chemical change at "X" in this food chain that allows the transfer of energy?
<ul> <li>A Michael chewing the cookie before swallowing.</li> <li>B Enzymes in Michael's saliva breaking down the sugar compounds.</li> <li>C Michael abdominal muscles pushing the cookie through the small intestines.</li> <li>Small amounts of water being absorbed from the cookie in the large intestine.</li> </ul>	<ul> <li>A photosynthesis</li> <li>B respiration</li> <li>C reproduction</li> <li>D condensation</li> </ul>
<ul> <li>9. What is the best title for the chart below?</li> <li>Title <ul> <li>Contains long chains of carbon atoms</li> <li>Foundation of all living things</li> <li>Can include hydrogen, oxygen, nitrogen, phosphorus, and sulfur</li> </ul> </li> <li>A Characteristics of Metals in the Periodic Table <ul> <li>B Items that Conduct Electricity</li> <li>C Highly Reactive Elements</li> <li>D Organic Compounds</li> </ul> </li> </ul>	<ul> <li>11. Miriam is investigating the reaction between magnesium metal with oxygen in the laboratory. What safety issues should Miriam be aware of?</li> <li>A Magnesium metal is not very reactive. Miriam should only wear an apron to protect her clothes from spills.</li> <li>B The reaction will produce carbon monoxide, a toxic gas.</li> <li>C Magnesium is very reactive with oxygen. Miriam should wear goggles, gloves, and an apron.</li> <li>D Water will be produced. She will need a beaker to collect the liquid.</li> </ul>

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DAY 1 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A. Atomic Mass	1 The tendency of an element to react with other elements to produce compounds.
B. Atomic Number	2 A compound containing a chain of carbon atoms bound with other elements such
C. Chemical Change	as hydrogen and oxygen.
D. Compound	3 A combination of two or more types of matter that retain their own individual
E. Electron Shells	properties.
F. Electron	4 A subatomic particle that has almost no mass and a negative charge.
G. Element	5 The number of protons in the atoms of a particular element that is unique only to
H. Mixture	that element.
I. Neutron	6 A positively charged subatomic particle located in the nucleus and has an atomic mass of 1.
J. Nucleus	
K. Organic Compounds	7 A collection of orbitals around the nucleus, each having its own energy level.
L. Proton	8 A neutral subatomic particle located in the nucleus.
M. Reactivity	9 The number of negatively charged particles in the most outer shell.
N. Valence Electrons	10 The mass of an atom equal to the number of protons and neutrons.
	11 A chemical substance made up of two or more kinds of atoms bonded together.
	12 The reaction between substances that results in new substances with different properties.
	13 A pure substance containing only one type of atom.
	14 The center of an atom that contains the proton and neutrons and has a positive charge.

DAY 2 - 8th Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5C (R), 8.5D (R), 6.5C (S), 6.6A (S), 6.6B (S)

Use the table below to answer the questions on this page. A $B$ $C$ $D$ $C$ $D$	<ul> <li>3. Some elements have properties of metals and nonmetals, which make them useful in electronic devices. Where can these elements be found?</li> <li>A section A</li> <li>B section B</li> <li>c section C</li> <li>D section D</li> </ul>
<ul> <li>1. All living things require oxygen to survive. Where on the periodic table above would you find gases like oxygen?</li> <li>A section A</li> <li>B section B</li> <li>C section C</li> <li>D section D</li> </ul>	<ul> <li>4. Transition metals are malleable and are found in section B. What is another property of metals in section B?</li> <li>A conducts heat</li> <li>B liquid state of matter</li> <li>C highly reactive and never found as a pure element</li> <li>D poor conductors of electricity</li> </ul>
<ul> <li>2. Henry is investigating the properties of elements in section A. What are the general characteristics of elements from section A?</li> <li>A conducts heat and electricity, shiny, and solid</li> <li>B mostly gases and are very reactive</li> <li>C share properties of metals and nonmetals</li> <li>D liquids that are stable in pure form</li> </ul>	<ul> <li>5. Which two sections of elements are mostly likely to react and form chemical bonds with one another?</li> <li>A section A and section B</li> <li>B section B and section C</li> <li>c section C and section D</li> <li>D section D and section A</li> </ul>

DAY 2 - 8th Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5C (R), 8.5D (R), 6.5C (S), 6.6A (S), 6.6B (	<b>Date</b>
Use this chemical equation to answer questions on this page. $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$ 6. How many different elements are involved in this reaction? (A) two (B) three (C) four (D) five	<ul> <li>9. Which of the following lab equipment is necessary when conducting this reaction?</li> <li>A filter to safeguard against contaminants in the water used to initiate the reaction.</li> <li>B A glass beaker to hold the methane gas.</li> <li>C A magnet to ensure the oxygen is free of iron filings.</li> <li>A fire extinguisher as a safety precaution since the methane gas is flammable.</li> </ul>
<ul> <li>7. How many atoms are there on the left side of the equation compared to the right side?</li> <li>A The left side has more atoms than the right side.</li> <li>B The right side has more atoms than the left side.</li> <li>C The left and right side have the same number of atoms.</li> <li>D It is impossible to know because it depends on the reaction speed.</li> <li>8. How many atoms of hydrogen are involved in this reaction? Record you answer below.</li> </ul>	<ul> <li>10. In the hypothetical chemical reaction below, which element will be recombined into two separate atoms of one single element following the reaction?</li> <li>2AB + C<sub>2</sub> → 2CB + 2A</li> <li>A element A</li> <li>B element B</li> <li>C element C</li> <li>D All of the reactants will recombine into two separate atoms of a single element.</li> </ul>

DAY 2 - 8 <sup>th</sup> Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5C (R), 8.5D (R), 6.5C (S), 6.6A (S), 6.6B	<b>Date</b>
11. Consider the following reaction between iron and oxygen to form iron oxide. $2Fe + O_2 \rightarrow 2FeO$	13. The chart below shows the densities of various substances. Which of the answer choices indicate the mass of 6 cm <sup>3</sup> of salt?
Iron oxide is a (an):	Water1.0 g/cm3Mercury13.5 g/cm3Salt2.1 g/cm3Helium0.01 g/cm3
<ul> <li>A element</li> <li>B compound</li> </ul>	$\bigcirc 0.06 \text{ grams}$
© product	<ul> <li>B 6.0 grams</li> <li>C 12.6 grams</li> </ul>
<b>both B and C</b>	81.0 grams
12. In the table below, what would be an appropriate title for column C?	14. When comparing two elements on the periodic table, elements in the same are most likely to have similar chemical and physical properties.
PropertyABCConductor?YesSemiNoMalleable?YesNoNoLustrous?YesYesNo	<ul> <li>A group</li> <li>B period</li> </ul>
<ul> <li>A Metals</li> <li>B Nonmetals</li> </ul>	© area section
© Metalloids	
Solid Compounds	

DAY 2 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A. Chemical Formula	1 the ability of an element to transfer heat or electricity through it
B. Coefficient	2 found on the left side of the periodic table, these elements have high
C. Conductivity	luster, are usually solid, and conduct electricity
D. Density	3 the amount of matter in a given space
E. Groups	4 a number written slightly smaller, below, and after an element's symbol
F. Luster	indicating the number of atoms in a compound
G. Malleability	5 a physical property that describes how a substance reflects light
H. Metalloids	6 found in a small diagonal section of the periodic table, these elements
I. Metals	have unique properties of metals and nonmetals
J. Nonmetals	<ol> <li> a number written preceding a chemical formula indicating the number of molecules</li> </ol>
K. Periodic Table	liblecules
L. Periods	8 a visual representation of the elements grouped by similar properties
M. Subscript	9 found on the right side of the period table, these elements are poor conductors of electricity and are mostly gases
	10 rows of elements on the period table
	11 the ability to be molded under compressive stress
	12 a set of symbols and numbers representing the number and type of elements in a compound
	13 columns of elements on the period table that share similar physical and chemical properties

Name \_\_\_\_\_ Date \_\_\_\_\_

1. Felipe is observing how acetic acid (vinegar) and sodium bicarbonate (baking soda) react with one another in a volcano model. What evidence can Felipe look for to indicate a chemical reaction has taken place?	3. A science class is placing an iron rod outside and another inside a sealed plastic container. Several weeks later, the iron rod outside has rusted. What research question was the class attempting to answer?
$^{igle A}$ The volume of the acetic acid increases.	A Will a physical change occur on either iron rod?
$^{\textcircled{B}}$ The density of the baking soda decreases.	<sup>B</sup> How often do iron rods rust?
<ul> <li>C Gas bubbles are produced.</li> <li>The baking soda is dissolved.</li> </ul>	<ul> <li>C Will the iron rod inside gain mass when compared to the iron rod outside?</li> <li>D Will there be a difference in the speed of the chemical change between the two iron rods?</li> </ul>
<ul> <li>2. During a science lab, Jessica records the following data when Liquid A (clear) and Liquid B (clear) are combined in a beaker:</li> <li>Temperature No change over 5 minutes</li> <li>Color Yellow liquid is formed immediately</li> <li>State of Matter No change in state of matter</li> <li>Did a chemical change occur? Why?</li> </ul>	<ul> <li>4. Which of the following pictures is an example of a chemical change?</li> <li>A</li> </ul>
<ul> <li>A Yes, a new yellow liquid is formed</li> <li>B Yes, mixing any two unknown liquids will cause a chemical change</li> <li>C No, there was no change in temperature</li> <li>D No, there was no change in the state of matter</li> </ul>	
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Date
<ul> <li>7. Susan observes two antacid tablets dropped into water. Bubbles immediately form. When will she know the chemical reaction has stopped?</li> <li>A when the bubbles have completely disappeared</li> <li>B when the temperature of the water begins to decrease</li> <li>C when a white substance begins to form at the bottom</li> <li>D when heat is produced from the water</li> </ul>
<ul> <li>8. Which of the following pieces of lab equipment is needed to measure the amount heat energy released during a chemical change?</li> <li>A</li> <li>B</li> </ul>
C 90 40 20 10 0 0 10 20 30 40 F 12 10 80 40 42 30 30 40 C 5

DAY 3 - 8 <sup>th</sup> Grade Science STAAR ReviewNameMatter and Energy - TEKS 8.5E (R), 8.5F (S)	Date
9. Which of the following chemical equations for a reaction between carbon dioxide and water is considered balanced?	11. Why is it important for a chemist to have a balanced chemical equation for a reaction?
(A) $3CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 3O_2$	A She will need to be able to predict the ideal temperature for the reaction to place.
<sup>(B)</sup> $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$	<sup>B</sup> Not having the right amounts of reactants will cause
ⓒ $3CO_2 + 2H_2O \rightarrow C_6H_{12}O_6 + 6O_2$	the reaction to be unstable.
$\textcircled{D} CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2$	© In order to produce the desired mass of product, she will need to know the mass of the reactant to use.
	D Unbalanced equations will cause her not to use the right lab equipment.
10. In question #9, what is the mass of the products compared to the mass of the reactants?	12. A beaker with two liquid compounds is placed on a hot plate and heated. What question can be best answered from this experiment?
A The mass of the products is equal to the mass of the reactants.	
<sup>(B)</sup> The mass of the products of the chemical reaction is always greater than the reactants.	
© Some of the mass is lost in the reaction, so the mass of the reactants is greater.	At what temperature will the substances react?
There is not enough information. It depends on the	<sup>B</sup> Which substance will float on the other?
conditions of the reaction.	ⓒ Which substance will freeze first?
	Will the substances conduct electricity?     © Hedgehog Learning, Copying allowed for purchasing school ONLY.

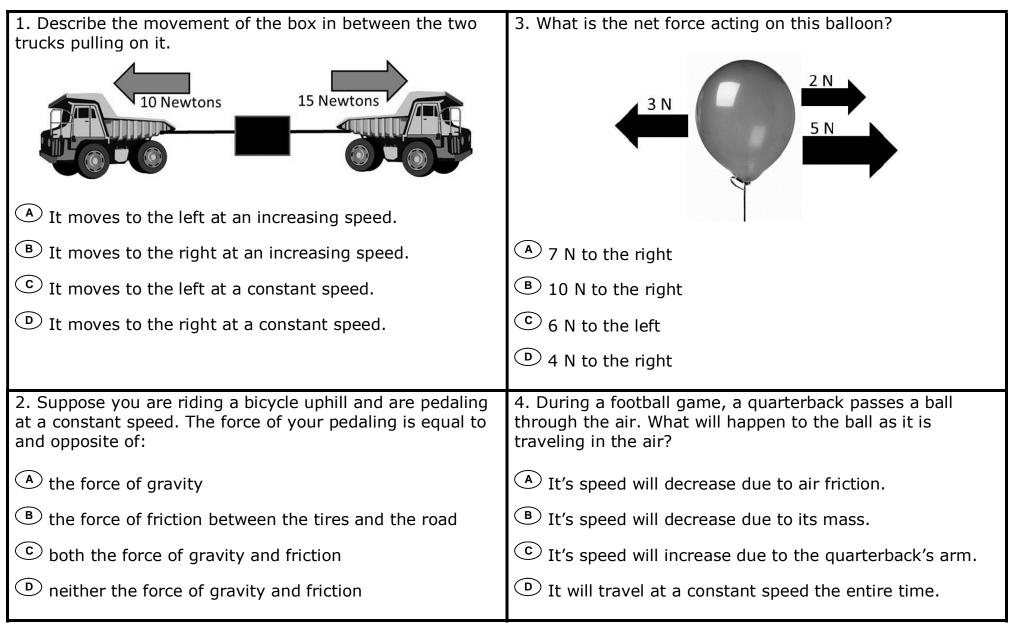
DAY 3 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A. Balanced Equation	<ol> <li> the new substances produced from a chemical reaction and are written on the right side of the chemical equation</li> </ol>
B. Chemical Change	
C. Chemical Reaction	<ol> <li> a change in the temperature, state of matter, shape, density, or any other observable characteristic of a substance</li> </ol>
D. Coefficient	3 a chemical equation that has equal number and type of atoms on the
E. Physical Change	reactant and product side of the equation
, 2	4 a change when a new substance is formed from the reaction between
F. Products	two or more different substances
G. Reactants	5 the process in which the physical and chemical properties of substances
	are changed when new substances are formed
H. The Law of	6 the principle that states the mass of the substances before a reaction is
Conversation of Mass	equal to the mass of the substances after the reaction
	7 the substances in a sherriest reaction that are being shares ad into new
	<ol><li> the substances in a chemical reaction that are being changed into new substances</li></ol>
	<ol> <li>the number that precedes a chemical formula that indicates the number of molecules</li> </ol>
	or molecules

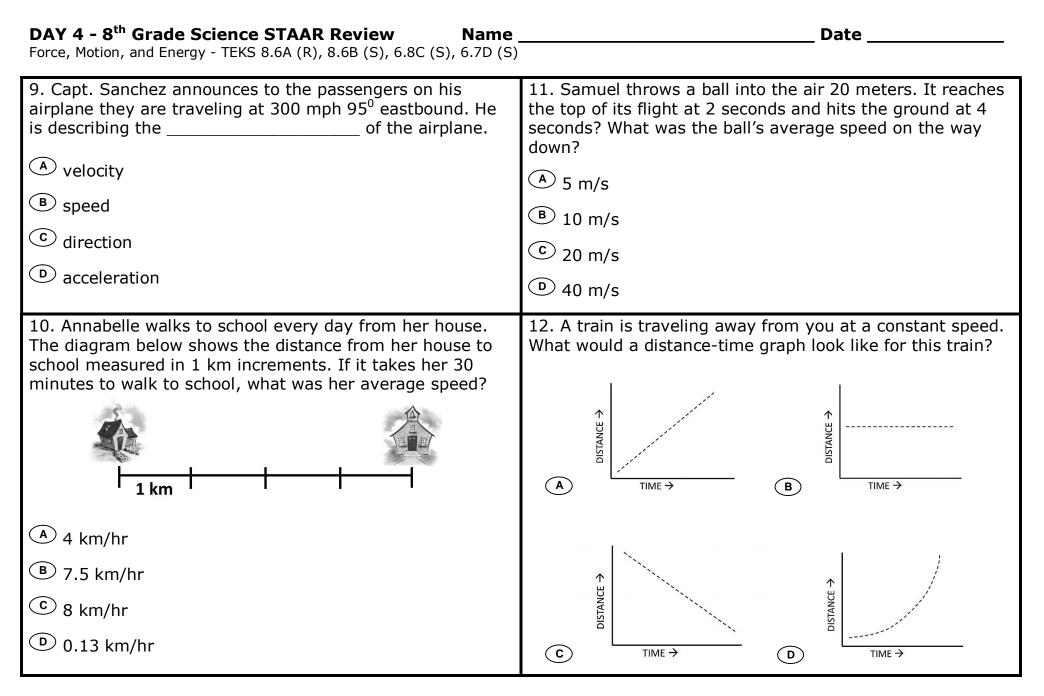
### DAY 4 - 8<sup>th</sup> Grade Science STAAR Review Name

Date

Force, Motion, and Energy - TEKS 8.6A (R), 8.6B (S), 6.8C (S), 6.7D (S)



<b>DAY 4 - 8<sup>th</sup> Grade Science STAAR Review</b> Name Force, Motion, and Energy - TEKS 8.6A (R), 8.6B (S), 6.8C (S), 6.7D (S	
5. Frank drew the following chart using data from an experiment he conducted on a toy car. At what point does the car have an unbalanced force acting on it?	7. Sara is investigating how the slope of an incline will affect the amount of unbalanced force acting on a marble. She sets up her experiment similar to the illustration below.
40 cm 30 cm 20 cm 10 cm	How will Sara change the variable in the experiment?
0 cm ✔ 0 s 10 s 20 s 30 s 40 s	(A) use a marble of different mass
▲ 5 s	$^{igodol{B}}$ change the surface material of the incline
<sup>B</sup> 15 s	© change the slope of the incline
© 25 s D 35 s	D adjust the temperature in the room
6. Which of the following scenarios is an example of an unbalanced force?	8. A rocket has a downward force of 1 N due to gravity and an upward force of 1 N. The rocket is:
A car traveling constantly at 50 mph	Iaunching and accelerating upward
$^{\textcircled{B}}$ a golf ball being hit with a club	$^{\textcircled{B}}$ reaching the peak of its traveled height
$\odot$ a big truck stopped at a red light	$^{igodoldoldoldoldoldoldoldoldoldoldoldoldol$
D a satellite orbiting the earth	D accelerating either upward or downward
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DAY 4 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A Acceleration	1 the metric unit of measurement for distance
A. Acceleration	1 the metric unit of measurement for distance
B. Balanced Force	2 a push or pull on an object
C. Direction	3 the speed and direction of motion of an object
D. Force	<ol> <li> occurs when multiple forces acting on an object causes the object to increase or decrease speed</li> </ol>
E. Meters	5 the unit of measurement for time
F. Seconds	6 occurs when multiple forces acting on an objects does not cause on
G. Speed	object to change its speed
H. Unbalanced Force	7 an increase or decrease in velocity
I. Velocity	8 the distance an object travels in a certain amount of time
	9 a line extending out from a point of reference that describes the motion of an object

DAY 5 - 8 <sup>th</sup> Grade Science STAAR ReviewNameForce, Motion, and Energy - TEKS 8.6C (R), 7.7A (S), 6.8A (S), 6.9C (S)	Date
1. Samuel kicks a soccer ball across a grassy field and it eventually comes to a stop. If Newton's law of inertia is true, why did the ball stop?	3. In the case of a car crash, the body's inertia will continue to carry it in its initial direction. However, if the person is wearing a seatbelt, in which direction will this force act?
<ul> <li>A Newton's law only applies to objects at rest.</li> <li>B The mass of the ball is not great enough to have inertia.</li> <li>C Friction with the grass applies a net force on the ball causing it to decrease its speed.</li> <li>D Gravity slowed the ball until it came to a stop.</li> </ul>	<ul> <li>A to the right</li> <li>B to the left</li> <li>C upward</li> <li>D downward</li> </ul>
<ul> <li>2. Once in orbit, the space shuttle used very little, if any, rocket power to maintain its speed despite traveling over 15,000 mph! How were NASA engineers able to do this?</li> <li>A The space shuttle is very massive and must burn its rockets at full power to achieve this speed.</li> </ul>	<ul> <li>4. Suppose you pull Nick, who is standing on a skateboard, using a rope at a constant acceleration. Nick's friend, who weighs the same as Nick, then gets on the skateboard too. How is the force you have to apply to the rope affected to maintain the same constant acceleration?</li> <li>A There will be no shanes to the required amount of</li> </ul>
<ul> <li>B The space shuttle was able to use a special coating in order to achieve its fast speed in space.</li> <li>C Gravity provides the necessary force to keep the space</li> </ul>	<ul> <li>A There will be no change to the required amount of force.</li> <li>B The amount of force required is slightly increased.</li> <li>C The second of the second secon</li></ul>
<ul> <li>shuttle traveling at a high rate of speed.</li> <li>The speed generated from force of rockets during liftoff is maintained throughout the flight since there is no air friction.</li> </ul>	<ul> <li>C The amount of force required is doubled.</li> <li>D The amount of force required is four-times as great.</li> </ul>

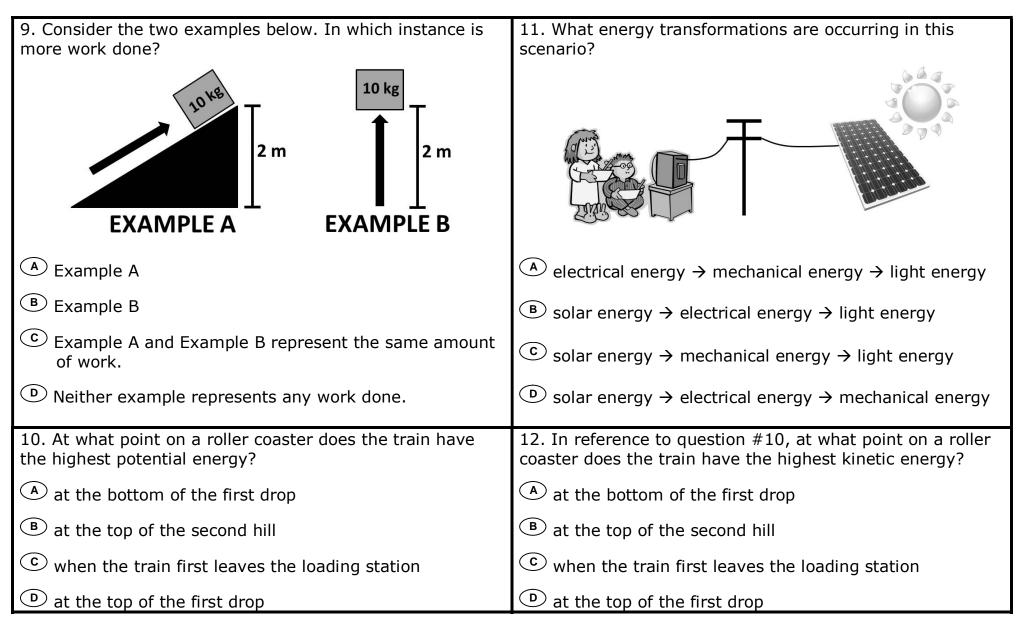
DAY 5 - 8 <sup>th</sup> Grade Science S Force, Motion, and Energy - TEKS 8				Date	
5. The data chart below indicates how carts of different mass accelerate when a constant force is applied. Using the data, determine the amount of force used in Newtons.		7. Suppose you launch tw two different engines. Eac amount of force, and you data for each rocket.	h engine produces	a different	
Mass (kg)	Acceleration (m/s <sup>2</sup> )		Engine/Rocket Number	Force of Engine	Accoloration
1.0	4.0		Engine/Rocket #1	2 N	$4 \text{ m/s}^2$
2.0	2.0		Engine/Rocket #2	1 N	$2 \text{ m/s}^2$
4.0 8.0	1.0 0.5		What conclusion can you i rockets?		
▲ 1 N			$^{igle }$ The mass of the two r	ockets are the san	ne.
<b>B</b> 2 N			<sup>B</sup> The mass of the first i second rocket.	rocket is double th	e mass of the
© 4 N			© The mass of the second rocket is double the mass of the first rocket.		
<b>D</b> 8 N					
			There is not enough in of the two rockets.	nformation to com	pare the mass
6. Josh Hamilton crushes a home run over the center field wall. The ball is struck with a force of 20 N. How much force does the ball apply to the bat?			8. A tennis ball being dropped, then bouncing upward after hitting the ground is an example of:		
▲ 5 N			(A) the law of inertia		
<sup>■</sup> 10 N			$^{\textcircled{B}}$ the law of force and a	cceleration	
© 20 N			© the law of action-reac	tion	
D 40 N			<b>D</b> the law of reflection		

### DAY 5 - 8<sup>th</sup> Grade Science STAAR Review

Name \_

Date

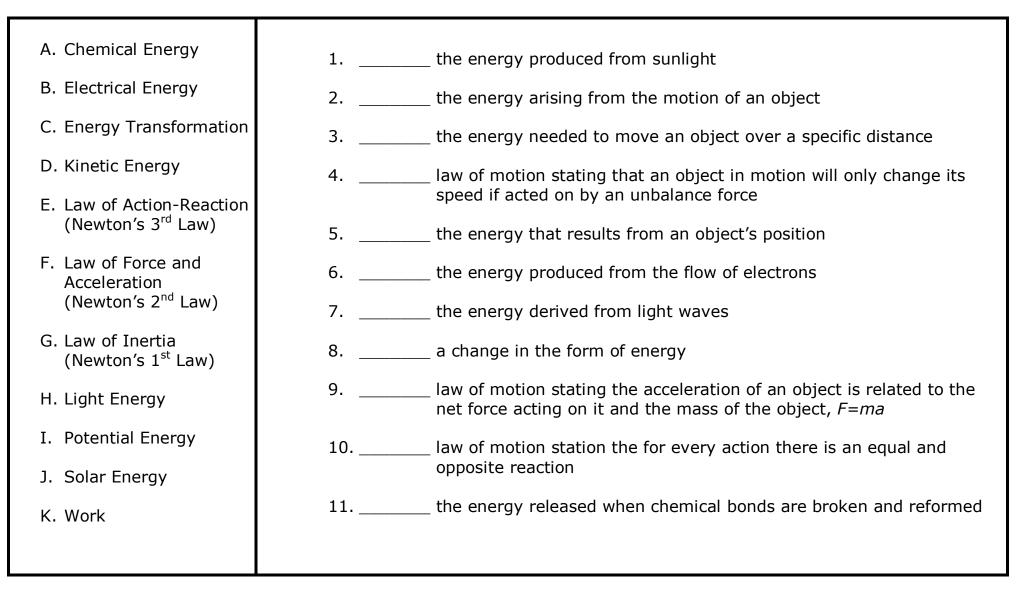
Force, Motion, and Energy - TEKS 8.6C (R), 7.7A (S), 6.8A (S), 6.9C (S)



### DAY 5 – Key Vocabulary and Concepts

Name Date

Match the science vocabulary word or concept to the correct definition.

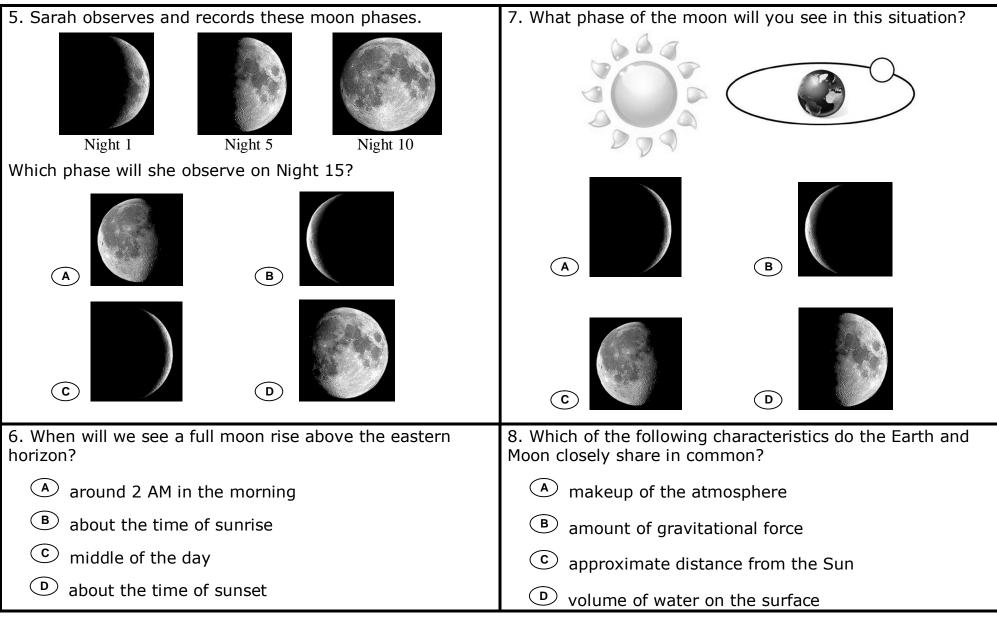


# DAY 6 - 8<sup>th</sup> Grade Science STAAR Review Name Date Earth and Space - TEKS 8.7A (R), 8.7B (R), 8.7C (S), 6.11B (S) Date

Use the model below to answer the questions on this page.	3. The tilting of the Earth on its axis contributes to:
	<ul> <li>A the different phases of the moon we see</li> <li>B the changing of seasons as Earth moves around the Sun</li> <li>C high and low ocean tides</li> <li>D an increase in the gravitational force from the Sun</li> </ul>
1. Which arrow indicates the cause of day and night on Earth?	4. Katrina travels to Australia when the Earth is located at Arrow #1 and it is winter. She returns to Australia when
Arrow 1	the Earth is located at Arrow #4. What season will it be?
B Arrow 3	(A) winter
C Arrow 4	B spring
D Both Arrow 1 & 4	ⓒ summer
2. Which arrows show the revolution of a body in space?	D autumn
Arrows 2 and 3	
B Arrows 1 and 2	
C Arrows 1 and 3	
D Arrows 3 and 4	

### DAY 6 - 8<sup>th</sup> Grade Science STAAR Review

Earth and Space - TEKS 8.7A (R), 8.7B (R), 8.7C (S), 6.11B (S)



Name \_\_\_\_\_\_

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Date

DAY 6 - 8 <sup>th</sup> Grade Science STAAR Review Name Earth and Space - TEKS 8.7A (R), 8.7B (R), 8.7C (S), 6.11B (S)	Date
9. Astronauts who walked on the Moon were able to "jump" two to three times higher than they were able to on Earth. This is primarily due to:	11. Even though the Sun has a mass 27 million times greater than the Moon, the Moon has a greater impact on the Earth's tides. This is because:
A The lunar atmosphere is much less dense.	A The Moon is much closer to the Earth.
$\bigcirc$ The Moon is much less massive than the Earth.	<sup>B</sup> The Moon has more gravitational force than the Sun.
C Special suits engineered by NASA made the astronauts more mobile.	$\odot$ The Moon is made of solid elements instead of gases.
Astronauts trained their muscles for the unique lunar surface.	D The Moon has a faster orbital period.
<ul> <li>10. In August 1981, Voyager II approached the planet Saturn. During this time, it's speed increased from 17 km/s to 34 km/s. Why did this sudden increase in speed occur?</li> <li>A Saturn has a magnetic field which attracted the probe.</li> <li>B Onboard rockets must have been fired.</li> <li>C The solar winds are very strong near Saturn.</li> <li>D The gravitational pull of Saturn increased as the probe got closer to the planet.</li> </ul>	12. Which positions of the Moon will produce the highest tides on Earth? (A) A and B (B) A and C (C) B and C (D) B and D

 DAY 6 - Key Vocabulary and Concepts
 Name

 Match the science vocabulary word or concept to the correct definition.

A. Axial Tilt	
A. Axidi Tili	1 occurs when subsequent phases of the moon are becoming less visible
B. Crescent Moon	2 the effect of gravitational pull of the Sun and Moon on the ocean
C. Full Moon	3 a phase of the moon when little or no part of the Moon is visible
D. Gravity	4 a rotational line of a celestial body slightly off of an imaginary vertical line
E. Half Moon	running through it top to bottom
F. Lunar Cycle	5 a phase of the moon that occurs when about 25% of the Moon is visible
G. New Moon	6 the spinning movement of a celestial body around its own axis
H. Revolution	<ol> <li> the force that pulls all objects with mass toward one another and is related to the distance between the two objects</li> </ol>
I. Rotation	8 a phase of the moon that occurs when nearly 100% of the Moon is visible
J. Seasons	9 the time it takes for the Moon to complete all phases and one orbit of the
K. Tidal Forces	Earth
L. Waning	10 occurs when subsequent phases of the Moon are becoming more visible
M. Waxing	11 the orbital movement of a celestial body around another due to its gravitational pull
	12 a phase of the Moon when half of it is visible
	13 yearly climate cycles caused by the tilt of the Earth's rotational axis

Name \_

1. An astronomer observes several items in the night sky 3. The following picture is the Horsehead Nebula and is and writes down their approximate distance from Earth. located about 1,500 light years from Earth in the What is mostly likely Object #3? constellation Orion. What is most likely occurring in the Horsehead Nebula? Object Distance from Earth in Light Years new star formation  $(\mathbf{A})$ 1 0.0001 2 4.2 (B) formation of black holes Center of 5,000 Milky Way (C) star explosions like 60,000,000 3 supernovas (A) a planet, probably Jupiter or Saturn (D)the birth of new galaxies (в) a nearby star relatively close to our solar system (C) a comet (D) another galaxy 2. Using the chart in Question 1, what is most likely Object 4. The stars we see at night are: #2. in the Milky Way galaxy  $(\mathbf{A})$ (A) Venus (B) in the solar system (в) a nearby star relatively close to our solar system (C) in galaxies other than the Milky Way a black hole near the center of the Milky Way C) (D) both A and C another galaxy

### DAY 7 - 8<sup>th</sup> Grade Science STAAR Review Name Date Earth and Space - TEKS 8.8A (R), 8.8B (S), 8.8C (S), 8.8D (S) Use this model of the Hertzsprung-Russell diagram to 6. Our Sun is a middle-aged star with an average answer questions on this page. temperature and brightness. What type of star is our Sun according to the Hertzburg-Russell diagram? Increasing Luminosity Red Giants (A)a white dwarf White Dwarfs $^{(B)}$ a red giant (C) a star on the upper left portion on the main sequence **Decreasing Temperature** D a star in the middle of the main sequence 5. An astronomer discovers a new star that is very hot, but 7. As a normal, averaged-size star progresses through its life cycle, what change will it undergo? not very bright. What type of star did she discover? a red giant it becomes cooler (A) (A) (в) a young star on the main sequence (B) it gets smaller (C) an old star on the main sequence • it becomes brighter (D) a white dwarf its gravity increases

### DAY 7 - 8<sup>th</sup> Grade Science STAAR Review Name\_\_\_\_\_ Date Earth and Space - TEKS 8.8A (R), 8.8B (S), 8.8C (S), 8.8D (S) 8. Which of the following galaxies is most like our own 10. Pulsars are dense, rotating stars that emit strong Milky Way? electromagnetic radiation with a wavelength around 6 mm. Using the chart below, what type of telescope would be best suited for observing pulsars? Ultraviolet 0.01 mm - 0.39 mm Visible Light 0.40 mm - 0.74 mm 0.75 mm - 1.00 mm Infrared Radio >1.00 mm (A)radio telescopes $(\mathbf{B})$ **A (B)** infrared telescopes (C) optical telescopes (D)ultraviolet telescopes C D 9. Looking at the answer choices in Question#8, which 11. You hear an astronomer on television mention that an answer choice could best be classified as an asymmetrical object in space is about 10 light-years away from planet galaxy? Earth. This object is located: (A)in the solar system (A) Galaxy A $^{(\mathbf{B})}$ nearby in the Milky Way galaxy (в) Galaxy B (C) on the other side of the Milky Way galaxy

(C)

Galaxy C

Galaxy D

In another galaxy

DAY 7 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

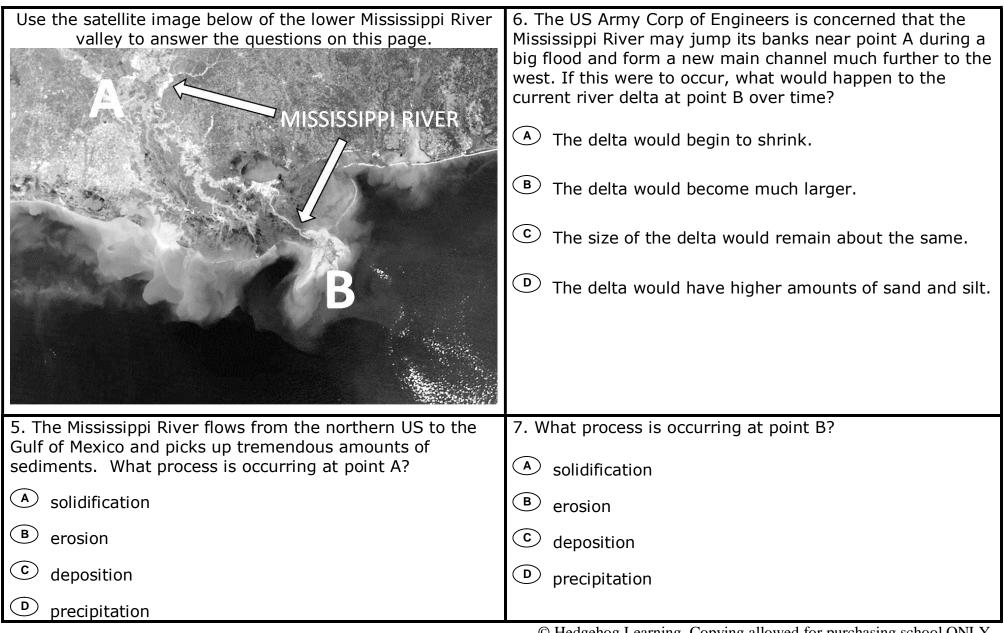
Α.	Electromagnetic Spectrum	<ol> <li> all the mass and energy in existence, made up of galaxies and the space in between them</li> </ol>
В.	Galaxy	2 the distance light will travel in 1 year
C.	Light-Year	<ol> <li> a system of bodies (planets, asteroids, comets, etc) that revolve around a star</li> </ol>
D.	Nebulae	
-	Color Custom	4 the star at the center of our solar system
E.	Solar System	5 a huge grouping of billions of stars that often revolve around a center
F.	Star	
G.	Sun	<ol> <li>6 an instrument used to collect and magnify electromagnetic waves from desired points in the universe</li> </ol>
н.	Telescope	7 a massive collection of gases that releases tremendous amounts of electromagnetic energy due to nuclear reactions occurring within it
Ι.	Universe	
		<ol> <li>an interstellar cloud of dust and gas that provides the birthplace for many stars</li> </ol>
		9 energy waves sorted by different wavelengths into categories such as visible light, x-rays, gamma rays, infrared radiation, and radio waves

DAY 8 - 8 <sup>th</sup> Grade Science STAAR Review Name Earth and Space - TEKS 8.9B (R), 8.9C (R), 8.9A (S), 8.10A (S), 8.10B (	<b>Date</b> (S), 8.10C (S), 7.8C (S)
<ul> <li>1. Which of the following landscapes is most likely located far away from a tectonic plate boundary.</li> <li>(A)</li> <li>(B)</li> <li>(B)</li> <li>(C)</li> <li>(D)</li> </ul>	<ul> <li>3. If you looked at a map of the Earth from 100 million years ago, it would look much different than today. This is because:</li> <li>A The continual circulation of magma underneath the Earth's crust has caused the crustal regions to move.</li> <li>B Life forms and organisms living on the Earth in the last 100 million years have caused the landscape to radically change.</li> <li>C Erosion and weathering has changed the shape and location of the continents.</li> <li>D Gravity forces from the Moon and Sun cause the continents to move.</li> </ul>
<ul> <li>2. Miguel's school often practices evacuations in the event of a tsunami, a large ocean wave created by an underwater earthquake. Miguel's school probably is located:</li> <li>A near tornado alley</li> <li>B in a marshy region</li> </ul>	<ul> <li>4. Some parts of the Himalayas are growing higher as much as 1 cm/year. What is causing the fast vertical growth?</li> <li>A subduction zone is near the mountain chain.</li> <li>B Huge underground geysers create pressure to push the mountains higher.</li> </ul>
<ul> <li>c near a place often hit with hurricanes</li> <li>D near a plate boundary</li> </ul>	<ul> <li>C Sediments from eroded materials are being deposited on top of the mountains.</li> <li>D Two continental plates are colliding.</li> </ul>

### DAY 8 - 8<sup>th</sup> Grade Science STAAR Review

Date

Earth and Space - TEKS 8.9B (R), 8.9C (R), 8.9A (S), 8.10A (S), 8.10B (S), 8.10C (S), 7.8C (S)



Name

DAY 8 - 8 <sup>th</sup> Grade Science STAAR Review Name Earth and Space - TEKS 8.9B (R), 8.9C (R), 8.9A (S), 8.10A (S), 8.10B (	
8. Which of the following discoveries does not necessarily support the Theory of Plate Tectonics?	10. Every year in late spring, NOAA issues a forecast on the number of hurricanes it expects to form in the Atlantic Ocean. This prediction is probably based on:
Fossils of the same species were discovered in both Scotland and the Appalachian Mountains.	A the air pressure readings on that day
$^{\textcircled{B}}$ Early sonar used in WWII found mid-ocean ridges.	$^{\textcircled{B}}$ the rate of evaporation
$\odot$ The shape of western Africa is similar to the eastern	$\odot$ the gravitational pull from the Moon
<ul> <li>coastline of South America.</li> <li>Many different species of dinosaurs were found in the western United States.</li> </ul>	D water temperature trends in the Atlantic
9. Using the chart below, which source of energy best fits in X and Y?	11. In which country is the following weather map most likely to be seen?
State of MatterPrimary Source of Convection Current EnergyAtmosphereGasXOceanLiquidYMantleLiquidNuclear Energy	WARM AIR
$\bigcirc$ Both X and Y = Solar Energy	COLD AIR
<ul> <li>B X = Solar Energy, Y = Nuclear Energy</li> <li>C Both X and Y = Nuclear Energy</li> </ul>	Great Britain
	B United States
$\bigcirc$ X = Nuclear Energy, Y = Solar Energy	China
	<ul> <li>Australia</li> <li>© Hedgehog Learning. Copying allowed for purchasing school ONLY.</li> </ul>

DAY 8 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A.	Atmosphere	1 a special map that indicates land elevations and special features such as rivers, lakes, and mountains	١
В.	Cold Front		
C.	Convection	<ol> <li> a weather system that rotates counter-clockwise (opposite in the southern hemisphere) and is usually associated with precipitation</li> </ol>	
D.	Currents	3 the process of removing sediments from one location and moving to another by natural processes	
Ε.	Erosion		
-	Likely Durgerson	4 a boundary line of advancing cold air	
F.	High Pressure System	5 a boundary line of advancing warm air	
G.	Low Pressure System	6 the theory that states crustal regions (or plates) of Earth are moving driven by convections in the Earth's mantle	
Н.	Plate Tectonics		
I.	Solar Energy	<ol> <li> a weather system that rotates clockwise (opposite in the southern hemisphere) and is usually associated with fair weather</li> </ol>	
J.	Topographic Map	8 the rising of a gas or liquid due to it being heated	
К.	Warm Front	9 the process of rocks breaking down due to rain, snow, ice, and wind	
L.	Weathering	10 energy from the sun that heats the atmosphere and oceans causing the movement of air and water	
		11 the lateral movement of water or air caused by solar energy	
		12 the blanket of air that surrounds the Earth	

Date

DAY 9 - 8<sup>th</sup> Grade Science STAAR Review Name Organisms and Environments – TEKS 8.11A (R), 8.11B (R), 7.10B (S), 7.10C (S), 7.11C (S), 8.11D (S)

1. Using the chart below, what would most likely happen if this specific ocean region was overfished by humans?				3. Which of the following statements is NOT true about the organism that completes this food chain?
Or Shar Sard Algad Marii Worr	ks Fish, Se ines Algae e Sun ne Dead Fi	Consum Primary Consum Produce	ary ner / ner er	$\rightarrow$ $\rightarrow$ ?
<ul> <li>A decrease in the amount of algae</li> <li>B increase in the shark population</li> <li>C decrease in the activity of marine worms</li> <li>D decrease in the available energy from the Sun</li> </ul>			e Sun	<ul> <li>A It derives its energy directly from the sun.</li> <li>B It has sharp claws or teeth.</li> <li>C It depends on other animals for energy.</li> <li>D It can move from one place to another.</li> </ul>
<ul> <li>2. In order for parasites to survive off of their host organism, they will need to be able to:</li> <li>A reproduce faster than their host</li> <li>B become self-supporting by producing their own energy</li> <li>C fight off other parasites of their own species</li> <li>D have a symbiotic relationship with their host</li> </ul>			r own energy ies	<ul> <li>4. Which does not describe a predator/prey behavior?</li> <li>A Dolphins working in a team to roundup a school of fish.</li> <li>B An eagle soaring above a field looking for a mouse.</li> <li>C A polar bear walking on the sea ice searching for a seal.</li> <li>D A barnacle attaching itself to a whale.</li> </ul>

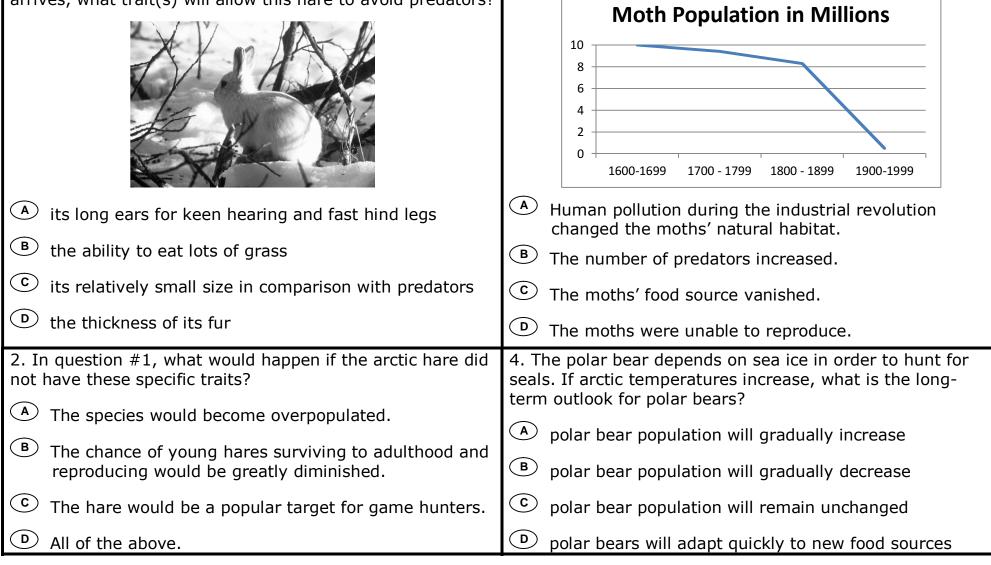
DAY 9 - 8 <sup>th</sup> Grade Science STAAR Review Name Organisms and Environments – TEKS 8.11A (R), 8.11B (R), 7.10B (S), 7	
<ul> <li>5. In a rainforest, giant trees normally live for hundreds of years. However, when they do die and fall to the ground, hundreds of seedlings will compete to take its place. What adaptation is most necessary for a young tree to mature in this environment?</li> <li>A the ability to grow vertically at a rapid rate</li> <li>B the ability to establish a deep root system while growing at a slow and steady rate.</li> <li>C the ability to retain water to survive in drought conditions</li> <li>D the ability to grow narrow, small leaves</li> </ul>	<ul> <li>7. Which of following is a possible research question for investigating the relationship between temperature and the population of different species of wildflowers?</li> <li>A How do late spring freezes affect the population of different species of wildflowers?</li> <li>B Do milder winters contribute to an increased population of certain wildflowers?</li> <li>C Both A and B are suitable research questions.</li> <li>D Neither A or B are suitable research questions.</li> </ul>
<ul> <li>6. Every spring, an ecologist records several environmental measures and is looking for a relationship to the deer population in a state park. Using her data below, what generalization can you make?</li> <li>Year Deer Population Average Temp Annual Rainfall 2010 367 74° 40 inches 2011 134 75° 14 inches 2012 284 69° 37 inches</li> <li>A The deer population decreases with sudden spikes in temperature.</li> <li>B Deer are dependent on grass growing with ample rainfall.</li> <li>C Deer do not adapt well in cooler environments.</li> <li>D There was significantly more hunting in 2011.</li> </ul>	<ul> <li>8. A geneticist is investigating how a new species of tomato plant may be able to survive in different soil compositions. In his experiment, what factor(s) will be his variable?</li> <li>A soil composition</li> <li>B amount of water</li> <li>C intensity of sunlight</li> <li>D all of the above will be an experimental variable</li> </ul>

<b>DAY 9 - 8<sup>th</sup> Grade Science STAAR Review</b> Name Organisms and Environments – TEKS 8.11A (R), 8.11B (R), 7.10B (S), 7	
<ul> <li>9. Conservationists argue that we should not kill every snake we see. What is the reasoning behind this argument?</li> <li>A Killing snakes will also decrease the population of their natural prey.</li> <li>B A decrease in the snake population will lead to an increase in more venomous reptiles.</li> <li>C The population of its natural prey, such as mice and insects, will increase.</li> <li>D The number of snakes is directly related to the coyote population.</li> </ul>	<ul> <li>11. Which of the following is an example of selective breeding in order to enhance a particular genetic trait?</li> <li>A Rabbits with larger back legs and muscles are more adapted to escape predators.</li> <li>B Eagles with sharp claws are adapted to catching fish from a lake.</li> <li>C Owls have keen eye sight in order to spot prey at night.</li> <li>D Horses with fast gallops are chosen to produce offspring equipped for racing.</li> </ul>
<ul> <li>10. A local farmer must annually apply weed prevention chemicals around his bean plants. Why do the weeds continue to invade the garden every year?</li> <li>A The weeds are a natural species and the seeds that land on the bare soil attempt to germinate every year.</li> <li>B The weeds attempt to enter into a mutually symbiotic relationship with the bean plants.</li> <li>C The farmer is not using the correct formulation of weed prevention to kill the weeds indefinitely.</li> <li>D Bugs attracted to the bean plants are carrying the seeds of the weeds into the garden.</li> </ul>	<ul> <li>12. Why are oil spills a major concern to the ocean ecosystem?</li> <li>A Oil can coat ocean plants and inhibit their capacity to conduct photosynthesis.</li> <li>B Oil sticks to the feathers of the birds and hinders their ability to fly.</li> <li>C Fish that ingest oil can spread the toxin to other sea animals that eat the fish.</li> <li>All of the above are concerns of oil spills on ocean ecosystems.</li> </ul>

DAY 9 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

A.	Abiotic	1 an inherited characteristic that is passed to an organism by its parents
В.	Biodiversity	2 all of the living and nonliving things in a given area that exist and interact
C.	Biotic	3 an organism that provides energy and living environment, either
D.	Consumer	intentionally or unintentionally, to another organism
E.	Ecological Succession	4 describes the nonliving things in an ecosystem
L.		5 the intent to produce organisms with specific genetic features by selecting
F.	Ecosystem	parents that already have the genetic trait
G.	Genetic Trait	6 an organism that derives its energy from the sun and is often a food source
н.	Host	for other living organisms
т	Natural Selection	7 an organism in a food web that is eaten by other animals
-		8 an animal in a food web that hunts and eats other organisms
J.	Parasite	
К.	Predator	9 the variety of and number of organisms in an ecosystem
	Prey	10 an organism that must get its energy from another organism
с.	TTCy	11 describes the living things in an ecosystem
М.	Producer	
N.	Selective Breeding	12 the concept that states the best adapted organisms for a particular environment will be the ones most likely to survive and reproduce
		13 an organism that feeds off another without a mutual benefit
		14 the colonization of a new habitat or the predictable and steady changes in an existing habitat after it has been disturbed

Organisms and Environments – TEKS 8.11C (R), 8.11D (S), 7.11A (S), 7.12B (S), 7.12D (S), 7.12F (S), 7.14B (S), 7.14C (S), 6.12D (S) 1. The arctic hare in the picture is shown camouflaged in the snow from possible predators. However, when summer arrives, what trait(s) will allow this hare to avoid predators? Moth Population in Millions

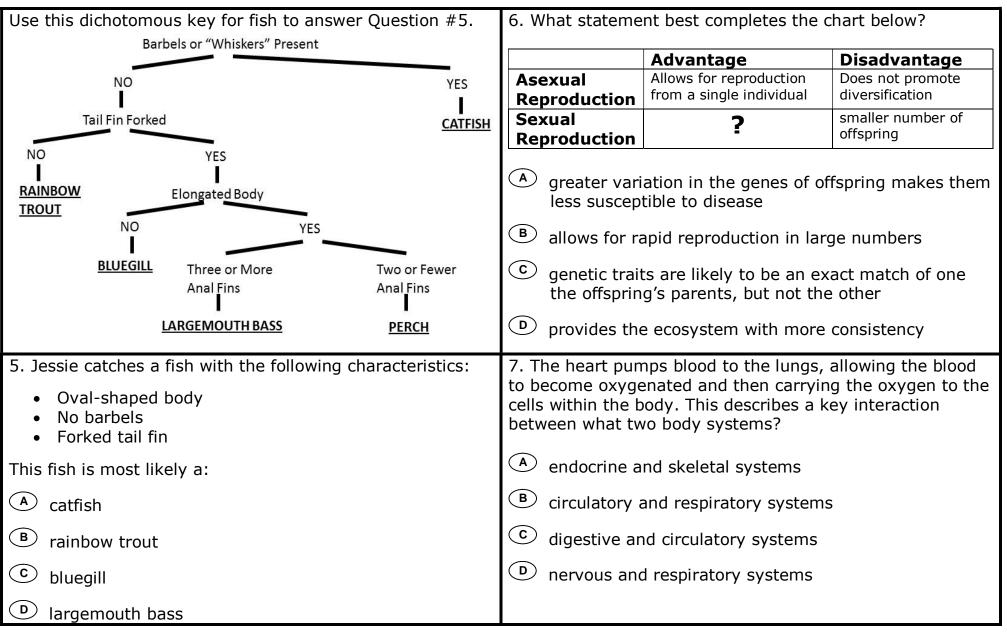


### DAY 10 - 8<sup>th</sup> Grade Science STAAR Review

Name

Date

Organisms and Environments – TEKS 8.11C (R), 8.11D (S), 7.11A (S), 7.12B (S), 7.12D (S), 7.12F (S), 7.14B (S), 7.14C (S), 6.12D (S)



 DAY 10 - 8<sup>th</sup> Grade Science STAAR Review
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 Organisms and Environments - TEKS 8.11C (R), 8.11D (S), 7.11A (S), 7.12B (S), 7.12D (S), 7.12F (S), 7.14B (S), 7.14C (S), 6.12D (S)
 Date

<ul> <li>8. Which of the following characteristics best describe the animal kingdom?</li> <li>A heterotrophic, prokaryotic, unicellular</li> <li>B autotrophic, eukaryotic, multicellular</li> <li>C heterotrophic, eukaryotic, multicellular</li> <li>D heterotrophic, prokaryotic, multicellular</li> </ul>	<ul> <li>10. Cell theory <u>does not</u> include the idea that:</li> <li>A all living things are made of cells</li> <li>B like cells carry similar functions</li> <li>C cells use energy from food to sustain life</li> <li>D all cells in all the organisms of the same species carry the exact same genetic traits</li> </ul>				
<ul> <li>9. In the plant cell below, which arrow is pointed to the organelle that contains the genetic material for inherited traits?</li> <li>G G G G G G G G G G G G G G G G G G G</li></ul>	<ul> <li>11. The picture below shows how runoff from an urban location is routed to the ocean. Pollution in the runoff can damage ocean ecosystems. A likely cause of the runoff is:</li> <li>A likely cause of the runoff is:</li> <li>A larger amounts of farmland to support more people</li> <li>B pavement and concrete prevents water from entering the groundwater</li> <li>C increased rainfall in urban areas</li> <li>D sediments being deposited in the streams and rivers around urban areas</li> </ul>				

DAY 10 - Key Vocabulary and ConceptsNameMatch the science vocabulary word or concept to the correct definition.

Α.	Asexual Reproduction	1	_ a clear, thick fluid that holds the internal parts of a cell
В.	Autotrophic	2	_ a body inside a plant cell that converts sunlight into energy
C.	Cell Membrane	3	_ the body system includes the brain and collects and transfer information
D.	Cell Wall	4	_ describes a simple cell, such as bacteria, with no real nucleus
E.	Chloroplast	5	_ the center of a eukaryotic cell that contains the genetic material
F.	Circulatory	6	_ the body system that consumes, breaks down, and processes food components
G.	Cytoplasm	7	_ production of offspring through the joining of genes from two parents
н.	Digestive	8	_ a cavity inside a cell's cytoplasm that stores food and water
I.	Eukaryotic	9	_ the body system made of bones and cartilage that provides structure and shape
J.	Heterotrophic	10	_ the body system that carries oxygenated blood to the body's cells
К.	Mitochondrion	11	_ the structure that surrounds and regulates movement in and out of a cell
L.	Muscular	12	_ the organelle that provides energy for cellular functions
Μ.	Nervous	13	_ complex cells that include a defined nucleus and organelles
N.	Nucleus	14	_ the body system that converts energy into movement
0.	Prokaryotic	15	_ describes a cell or organism that produces its own energy from sunlight
Ρ.	Reproductive	16	_ describes a cell or organism that must get its energy from other organisms
Q.	Respiratory	17	_ production of offspring from the same genes of an individual parent
R.	Sexual Reproduction	18	_ the body system that takes in oxygen from the air to supply to the blood
S.	Skeletal	19	_ the outer structure around plant cells
т.	Vacuole	20	_ the body system that delivers or receives genetic material to produce offspring

# **Answer Key**

Da	y 1									
		<b>Multiple Choice S</b>	STAA	R Questions		Vocabulary Review				
1	С		8	В	1		Μ	8	I	
2	Α		9	D	2		К	9	N	
3	В		10	Α	3		Н	10	A	
4	В		11	С	4		F	11	D	
5	A				5		В	12	C	
6	В				6		L	13	G	
7	С				7		E	14	J	

# Day 2

	Multiple Choice S	R Questions	Vocabulary Review				
1	D	8	4	1	С	8	К
2	A	9	D	2	I	9	J
3	С	10	A	3	D	10	L
4	A	11	D	4	Μ	11	G
5	D	12	В	5	F	12	A
6	В	13	С	6	Н	13	E
7	С	14	A	7	В		

# Day 3

	Multiple Choice STAAR Questions				Vocabulary Review				
1	C	8	С	1	F	8	D		
2	A	9	В	2	E				
3	D	10	A	3	A				
4	A	11	С	4	В				
5	С	12	A	5	С				
6	D			6	Н				
7	A			7	G				

### Day 4

	Multiple Choice STAAR Questions				Vocabulary Review			
1	В	8	В	1	E	8	G	
2	С	9	A	2	D	9	С	
3	D	10	С	3	Ι			
4	A	11	В	4	Н			
5	D	12	A	5	F			
6	В			6	В			
7	С			7	A			

# Day 5

	Multiple Choice STAAR Questions					Vocabulary Review				
1	С	8	С	1	J		8	С		
2	D	9	С	2	D		9	F		
3	В	10	D	3	L		10	E		
4	С	11	B	4	G		11	A		
5	С	12	2 A	5	I					
6	C			6	В					
7	A			7	Н					

### Day 6

	Multiple Choice STAAR Questions				Vocabulary Review			
1	В	8	С	1	L	8	С	
2	В	9	В	2	К	9	F	
3	В	10	D	3	G	10	Μ	
4	C	11	A	4	A	11	Н	
5	A	12	В	5	В	12	E	
6	D			6	I	13	J	
7	С			7	D			

# Day 7

	Multiple Choice STAAR Questions				Vocabulary Review				
1	D	8	С	1	I	8	D		
2	В	9	В	2	С	9	A		
3	A	10	A	3	E				
4	A	11	В	4	G				
5	D			5	В				
6	D			6	Η				
7	A			7	F				

# Day 8

Multiple Choice STAAR Questions					Vocabulary Review			
1	D	8	D	1	J	8	С	
2	D	9	Α	2	G	9	L	
3	A	10	D	3	E	10	I	
4	D	11	D	4	В	11	D	
5	В			5	K	12	A	
6	A			6	Н			
7	С			7	F			

# Day 9

	Multiple Choice STAAR Questions				Vocabulary Review			
1	C	8	A	1	G	8	K	
2	A	9	С	2	F	9	В	
3	A	10	A	3	Н	10	D	
4	D	11	D	4	A	11	С	
5	A	12	D	5	Ν	12	I	
6	В			6	Μ	13	J	
7	C			7	L	14	E	

# Day 10

Multiple Choice STAAR Questions			Vocabulary Review				
1	A	11	В	1	G	11	С
2	В			2	E	12	K
3	A			3	Μ	13	I
4	В			4	0	14	L
5	С			5	Ν	15	В
6	A			6	Н	16	J
7	В			7	R	17	A
8	С			8	Т	18	Q
9	A			9	S	19	D
10	D			10	F	20	Р