Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

Combined Curriculum Document
Science – Seventh Grade

Big Idea: Energy Transformations (Unifying Concepts) Grade 7
Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple Earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels).

Academic Expectations
2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.
2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.
2.3 Students identify and analyze systems and the ways their components work together or affect each other.
2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Program of Studies: Understandings	**Program of Studies: Skills and Concepts**	**Related Core Content for Assessment**
SC-7-ET-U-1 Students will understand that most of the energy that powers the Earth's systems comes from the sun. Energy from inside the Earth, however, is responsible for some important phenomena (volcanism, plate tectonics).	SC-7-ET-S-1 Students will investigate a variety of Earth systems that are powered by solar (e.g. water cycle, climate, carbon cycle) and/or geothermal (e.g. plate tectonics, volcanism) energy	*SC-07-4.6.1* *Students will understand that Earth systems have sources of energy that are internal and external to the Earth. The Sun is the major external source of energy.*
SC-7-ET-U-2 Students will understand that the amount of energy in a closed system remains the same, so that the energy lost by a hot object equals the energy gained by a cold one.	SC-7-ET-S-3 Students will explain where energy comes from (and goes next) in a variety of real-world examples (e.g. burning, respiration, residential lighting, dry cell batteries) involving different forms of energy (e.g. heat, light, kinetic, chemical) SC-7-ET-S-6 Students will describe the kinetic molecular theory of matter SC-7-ET-S-7 Students will experiment with heat flow inside closed and open systems to explore the concept of thermal equilibrium	**SC-07-4.6.2** **Students will:** • **describe the transfer and/or transformations of energy which occur in examples that involve several different forms of energy (e.g., heat, electrical, light, motion of objects and chemical).** • **Explain, qualitatively or quantitatively, that heat lost by hot object equals the heat gained by cold object.** **The transfer and transformation of energy can be examined in a variety of real life examples. Models are an appropriate way to convey the abstract/invisible transfer of**

		energy in a system. **Heat energy is the disorderly motion of molecules. Heat can be transferred through materials by the collisions of atoms or across space by radiation. If the material is fluid, currents will be set up in it that aid the transfer of heat. To change something's speed, to bend or stretch things, to heat or cool them, to push things together, to expand or contract them or tear them apart all require transfers (and some transformations) of energy. Heat lost by hot object equals the heat gained by cold object. This is an energy conservation statement. Whenever hot and cold objects are put in contact, heat energy always transfers from the hot object to the cold object and this continues until all the mass is at the same temperature. Students should understand that heat produced by burning comes from the release of chemical energy of the substance.** **DOK 3**
SC-7-ET-U-3 Students will understand that all energy must have a source and may change forms or be transferred in a wide variety of ways, including via waves.	SC-7-ET-S-3 Students will explain where energy comes from (and goes next) in a variety of real-world examples (e.g. burning, respiration, residential lighting, dry cell batteries) involving different forms of energy (e.g. heat, light, kinetic, chemical) SC-7-ET-S-4 Students will identify forms of energy that are transferred via waves	*SC-07-4.6.3* *Students will understand that waves are one way that energy is transferred. Types of waves include sound, light, earthquake, ocean and electromagnetic.*

SC-7-ET-U-4 Students will understand that thermal energy and motion are inseparable when viewed at the molecular level.	SC-7-ET-S-5 Students will equate work done on an object with change in energy of the object SC-7-ET-S-6 Students will describe the kinetic molecular theory of matter	**SC-07-4.6.2** **Students will:** • **describe the transfer and/or transformations of energy which occur in examples that involve several different forms of energy (e.g., heat, electrical, light, motion of objects and chemical).** • **Explain, qualitatively or quantitatively, that heat lost by hot object equals the heat gained by cold object.** **The transfer and transformation of energy can be examined in a variety of real life examples. Models are an appropriate way to convey the abstract/invisible transfer of energy in a system.** **Heat energy is the disorderly motion of molecules. Heat can be transferred through materials by the collisions of atoms or across space by radiation. If the material is fluid, currents will be set up in it that aid the transfer of heat. To change something's speed, to bend or stretch things, to heat or cool them, to push things together, to expand or contract them or tear them apart all require transfers (and some transformations) of energy. Heat lost by hot object equals the heat gained by cold object. This is an energy conservation statement. Whenever hot and cold objects are put in contact, heat energy always transfers from the hot object to the cold object and this continues until all the mass is at the same temperature. Students should understand that heat produced by burning comes from the release of chemical energy of the substance.** **DOK 3**

SC-7-ET-U-5 Students will understand that the role various organisms play within an ecosystem can be determined by observing the flow of energy between them.	SC-7-ET-S-2 Students will model, explain and analyze the flow of energy in ecosystems and draw conclusions about the role of organisms in an ecosystem	**SC-07-4.6.4** **Students will describe or represent the flow of energy in ecosystems, using data to draw conclusions about the role of organisms in an ecosystem.** **For most ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism in food webs.** **DOK 3**
SC-7-ET-U-6 Students will understand that systems tend to change until they become stable and remain that way unless conditions change.	SC-7-ET-S-5 Students will equate work done on an object with change in energy of the object SC-7-ET-S-6 Students will describe the kinetic molecular theory of matter SC-7-ET-S-7 Students will experiment with heat flow inside closed and open systems to explore the concept of thermal equilibrium	**SC-07-4.6.2** **Students will:** • **describe the transfer and/or transformations of energy which occur in examples that involve several different forms of energy (e.g., heat, electrical, light, motion of objects and chemical).** • **Explain, qualitatively or quantitatively, that heat lost by hot object equals the heat gained by cold object.** **The transfer and transformation of energy can be examined in a variety of real life examples. Models are an appropriate way to convey the abstract/invisible transfer of energy in a system.** **Heat energy is the disorderly motion of molecules. Heat can be transferred through materials by the collisions of atoms or across space by radiation. If the material is fluid, currents will be set up in it that aid the transfer of heat. To change something's speed, to bend or stretch things, to heat or cool them, to push things together, to**

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Knowledge	Skills	Reasoning	Products
Examples of energy (heat, electrical, light, motion of objects, chemical, etc.) Energy transfer Energy transformations (ex. Burning, respiration, residential lighting, dry cell battery) Heat transfer (conduction, radiation, convection) Heat lost by objects = heat gained by other objects Energy conservation	Measure temperature of objects Make models	Describe transfer/transformation of energy Model energy transformations Model energy conservation Explain heat transfer methods	

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Unit Plan: Energy Transformations Dates: Nov. 9- Dec. 11

Student-Friendly Learning Target Statements	
Knowledge Targets *"What I need to know?"*	1. I can give examples of energy. 2. I can give examples of energy transfer. That means when energy is moved from one object to another. 3. I can give examples of energy transformations. That means when energy is changed from one form to another form. 4. I can describe the exchange of energy between hot objects and cold objects. 5. I can explain how heat energy is transferred. 6. I can describe examples of systems that are powered by energy.
Reasoning Targets *"What I can do with what I know?"*	7. I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system. 8. I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.

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Genetics and Heredity Learning Targets	
Knowledge Targets *"What I need to know?"*	1. I can define the following words: gene, chromosome, inherited, sexual reproduction, asexual reproduction, and variation. 2. I can explain what genes and chromosomes are. 3. I can describe the role of genes and chromosomes in passing information from one generation to another.
Reasoning Targets *"What I can do with what I know?"*	4. I can explain the differences between learned and inherited traits. 5. I can describe how genes are passed on through asexual reproduction. 6. I can describe how genes are passed on through sexual reproduction. 7. I can explain the differences between sexual and asexual reproduction. 8. I can explain how sexual reproduction creates variations (differences) among offspring.
Skill Targets *"What can I demonstrate?"*	
Product Targets *"What I can make to show my learning?"*	

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Transformation of Energy Pre-Assessment

Name: _____

1. What are 3 examples of different forms of energy?

2. Give an example of energy being moved (or transferred) from one object to another.

3. Give an example of energy being changed (or transformed) from one type of energy to another.

4. What direction does heat energy move in?

5. You have a cold container with a hot container on top of it. What will happen to the temperatures of the containers?

6. What is an example of a man-made system (parts working together to do something) that is powered by energy?

7. What is an example of a natural system that is powered by energy?

8. What happens to the electrical energy that powers a toaster?

9. What happens to the electrical energy in a battery (batteries do run out of energy, don't they)?

10. How can you get heat energy from one object to another object?

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Transformation of Energy Study Guide

Name: _____

I can give examples of energy.

The seven major categories of energy are: heat, light, chemical, mechanical, sound, electrical, and nuclear. You are generally familiar with heat, light, sound, and electrical. Mechanical energy is contained in objects that are moving, or could be moving if released. Chemical energy is contained in any object that could burn. It is also contained in food. Nuclear energy is the energy that is stored within atoms. You will **not** have any questions about nuclear energy on the test.

I can give examples of energy transfer. That means when energy is moved from one object to another.

During an energy transfer, energy is moved from one object to another. The energy form remains the same, it's just where the energy is located that is different. Examples of energy transfer would be hitting a baseball, throwing a football, or hitting a golf ball (mechanical energy transferred from one object to the other). Other examples would be cooking bacon in a skillet (heat energy transferring from the burner to the skillet to the bacon), sticking your hand into hot water (heat energy transferring from the water to your hand), or a car running into the bumper of another car (mechanical energy transferring from one car to the other).

I can give examples of energy transformations. That means when energy is changed from one form to another form.

During an energy transformation, energy is changed from one form to a different form. Energy transformations occur around us all the time. We use the chemical energy in the food we eat to power our muscles. We change the chemical energy into mechanical energy. Some of the chemical energy gets changed into heat energy also. That explains why we get hot when we run around a lot (we are changing bunches of chemical energy into mechanical **and** heat energy). The chemical energy in a candle is transformed into heat and light energy. The mechanical energy in a car is transformed into heat energy when the brakes are used.

The most common energy transformation involves electrical energy. We use electrical energy every day for a variety of purposes. We transform it into sound energy for our radios and iPODs. We transform it into heat/mechanical/sound energy with hairdryers. We transform it into heat for our homes. We change it into light for our cars, homes, and schools. Electrical energy is so common because it is relatively easy to move from one place to another through wires. All of our electrical energy is produced through the transformation of other energy types into electricity. Mechanical energy (moving water, wind, tides) is used to turn turbines that generate electrical energy. The chemical energy in coal and gas is transformed into electrical energy as well. Light energy (solar) is transformed into electrical energy through solar panels.

I can describe the exchange of energy between hot objects and cold objects.

Heat energy is exchanged between objects that are different temperatures. Objects with lower temperatures with gain heat energy from their surroundings. Objects with higher temperatures than their surroundings will lose heat energy. For example a hot cup of chocolate will gradually lose energy to its cooler surroundings. The transfer of heat energy will stop when the objects reach the same temperature. Likewise, a block of ice will absorb heat from warmer objects around it. Remember though that if we put a cup that's 32 degrees Fahrenheit in a room that is 0 degrees Fahrenheit the cup will lose heat energy to the room because it is warmer than the room.

I can explain how heat energy is transferred.

Heat is transferred by three different methods: conduction, convection, and radiation. Conduction occurs in solid objects. The heat travels through the objects by causing their particles to vibrate more, then those particles bounce into their neighbors causing them to bounce, and this continues through the object. Some objects are better conductors (metals are good conductors of heat) than others (wood and plastic are poor conductors of heat).

Convection occurs in liquids and gasses. During convection, liquids or gasses that are near the heat source gain heat energy. This causes them to expand and become less dense. The less dense liquid or gas rises, while more dense liquid or gas sinks to take its place. Convection will move heat from the bottom of a liquid or gas to the top.

Radiation occurs when heat energy is transferred without the help of solids, liquids, or gasses. Heat energy is transferred as waves (similar to how light is transferred) by radiation. The heat energy from the sun travels this way to the earth.

I can describe examples of systems that are powered by energy.

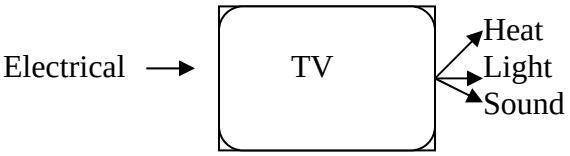
A system is parts working together to do something. All systems need energy to do their work. A TV is a system. It requires electrical energy (which it transforms into heat/light/sound energy) to work. A car is a system that requires chemical energy (which it transforms into heat/sound/mechanical energy) to function.

An ecosystem is powered by energy. Plants transform light energy (from the sun) into chemical energy (food). Animals eat the chemical energy and transform it into mechanical, heat, sound energy. Some of the chemical energy is stored in the animal (that's how we can eat a hamburger and get chemical energy from it). Without these energy transfers and transformations ecosystems would not function.

The weather is a system that is powered by energy. The heat energy from the sun warms the earth. This causes water to evaporate, eventually producing precipitation over different parts of the earth. The heat energy also warms the atmosphere causing warmer less dense air to rise and cooler more dense air to sink (thereby producing wind). Without these energy transfers and transformations there would be no precipitation or movement of the atmosphere (wind).

I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system.

Diagrams help show the types of energy that enter a system and the types that exit the system. For example:



I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.

The amount of energy that enters a system (like a TV) is equal to the amount that leaves the system. The only difference is the form it takes. With a TV the energy arrives as electricity but leaves as heat, light, and sound. If we total the amount of electricity and compare it to the total amount of heat, light and sound, we will find that they come to the same amount.

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Transformation of Energy Test Plan

Name: _____

I can give examples of energy.

1. Which of the following four energy sources are forms of chemical energy:
   I. Oil II. Geothermal III. Solar IV. Coal

   A. I and II **B**. II and III **C**. I and IV **D**. I, III, and IV

2. An ecosystem could not survive without this form of energy.
   A. Electrical Energy
   B. Sound Energy
   C. Mechanical Energy
   D. Light Energy

3. A moving car, a book held above a table, and a thrown football each contain this type of energy:
   A. Electrical Energy
   B. Sound Energy
   C. Mechanical Energy
   D. Light Energy

I can give examples of energy transfer. That means when energy is moved from one object to another.

4. We dropped a golf ball from 100 cm in class. It bounced back to 60cm. Why did it not return to the 100 cm mark?
   A. Energy was lost while it fell.
   B. Energy was added to it when it hit the ground.
   C. Energy was transferred when it hit the ground.
   D. Energy was lost while it rose back up.

5. A light bulb shines on a glass of water. The water's temperature rises. This is an example of:
   A. heat transfer
   B. light transfer
   C. light to solar transformation
   D. heat to light transformation

6. You swing a golf club and hit a golf ball. Mechanical energy is transferred in this process. The transfer is from:
   A. your arm to the golf ball
   B. the golf club to the golf ball
   C. the golf ball to the golf club
   D. the golf club to your arm

7. A material that slows down the passage of heat or electricity is called a(n):
   A. insulator **B**. conductor **C**. radiator **D**. thermal amplifier

I can give examples of energy transformations. That means when energy is changed from one form to another form.

8. Mark places new batteries in his CD player and turns it on. Identify the correct energy transformation.
   - **A.** Electrical → chemical → mechanical and sound
   - **B.** Chemical → electrical → mechanical and sound
   - **C.** Sound → chemical → mechanical and electrical
   - **D.** Mechanical → chemical → electrical and sound

9. This type of energy transformation occurs when you burn something.
   A. solar to heat/light **B**. chemical to heat/light
   C. heat/light to chemical **D**. chemical to heat

10. When energy changes from one form to another (for example, chemical energy → heat → light), it is know as:
    A. energy transfer **B**. energy transformation
    C. light/heat change **D**. fossil change

11. Becky was exercising on her treadmill and became warm. In order to cool off she turns on a fan. Identify the correct energy transformations as she plugs up the fan and turns it on.
    - **A.** Electrical → mechanical(fan) → mechanical(wind)
    - **B.** Mechanical(wind) → mechanical(wind) → electrical
    - **C.** Mechanical(wind) → electrical → mechanical(fan)
    - **D.** Electrical → mechanical(wind) → mechanical(fan)

12. We transform energy into other forms for use in our homes (light, heat, sound, etc.). What is the most common energy we start this transformation with in our homes?
    A. sound **B**. electrical **C**. mechanical **D**. chemical

I can describe the exchange of energy between hot objects and cold objects.

13. Two cups of water (A and B) are sitting on a table in a room. Based on the graph, what is the room's temperature?
    A. 5 **B**. 22 **C**. 37 **D**. 63

14. What **should** happen to the temperature of the cups after 60 minutes have passed?
    A. Cup B colder than Cup A **B**. Cup A warmer than Cup B
    C. Cup B same temp as Cup A **D**. Cup A cools off some more

15. Heat always moves from:
    A. warm temps to high temps **B**. low temps to warm temps
    C. higher temps to lower temps **D**. none of these, heat doesn't move

I can explain how heat energy is transferred.

2. You are heating up a container of water. It is sitting on a hot burner.
   a. Describe the heat transfer method that is occurring between the burner and container.
   b. Describe the heat transfer method that is raising the temperature of the water.
   c. Explain what happens to the movement of the water molecules as they first heat up, and then turn into a gas.

16. Heat energy can be transferred by:
    A. conduction **B**. convection **C**. radiation **D**. all of these

17. Convection occurs in:
    A. solids and gasses **B**. liquids and solids
    C. just solids **D**. liquids and gasses

18. Which kind of heat transfer does not require matter (solid, liquid or gas)?
    A. conduction **B**. convection **C**. radiation **D**. all of these

19. As a substance is heated, the particles that make up the substance:
    A. stop moving **B**. move slower
    C. move faster **D**. don't change their motion at all

20. When you place a pan on a burner and turn the stove on, the pan gets warm. This movement of heat is from:
    A. conduction **B**. convection
    C. radiation **D**. heat transformation

I can describe examples of systems that are powered by energy.

21. Most of the energy that powers Earth's systems comes from this source:
    A. geothermal **B**. sun **C**. inside the earth **D**. electrical

22. This system is powered by heat energy from the sun.
    A. ecosystems **B**. volcanoes **C**. TVs **D**. weather

23. Our body system is powered by which type of energy?
    A. Chemical Energy
    B. Heat Energy
    C. Mechanical Energy
    D. Sound Energy

I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system.

1. Humans rely on energy transfers and transformations to meet our daily energy needs.
   a. Describe the energy transformations that occur when a hairdryer is used.
   b. Create a food chain, starting with the sun that shows how humans get our energy to live.

I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.

24. Based on the Law of Conservation of Energy, in a completely controlled environment, if you roll a ball with a force of 4N and it hits another ball. The first ball immediately stops while the other ball rolls away. What should the force of the second rolling ball be?
    A. 2N B. 4N C. 6N D. 10N

25. The energy that a log has is transformed when burned. How does the chemical energy of the log compare to the heat and light energy it is transformed into?
    A. The amount of chemical energy is equal to the amount of heat and light energy.
    B. The amount of chemical energy is less than the amount of heat and light energy.
    C. The amount of chemical energy is more than the amount of heat and light energy.
    D. There is no way to know.

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Energy Transfer and Transformations Unit Test

Answer the following **two** open-response questions on the paper provided. Do **NOT** write on the test booklet.

1. Humans rely on energy transfers and transformations to meet our daily energy needs.
   a. Describe the energy transformations that occur when a hairdryer is used.
   b. Create a food chain, starting with the sun that shows how humans get our energy to live.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

2. You are heating up a container of water. It is sitting on a hot burner.
   a. Describe the heat transfer method that is occurring between the burner and container.
   b. Describe the heat transfer method that is raising the temperature of the water.
   c. Explain what happens to the movement of the water molecules as they first heat up, and then turn into a gas.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Multiple Choice Section – Use the bubble sheet provided to indicate your answers. Do **NOT** write in the test booklet. Make your mark heavy and dark. If you wish to change an answer, completely erase the old answer before making a new mark. Choose the answer that is **most** correct.

For questions 1-2, use the following graph:

1. Which of the following four energy sources are forms of chemical energy:
   I. Oil II. Geothermal III. Solar IV. Coal

   A. I and II **B**. II and III **C**. I and IV **D**. I, III, and IV

2. An ecosystem could not survive without this form of energy.
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3. A moving car, flowing water, and a thrown football each contain this type of energy:
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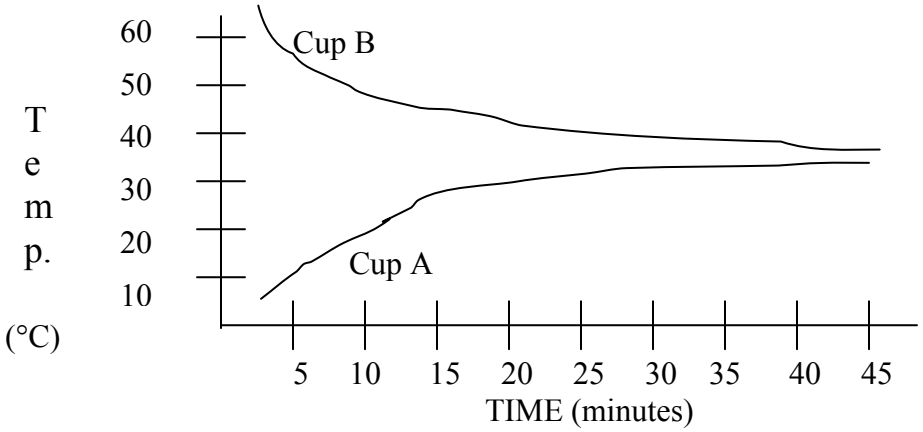

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A. stop moving **B**. move slower
C. move faster **D**. don't change their motion at all

20. When you place a pan on a burner and turn the stove on, the pan gets warm. This movement of heat is from:
A. conduction **B**. convection **C**. radiation **D**. heat transformation

21. Most of the energy that powers Earth's systems comes from this source:
A. geothermal **B**. sun **C**. inside the earth **D**. electrical

22. This system is powered by heat energy from the sun.
A. earthquakes **B**. volcanoes **C**. TVs **D**. weather

23. Our body system is powered by which type of energy?
A. Chemical **B.** Heat **C.** Mechanical **D.** Sound

24. In a completely controlled environment, you roll a ball with a force of 4N and it hits another ball. The first ball immediately stops while the other ball rolls away. Based on the Law of Conservation of Energy, if no energy has been transformed, what should the force of the second rolling ball be?
A. 2N **B.** 4N **C.** 6N **D**. 10N

25. The energy that a log has is transformed when burned. How does the chemical energy of the log compare to the heat and light energy it is transformed into?
A. The amount of chemical energy is equal to the amount of heat and light energy.
B. The amount of chemical energy is less than the amount of heat and light energy.
C. The amount of chemical energy is more than the amount of heat and light energy.
D. There is no way to know.

Open Response #1 Name: _____

SCIENCE

1

Teacher Use Only: 1___ 2___ 3___ 4___ 5___ 6___ 7___ 8___

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

Energy Types

Name: _____

Today you will examine different examples of energy. At each station, you will decide what type of energy is going into the system and what type of energy is going out of the system. You will also decide whether there is an energy transfer, transformation, or both occurring at the station. An energy transfer happens when the same type of energy is moved from one object to another object. An energy transformation is when a type of energy is changed into another type of energy.

Station #1
When does the energy in a candle get released?
What energy type does a candle contain before it is lit?
How is a candle similar to paper, leaves, gasoline, and coal?

Station #2
What type of energy gets put into a hairdryer?
Does this energy get changed into any other types?
What happens to the energy that goes into it?

Station #3
Pull the string (pendulum) back and let it swing.
What type of energy was added to the pendulum?
Did the pendulum keep this energy or lose it?
What happened to the energy?

Station #4
Take the rubber ball, lift it into the air above the table, and let it go.
What type of energy gets put into the ball?
Does this energy get changed into any other types?
What happens to the energy that goes into it?

Station #5
Take the wire ends of the motor and connect them to the ends of the battery.
What type of energy gets put into the motor?
Does this energy get changed into any other types?
What happens to the energy that goes into it?

Station #6
Turn the radio on and keep the volume low.
What type of energy gets put into the radio?
Does this energy get changed into any other types?
What happens to the energy that goes into it?

Station #7
Turn on the light bulb by pulling the chain.
What type of energy gets put into the light bulb?
Does this energy get changed into any other types?
What happens to the energy that goes into it?

Station #	Energy In	Energy Out	Transfer/Transformation
1			
2			
3			
4			
5			
6			
7			

Energy Transfer Formative Assessment

Name: _____

In the space below draw a picture that shows an energy transfer. Make sure you clearly indicate that energy is being transferred from one object to another.

Now give a written explanation of what is happening in your example.

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Energy Transfer or Transformation?

Name: _____

You are outside playing a game of baseball. You're at bat and swing at the pitch. You hit the ball and it rolls into the outfield. Is this an example of energy transfer or energy transformation? Explain your answer as clearly as possible using the correct vocabulary.

_____

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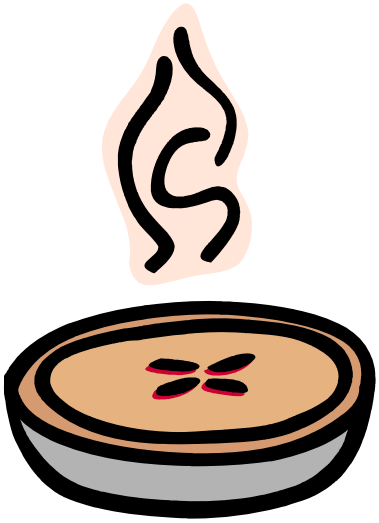
Energy Transfer or Transformation?

It's the 4th of July. Late in the evening you set a fire cracker on the ground, light it, and move away. In a few seconds it explodes. Is what happens to the firecracker an energy transfer or energy transformation? Explain your answer as clearly as possible using the correct vocabulary.

Heat Energy Movement



Imagine that you have just made a fresh apple pie that you set on your kitchen table. When you took it out of the stove, you couldn't even hold it in your hand. Now, several minutes later, you are able to cut a slice and eat it.

The apple pie has cooled, the question now is where has the heat gone. Select which of the following is most likely to have occurred:

A. The heat rose into the air.
B. The heat evaporated.
C. The heat went to the table.
D. The heat went to the table and the air.

In the space below describe your thinking. Provide an explanation for your answer.

Mastery (#3 Green)
The student consistently meets and often exceeds the content standard. The student, with relative ease, grasps, applies, and extends key concepts, processes, and skills for the grade level.

This means that a student is able to demonstrate clear and consistent understanding of the knowledge, reasoning, skill, and product target.

Developing (#2 Yellow)
The student regularly meets the content standard. The student, with limited errors, grasps and applies key concepts, processes, and skills for the grade level.

This means that a student demonstrates understanding of the target, but does so on an inconsistent or incomplete manner.

Beginning or Below Basic (#1 Red)
The student is beginning to, and occasionally does, meet the content standards, or the student is not meeting them. The student is beginning to grasp and apply key concepts, processes, and skills for the grade level put produces work that contains many errors.

This means that a student demonstrates a limited understanding of the target.

2009-2010 Science Grading Process

During this school year Mr. Mattingly will begin using a grading process that is designed to give students more directed feedback about specific learning objectives. Students will know the areas that they have performed well in and areas that need improvement. The following will outline how this grading system operates and what students can expect.

1. For each unit students will receive a list of learning targets that are written in student friendly language. These targets specify what students need to know, be able to do with what they know, and demonstrate. Lessons will focus on these learning targets and students will know the learning target that the activity/lesson addresses. Students will be assessed throughout the unit to see how they are doing on their targets. This information will provide feedback to the teacher and student on the progress being made and where to go next.

2. At the end of each unit students will be assessed on their understanding of the learning targets. Each unit assessment will be planned out so that each target is assessed an appropriate amount and in an appropriate way. The assessment will be scored and students will receive a report that indicates their performance on each of the targets (see accompanying Performance Level Descriptor page). The total points they earn divided by the total points possible will then determine the student's percentage grade for the unit.

3. After receiving feedback on their performance students will have an opportunity (about a week later) to take a second assessment. This second opportunity will allow students to show if there has been an improvement in their understanding of individual learning targets they initially had trouble with. If students show an improvement on their learning target performance, their grade will go up accordingly. If they don't show improvement, their grade remains the same. There is not penalty for taking longer to demonstrate competency of a learning target.

4. A student who still does not demonstrate acceptable understanding can request help with the learning target from the teacher. They are allowed to check their current understanding at any point during the school year, and if they choose may take another assessment to show understanding. Students can show comprehension of a learning target at any time after the initial unit assessment. Even if it takes them 5 months to grasp the learning target, they can do that and improve their performance if they show the teacher they've mastered it. Whenever this occurs the students score on that target will be changed to reflect this new understanding and their grade will improve accordingly.

This grading process allows students to have ownership of their grades. They have the opportunity to know what they need to improve on and how to improve it. Students also discover that it's never too late to learn.

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

Energy Transfer and Transformation Target Practice

Name: _____

Learning Target #1 - I can give examples of energy.

Give two examples of each of the following forms of energy:

a. light
b. heat
c. chemical
d. mechanical
e. sound
f. electrical

Learning Target #2 - I can give examples of energy transfer. That means when energy is moved from one object to another.

a. List two examples of energy transfer.

b. Explain the energy transfer that is occurring in each example.

Learning Target #3 - I can give examples of energy transformations. That means when energy is changed from one form to another form.

a. List three examples of energy transformation.

b. Explain the energy transformation that is occurring in each example.

Learning Target #4 - I can describe the exchange of energy between hot objects and cold objects.

A room's temperature is 74°F. You place a cup of water at 127°F on a table in the room. You also place a cup of water at 34°F on a different table in the room.

a. Describe what will happen to the temperature of the cup of 127°F water.
b. Describe what will happen to the temperature of the cup of 34°F water.
c. Explain what caused these temperature changes.

Learning Target #5 - I can explain how heat energy is transferred.

a. List an example for each heat transfer method: conduction, convection, and radiation.

b. Explain how heat is transferred in each example.

Learning Target #6 - I can describe examples of systems that are powered by energy.

a. List three systems that are powered by energy (at least one must be a natural system).

b. List the type of energy that powers each system.

c. Describe what each system uses that energy type for.

Learning Target #7 - I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system.

Humans rely on energy transfers and transformations to meet our daily energy needs.

a. Describe the energy transformations that occur when a television is used.

b. Create a food chain, starting with the sun, which shows the energy transfers and transformations that occur for humans to get our energy to live.

c. Describe the energy transformations that occur in humans.

Learning Target #8 - I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.

You roll a ball across the floor. It contains mechanical energy. The Law of Conservation of Energy states that the amount of energy in the system stays the same; it cannot be created or destroyed. You notice the ball is slowing down.

a. If the ball started with 20 units of energy, how much energy would there be when it stops moving?

b. Explain what happened to the energy.

c. An object in space keeps moving in a straight line. Use the Law of Conservation of Energy to explain why it doesn't slow down.

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

Energy Transfer and Transformation Re-Test

This test contains one question for each learning target from our energy unit. You will only need to answer the questions that go with the learning targets you want to show improvement on. The questions are very open-ended (that means they have many different correct answers) so you will have choice in how you show understanding of the learning target. However, you should do your best to prove to me that you have a **clear** and **complete** understanding of the learning target in order to get a 3.

Learning Target #1 - I can give examples of energy.

a. List 3 different types of energy.
b. For each type of energy, give two examples of objects, systems, or organisms that use or contain that energy type.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #2 - I can give examples of energy transfer. That means when energy is moved from one object to another.

a. List two examples of energy transfer.
b. Explain the energy transfer that is occurring in each example.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #3 - I can give examples of energy transformations. That means when energy is changed from one form to another form.

a. List three examples of energy transformation.
b. Explain the energy transformation that is occurring in each example.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #4 - I can describe the exchange of energy between hot objects and cold objects.

A room's temperature is 72°F. You place a cup of water at 140°F on a table in the room. You also place a cup of water at 38°F on a different table in the room.

a. Describe what will happen to the temperature of the cup of 140°F water.
b. Describe what will happen to the temperature of the cup of 38°F water.
c. Explain what caused these temperature changes.

Learning Target #5 - I can explain how heat energy is transferred.

a. List an example for each heat transfer method: conduction, convection, and radiation.
b. Explain how heat is transferred in each example.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #6 - I can describe examples of systems that are powered by energy.

a. List three systems that are powered by energy (at least one must be a natural system).
b. List the type of energy that powers each system.
c. Describe how each system uses that energy type.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #7 - I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system.

Humans rely on energy transfers and transformations to meet our daily energy needs.

a. Describe the energy transformations that occur when a television is used.
b. Create a food chain, starting with the sun, which shows the energy transfers and transformations that occur for humans to get our energy to live.
c. Describe the energy transformations that occur in humans.

Do not write on this page. Please write your answer to this open-response question on the open-response sheet provided.

Learning Target #8 - I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.

You roll a ball across the floor. It contains mechanical energy. The Law of Conservation of Energy states that the amount of energy in the system stays the same; it cannot be created or destroyed. You notice the ball is slowing down.

a. If the ball started with 20 units of energy, how much energy would there be when it stops moving?
b. Explain what happened to the energy.
c. An object in space keeps moving in a straight line. Use the Law of Conservation of Energy to explain why it doesn't slow down.

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

Genetics Re-Test Practice

#1 - I can define the following words: gene, chromosome, inherited, sexual reproduction, asexual reproduction, and variation

For each word, you need to write down an appropriate definition.

#2 - I can explain what genes and chromosomes are.

1. What are genes and chromosomes?
2. What is the connection between genes and chromosomes?
3. Where are genes and chromosomes located?

#3 - I can describe the role of genes and chromosomes in passing information from one generation to another.

For questions 1-3 use the gene trait grid below:

Gene	Dominant	Recessive
Face	Round (R)	Oval (r)
Ear lobes	Attached (A)	Unattached (a)
Hair line	Widow's Peak (W)	Straight (w)
Nose length	Long (L)	Short (l)
Eyebrows	Bushy (B)	Thin (b)
Lips	Full (F)	Thin (f)
Eyes	Huge (H)	Beady (h)
Height	Tall (T)	Short (t)

1. A mother has the following sets of genes: rR, aa, Ww, LL, BB, ff, hH, Tt. What are the correct traits for her?

2. A mother has the following sets of genes: rR, aa, Ww, LL, BB, ff, hH, Tt. Which traits are her offspring sure to have?

3. A father has the following genotype: RR, Aa, wW, Ll, bb, FF, Hh, Tt. Which of the following sperm cells could be his? Explain your answer for each.

- **a.** raWLBFHT
- **b.** RaWlLfhT
- **c.** RaWlBFHT
- **d.** RAwLbFHT

#4 - I can explain the differences between learned and inherited traits.

1. What is a learned trait and give 2 examples

2. What is an inherited trait and give 2 examples?

3. Which of the following is not an inherited trait? Explain your answer.
a. two ears **b**. reading a book **c.** dark hair **d**. hoofed feet

#5 - I can describe how genes are passed on through asexual reproduction.

1. During asexual reproduction, where does the offspring get their genes and chromosomes?

2. The cells of a particular bacteria species each contain 4 chromosomes. After this bacteria cell undergoes asexual reproduction, what will the number of chromosomes in the new bacteria cell be?

3. A normal tomato cell contains 12 chromosomes. A stem is cut from the tomato and planted. It grows into another tomato plant. Explain why this is an example of asexual reproduction.

#6 - I can describe how genes are passed on through sexual reproduction.

1. What cells are required for sexual reproduction?

2. How much genetic information is contained in each sex cell?

3. The egg cells of a particular animal species each contain 11 chromosomes. After this animal's egg is fertilized by a sperm cell, what will the number of chromosomes in the new cell be?

4. A normal dog cell contains 39 pair of chromosomes. How many chromosomes does the embryo receive from the father?

5. A normal red fox cell contains 34 chromosomes. How many chromosomes does the embryo receive from the mother?

#7 - I can explain the differences between sexual and asexual reproduction.

The most important function for all organisms is reproduction. Those organisms that are better able to reproduce and pass their genes to the next generation are more successful than those that don't.

- **a.** List and explain the two different types of reproduction.
- **b.** Give two advantages and disadvantages of **each** type of reproduction.

#8 - I can explain how sexual reproduction creates variations (differences) among offspring.

1. Explain why in sexual reproduction offspring look similar to each other but not identical.

2. Explain how it is possible that a mom and dad can both have brown hair, but that their child has blonde hair.

Genetics Re-Test

#1 - I can define the following words:

For each statement, write down the word that is described:

1. This type of reproduction requires egg and sperm or egg and pollen.
2. Differences among a species (hair color, skin tone…) are called what?
3. This type of reproduction requires only one parent and makes an exact copy of itself.
4. The passing of traits from parent to offspring is called?
5. These are the specific individual traits or instructions for an organism.
6. These structures are found in the nucleus and they contain (hold) all the genetic information.

#2 - I can explain what genes and chromosomes are.

1. What are genes and chromosomes?
2. What is a section of a chromosome that controls one trait in an organism called?
3. Where would I find genes and chromosomes?

#3 - I can describe the role of genes and chromosomes in passing information from one generation to another.

For questions 1-3 use the gene trait grid below:

Gene	Dominant	Recessive
Face	Round (R)	Oval (r)
Ear lobes	Attached (A)	Unattached (a)
Hair line	Widow's Peak (W)	Straight (w)
Nose length	Long (L)	Short (l)
Eyebrows	Bushy (B)	Thin (b)
Lips	Full (F)	Thin (f)
Eyes	Huge (H)	Beady (h)
Height	Tall (T)	Short (t)

1. A mother has the following sets of genes: RR, Aa, ww, Ll, bb, FF, Hh, Tt. What are the correct traits for her?

2. A mother has the following sets of genes: RR, Aa, ww, Ll, bb, FF, Hh, Tt. Which traits are her offspring sure to have?

3. A father has the following genotype: rR, aa, WW, lL, BB, Ff, Hh, TT. Which of the following sperm cells could be his? Explain your answer for each.

- **a.** raWLBFHT
- **b.** RaWlLfhT
- **c.** raWlBFHT
- **d.** RAWLBFHT

#4 - I can explain the differences between learned and inherited traits.

1. What is a learned trait and give 2 examples

2. What is an inherited trait and give 2 examples?

3. Which of the following is not an inherited trait?
a. spotted fur **b**. playing the piano **c.** large beak **d**. hoofed feet

#5 - I can describe how genes are passed on through asexual reproduction.

1. During asexual reproduction, where does the offspring get their genes and chromosomes?

2. The cells of a particular bacteria species each contain 18 chromosomes. After this bacteria cell undergoes asexual reproduction, the number of chromosomes in the new bacteria cell will be

3. A normal willow tree cell contains 32 chromosomes. A stem is cut from the tree and planted. It grows into another willow tree. Explain why this is an example of asexual reproduction.

#6 - I can describe how genes are passed on through sexual reproduction.

1. What two cells are required for sexual reproduction in animals?

2. What two cells are required for sexual reproduction in plants?

3. How much genetic information is contained in each sex cell?

4. The sperm cells of a particular animal species each contain 18 chromosomes. After this animal's sperm cell fertilizes an egg, what will the number of chromosomes in the new cell be?

5. A normal horse cell contains 64 chromosomes. How many chromosomes does the embryo receive from the father?

#7 - I can explain the differences between sexual and asexual reproduction.

The most important function for all organisms is reproduction. Those organisms that are better able to reproduce and pass their genes to the next generation are more successful than those that don't.

- **a.** List and explain the two different types of reproduction.
- **b.** Give one advantage and one disadvantage of **each** type of reproduction.

#8 - I can explain how sexual reproduction creates variations (differences) among offspring.

1. Explain why in sexual reproduction offspring look similar to their parents but not identical.

2. Expain how it is possible that mom and dad can both have brown eyes, but that their child has blue eyes.

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Identifying My Strengths and Areas for Improvement

Name: _____

Please look at your test results and mark whether each problem is right or wrong. Then look at the problems you got wrong and decide if you made a simple mistake. If you did, mark the "Simple Mistake" column. For all the remaining problems you got wrong, mark the "Don't Get It" column.

Problem	Learning Target	Right	Wrong	Simple Mistake	Don't Get It
1	#1 - I can identify the physical properties of a variety of substances.				
2	#1				
3	#1				
4	#1				
5	#1				
6	#2 - I can classify substances according to their chemical properties.				
7	#2				
8	#2				
9	#2				
10	#2				
11	#3 - I can explain the difference between elements and compounds.				
12	#3				
13	#3				
14	#3				
15	#3				
16	#4 - I can identify reactants and products in a chemical reaction.				
17	#4				
18	#4				
19	#4				
20	#4				
21	#5 - I can explain why the mass of the reactants and the mass of the products are the same				
22	#5				
23	#5				
24	#5				
25	#5				
OR #1	#5				
OR #2	#2				

I am good at these

Learning targets I got right:

I am pretty good at these, but need to do a little review

Learning targets I got wrong because of a simple mistake:

What I can do to keep this from happening again:

I need to keep learning these

Learning targets I got wrong and I'm not sure what to do to correct them:

What I can do to get better at them:

Section Summary Report

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

*Key: *M = Missing *L = Late *I = Incomplete*
**Ch = Cheated *Dr = Dropped *Ex = Exempt*

Term 2nd Quarter Grade Assignments

	Group	Abbrev	Name	Description	Due Date	Assigned Date	Multiplier	Pts Poss
1	Learning Targets	GLT1	Genetics Learning Target #1	I can define the following words: gene, chromosome, inherited, sexual reproduction, asexual reproduction, and variation.	10/16/2009		1.000	3
2	Learning Targets	GLT2	Genetics Learning Target #2	I can explain what genes and chromosomes are	10/16/2009		1.000	3
3	Learning Targets	GLT3	Genetics Learning Target #3	I can describe the role of genes and chromosomes in passing information from one generation to another	10/16/2009		1.000	3
4	Learning Targets	GLT4	Genetics Learning Target #4	I can explain the differences between learned and inherited traits	10/16/2009		1.000	3
5	Learning Targets	GLT5	Genetics Learning Target #5	I can describe how genes are passed on through asexual reproduction	10/16/2009		1.000	3
6	Learning Targets	GLT6	Genetics Learning Target #6	I can describe how genes are passed on through sexual reproduction	10/16/2009		1.000	3
7	Learning Targets	GLT7	Genetics Learning Target #7	I can explain the differences between sexual and asexual reproduction	10/16/2009		1.000	3
8	Learning Targets	GLT8	Genetics Learning Target #8	I can explain how sexual reproduction creates variations (differences) among offspring	10/16/2009		1.000	3
9	Learning Targets	FLT1	Fossil Learning Target #1	I can define the following words: fossil, extinction, adaptation, catastrophe, and marine	11/09/2009		1.000	3
10	Learning Targets	FLT2	Fossil Learning Target #2	I can describe how fossils are used to make conclusions (which are decisions based on fact) about past life forms (herbivore, carnivore, ability to fly etc.).	11/09/2009		1.000	3
11	Learning Targets	FLT3	Fossil Learning Target #3	I can describe how fossils are used to make conclusions about past environmental conditions (things like rainfall, volcanism, covered with water, temperature)	11/09/2009		1.000	3
12	Learning Targets	FLT4	Fossil Learning Target #4	I can explain how over time some species become so adapted to each other that one can’t survive without the other	11/09/2009		1.000	3
13	Learning Targets	FLT5	Fossil Learning Target #5	I can explain cause and effect relationships	11/09/2009		1.000	3
14	Learning Targets	FLT6	Fossil Learning Target #6	I can explain the relationship between environmental change and the extinction of a species (that continues today)	11/09/2009		1.000	3
15	Learning Targets	FLT7	Fossil Learning Target #7	I can describe the conditions	11/09/2009		1.000	3

Section Summary Report

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Term 2nd Quarter Grade Assignments

	Group	Abbrev	Name	Description	Due Date	Assigned Date	Multiplier	Pts Poss
				necessary for a species to go extinct				
16	Learning Targets	ETLT1	Energy Transformations Learning Target #1	I can give examples of energy.	12/04/2009		1.000	3
17	Learning Targets	ETLT2	Energy Transformations Learning Target #2	I can give examples of energy transfer. That means when energy is moved from one object to another.	12/04/2009		1.000	3
18	Learning Targets	ETLT3	Energy Transformations Learning Target #3	I can give examples of energy transformations. That means when energy is changed from one form to another form.	12/04/2009		1.000	3
19	Learning Targets	ETLT4	Energy Transformations Learning Target #4	I can describe the exchange of energy between hot objects and cold objects.	12/04/2009		1.000	3
20	Learning Targets	ETLT5	Energy Transformations Learning Target #5	I can explain how heat energy is transferred.	12/04/2009		1.000	3
21	Learning Targets	ETLT6	Energy Transformations Learning Target #6	I can describe examples of systems that are powered by energy.	12/04/2009		1.000	3
22	Learning Targets	ETLT7	Energy Transformations Learning Target #7	I can use models to show the transformation of energy in a system. That means I can show the energy forms that enter a system and how they change form until they leave the system.	12/04/2009		1.000	3
23	Learning Targets	ETLT8	Energy Transformations Learning Target #8	I can use models to show that the amount of energy in a system is conserved. That means the total amount of energy stays the same, no matter how it has been transferred or transformed.	12/04/2009		1.000	3

Section Summary Report

Created by Ken Mattingly ken.mattingly@rockcastle.kyschools.us

*Key: *M = Missing *L = Late *I = Incomplete*
**Ch = Cheated *Dr = Dropped *Ex = Exempt*

Term 2nd Quarter Grade Scores																											
Student	1 GLT1	2 GLT2	3 GLT3	4 GLT4	5 GLT5	6 GLT6	7 GLT7	8 GLT8	9 FLT1	10 FLT2	11 FLT3	12 FLT4	13 FLT5	14 FLT6	15 FLT7	16 ETLT1	17 ETLT2	18 ETLT3	19 ETLT4	20 ETLT5	21 ETLT6	22 ETLT7	23 ETLT8	Earned	Possible	Percent	In-Progress Grade
Points Possible	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**				
1943028918	2	2	3	3	2	3	2	3	3	3	3	3	2	2	2	2	1	3	3	2	2	2	2	55	69	79.71	C/79
1943024875	2	2	2	2	3	2	2	2	3	3	3	3	2	2	3	3	2	3	2	1	2	3	3	55	69	79.71	C/79
1943040327	3	2	2	3	2	2	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	63	69	91.30	B/91
1943038339	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	66	69	95.65	A/95
1943014256	3	3	2	3	2	2	2	3	3	2	3	3	3	3	2	2	1	3	2	1	3	2	3	56	69	81.16	C/81
1942988427	3	3	3	2	2	2	3	3	3	3	3	3	3	3	3	3	1	3	2	3	3	2	2	61	69	88.41	B/88
1943033256	2	3	2	3	3	2	2	2	3	3	3	3	3	3	2	2	2	3	2	2	3	2	3	58	69	84.06	B/84
1943023224	2	2	3	3	3	3	3	2	3	3	3	3	2	3	2	3	3	2	3	2	2	2	2	59	69	85.51	B/85
1950276012	3	2	3	3	2	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2	3	2	2	60	69	86.96	B/86
1943032936	3	3	2	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	2	1	3	2	3	62	69	89.86	B/89
1943028124	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	2	3	3	3	3	2	3	2	63	69	91.30	B/91
1942080373	3	2	2	2	3	2	2	3	3	3	3	3	3	2	2	3	3	2	3	1	3	2	3	58	69	84.06	B/84
1943016509	3	2	2	3	3	2	2	2	3	3	3	3	3	2	2	2	2	1	2	1	2	3	1	52	69	75.36	C/75
1943027183	3	3	3	2	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2	63	69	91.30	B/91
1943014199	3	3	3	3	3	2	3	3	3	3	3	3	2	3	3	2	3	2	3	2	3	2	2	62	69	89.86	B/89
1943031862	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	2	3	3	3	3	3	3	66	69	95.65	A/95
1943038354	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	2	66	69	95.65	A/95
1943037174	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	2	2	3	3	65	69	94.20	A/94
1943031565	2	3	2	3	2	2	3	3	3	3	3	3	2	3	2	2	3	3	2	2	2	3	3	59	69	85.51	B/85
1943020659	3	3	3	3	2	2	3	3	3	3	3	3	2	3	2	3	2	3	3	2	2	2	3	61	69	88.41	B/88
2120357209	2	3	3	3	3	2	3	2	3	3	3	3	3	3	2	3	3	3	3	1	3	3	3	63	69	91.30	B/91
1943013902	2	2	2	3	3	2	2	3	3	3	2	3	3	3	2	3	2	2	2	3	3	2	2	57	69	82.61	B/81.5
1943026987	2	3	3	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	2	1	2	3	60	69	86.96	B/86
1943038321	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	68	69	98.55	A/98
1943024156	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	3	67	69	97.10	A/97
1943018091	3	3	3	2	3	3	3	3	3	3	2	3	3	3	3	3	2	3	3	2	3	3	3	65	69	94.20	A/94
1943015998	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	2	3	66	69	95.65	A/95
Assignment Averages	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.3**	**2.7**	**2.7**	**3**	**3**	**2.9**	**3**	**2.6**	**2.9**	**2.5**	**2.7**	**2.4**	**2.8**	**2.6**	**2.1**	**2.6**	**2.5**	**2.6**			**88.89**	

Section Summary Report

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*Key: *M = Missing *L = Late *I = Incomplete*
**Ch = Cheated *Dr = Dropped *Ex = Exempt*

Grading Tasks\Standards - Final Grades	
	Term - Grading Task/Standard
1	2nd - Quarter Grade

Grading Tasks\Standards - Final Grades		
	1	
Student	Percent	Final Grade
1943028918	79.71	C/79
1943024875	79.71	C/79
1943040327	91.30	B/91
1943038339	95.65	A/95
1943014256	81.16	C/81
1942988427	88.41	B/88
1943033256	84.06	B/84
1943023224	85.51	B/85
1950276012	86.96	B/86
1943032936	89.86	B/89
1943028124	91.30	B/91
1942080373	84.06	B/84
1943016509	75.36	C/75
1943027183	91.30	B/91
1943014199	89.86	B/89
1943031862	95.65	A/95
1943038354	95.65	A/95
1943037174	94.20	A/94
1943031565	85.51	B/85
1943020659	88.41	B/88
2120357209	91.30	B/91
1943013902	82.61	B/83
1943026987	86.96	B/86
1943038321	98.55	A/98
1943024156	97.10	A/97
1943018091	94.20	A/94
1943015998	95.65	A/95
Class Averages	**88.89**	