

8 th Grade Science	Standard: embedded CAS Science standard	Teacher: Adrienne Bones
Last Unit N/A	Current Unit 1-Nature of Science; 14-16 days	Next Unit 2-Genetics

Lesson 1: What is the Scientific Process?
LT: I can trace the steps of the scientific process.
 Activities: BrainPOP Video-Scientific Method, Scientific Process GO, Sorting Strips, Fortune Fish Lab, Exit Ticket
 Vocab: Scientific Process/Method, research, observation, hypothesis, procedure, data, results, conclusion

Lesson 2: What are the variables in an experiment?
LT: I can determine the independent variable, dependent variable, constants and control group in an experiment.
 Activities: Variables Foldable, Variables Practice WS, Scientific Scenario Cards, Exit Ticket
 Vocab: independent variable, dependent variable, control group, constants

Lesson 3: How do you write a hypothesis?
LT: I can write a hypothesis using If... then... because...
 Activities: Hypothesis GO, Hypothesis Practice WS, Exit Ticket
 Vocab: testable question, hypothesis, cause, effect, reasoning, inference

is about

Scientists can solve problems in the world around them using observations, inferences and experimentation.

Class Expectations and Procedures- 1

Interactive Science Notebook- 2

Lab Safety and Emergency Procedures- 3

Getting to Know You and Team Building- 1, 4

Lesson 4: What type of data do scientists collect?
LT: I can collect data using quantitative and qualitative observations.
 Activities: Data Foldable, Grow Capsule Lab, Exit Ticket
 Vocab: data, data table, units, observation, quantitative, qualitative

Lesson 5: How do you display data in a graph?
LT: I can create a graph using TAILS DRY MIX.
 Activities: Graphing Skills Notes, Celebrity Graphing Cards, Grow Capsule Lab Graph, Exit Ticket
 Vocab: line graph, pie graph, bar graph, title, axes, interval, scale, dependent variable, independent variable

Lesson 6: How do you analyze data to form a conclusion about an experiment?
LT: I can analyze data to write a conclusion based on evidence.
 Activities: Graph Analysis GO, Claim-Evidence-Reasoning, Exit Ticket, NOS Task Card Review
 Vocab: analyze, results, accept, reject, sources of error

<p>Focus Question</p> <p>How do scientists solve problems in the world around them?</p>	<p>Summative Assessment</p> <p>Paper Airplane Performance Task</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections
<p>Unit Teaching Thesis</p> <p>Science is a methodical approach to studying the natural world. Science asks basic questions, such as how does the world work? How did the world come to be? What was the world like in the past, what is it like now, and what will it be like in the future? These questions are answered using observation, testing, and interpretation through logic.</p>		<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV <p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence

8 th Grade Science	Standard: Life Science 2	Teacher: Adrienne Bones
Last Unit 1-Nature of Science	Current Unit 2-Genetics; 14-16 days	Next Unit 3-Forces and Motion

is about

Organisms reproduce and transmit genetic information (genes) to offspring which influences individuals' traits in the next generation.

Lesson 1: What is a trait?
 LT: *I can describe what a trait is with examples.*
 Activities: Bill Nye Video-Genes, Reading: DNA to Traits, Exit Ticket, Genetics Vocabulary Matching Cards
 Vocab: genetics, trait, DNA, gene, allele, heredity

Lesson 6: What are the different patterns of inheritance and how do they differ?
 LT: *I can describe the different patterns of inheritance with examples.*
 Activities: Reading-Patterns of Inheritance, Inheritance G.O., Exit Ticket, Genetics Task Card Review
 Vocab: incomplete dominance, codominance, multiple alleles, polygenic inheritance

Lesson 2: How are traits inherited?
 LT: *I can explain how traits are inherited from parents to offspring.*
 Activities: BrainPOP Video-Heredity, Reading-Sexual Reproduction, Genetics Vocabulary Foldable, Exit Ticket
 Vocab: chromosome, meiosis, fertilization, gamete, offspring, egg, sperm

Lesson 4: How do you use a Punnett Square?
 LT: *I can correctly use a Punnett square to predict genotypes and phenotypes.*
 Activities: Punnett Square Notes, Mendel's Peas Interactive, Exit Ticket
 Vocab: dominant, recessive, homozygous, heterozygous, genotype, phenotype

Lesson 7: How are traits passed on through generations?
 LT: *I can analyze a pedigree to determine the traits of an unknown individual.*
 Activities: Pedigree Lab, Potter Pedigree, Exit Ticket, Genetics Task Card Review
 Vocab: pedigree, carrier

Lesson 3: How do dominant and recessive traits interact?
 LT: *I can identify dominant and recessive genotypes.*
 Activities: Dominant vs. Recessive G.O, Human Traits Activity, Exit Ticket
 Vocab: dominant, recessive, homozygous, heterozygous, genotype, phenotype

Lesson 5: How can inheritance be modeled?
 LT: *I can model how traits are passed on from parents to offspring using a Punnett Square.*
 Activities: Dragon Genetics Lab, Baby Dragon Portrait, Exit Ticket
 Vocab: dominant, recessive, homozygous, heterozygous, genotype, phenotype

***Lesson 8: What are the benefits and risks to genetic engineering?**
 LT: *I can discuss the benefits and risks to genetic engineering using an evidence-based argument.*
 Activities: Jigsaw Readings-Genetic Engineering, T chart-Risks vs. Benefits, Claim-Evidence-Reasoning Paragraph, Exit Ticket
 Vocab: genetic engineering, GMO, clone, gene therapy

<p>Focus Question</p> <p style="text-align: center;">How do we determine that traits are passed from parents to offspring?</p>	<p>Summative Assessment</p> <p style="text-align: center;">Create an Alien Performance Task</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections
<p>Unit Teaching Thesis</p> <p>A trait is a characteristic of an organism determined by a section of DNA genetic material. Half of your DNA is inherited from each parent. Meiosis is a type of cell division that produces gametes (sex cells) that contain the chromosomes (DNA) to be passed from parents to offspring. Geneticists can predict the probability of inheritance for many dominant and recessive traits using models such as Punnett squares and pedigrees.</p>		<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV <p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence

8 th Grade Science	Standard: Physical Science I	Teacher: Adrienne Bones
Last Unit 2-Genetics	Current Unit 3-Forces and Motion; 20-22 days	Next Unit 4-Energy and Matter

Lesson 1: What is a force?
 LT: I can identify and describe the different types of forces that act on objects.
 Activities: BrainPOP-Force, Reading-Forces, Forces Coloring Diagram, Exit Ticket
 Vocab: force, newton N, gravity, normal force, friction, push, pull, drag, thrust

Lesson 2: How do forces cause objects to move?
 LT: I can calculate net force and determine if the forces acting on an object are balanced or unbalanced.
 Activities: Balanced and Unbalanced Forces Notes, Forces Scenario-CER, Exit Ticket
 Vocab: net force, balanced forces, unbalanced forces, magnitude, opposite forces

Lesson 3: What is the relationship between Mass and Weight?
 LT: I can compare and contrast mass vs. weight in at least 3 ways.
 Activities: BrainPOP-Gravity, Mass vs. Weight Foldable, Measuring Forces Lab, Exit Ticket
 Vocab: mass, weight, gravity, spring scale, triple beam balance

is about

Forces have direction and magnitude that act on an object and results in the object's change of motion.

Lesson 4: How do we know an object is in motion and how is it calculated?
 LT: I can solve problems involving speed, distance and time.
 Activities: Speed Triangle GO, Speedy Speedy Animals, Speed Challenge Lab, Exit Ticket
 Vocab: speed, distance, time, velocity

Lesson 5: How do you graph speed?
 LT: I can analyze and construct distance-time graphs showing speed.
 Activities: DT Graphs-Analysis GO, Speed Challenge Lab, Exit Ticket
 Vocab: independent variable, dependent variable, constant speed

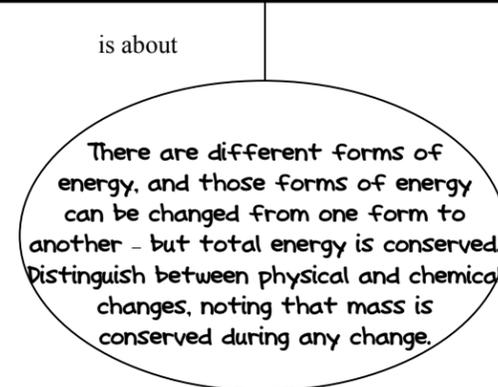
Lesson 6: How do you graph acceleration?
 LT: I can analyze speed-time graphs showing acceleration.
 Activities: BrainPOP-Acceleration, ST Graphs-Analysis GO, Go Motion! Lab, Exit Ticket
 Vocab: acceleration, deceleration

Lesson 7: What are Newton's 3 Laws of Motion?
 LT: I can identify and describe each of Newton's 3 Laws of Motion.
 Activities: BrainPOP-Newton's Laws, Reading-Newton's Laws, Newton's Laws Lab, Exit Ticket
 Vocab: inertia, opposite forces, Newton's 1st Law, Newton's 2nd Law, Newton's 3rd Law

Lesson 8: What relationships exists among force, mass, and acceleration?
 LT: I can determine the relationship between force, mass and acceleration.-Newton's 2nd Law.
 Activities: Newton Carts Lab, Exit Ticket
 Vocab: Newton's 2nd Law, force, mass, acceleration

Focus Question <p style="text-align: center;">How do forces affect the motion of objects such as airplanes and rockets?</p>	Summative Assessment <p style="text-align: center;">Bottle Rocket Performance Task</p>	Scientific Thinking <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections
Unit Teaching Thesis An object is in motion when its position is changing. Speed describes how far an object moves in a given amount of time. A force is a push or pull that can cause an object to move, stop, or change speed or direction. The greater the force, the greater the change in motion. Gravity (the Earth's pulling force) and friction are common forces that oppose motion. The greater the object's mass, the greater the force needed to move it, stop it or change its speed or direction.		Scientific Patterns <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV
		Literacy Practices <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence

8 th Grade Science	Standard: Physical Science 2, 3	Teacher: Adrienne Bones
Last Unit 3- Forces and Motion	Current Unit 4-Energy and Matter; 16-18 days	Next Unit 5-Waves



Lesson 1: What is energy and what are the different forms?
 LT: *I can describe energy and give examples of the different forms.*
 Activities: Reading-Energy GO, BrainPOP-Energy Sources, Energy Sorting Cards, Exit Ticket
 Vocab: energy, joules (J), kinetic-mechanical, thermal, radiant, sound, electric; potential- gravitational, chemical, nuclear, elastic

Lesson 6: What is a chemical reaction?
 LT: *I can identify the signs of a chemical reaction and describe the reactants and products.*
 Activities: Reaction Demo, Reaction in a Baggie Lab, Exit Ticket
 Vocab: chemical energy, chemical reaction, reactant, product, chemical equation, endothermic, exothermic

Lesson 2: What is the Law of Conservation of Energy?
 LT: *I can explain the law of conservation of energy and draw an energy transformation diagram.*
 Activities: Energy Transformation Slider, Science of Energy Lab, Exit Ticket
 Vocab: law of conservation of energy, energy transfer, transformation, heat (thermal energy)

Lesson 4: What are the chemical and physical properties of matter?
 LT: *I can distinguish between chemical and physical properties and changes.*
 Activities: BrainPOP-Property Changes, Reading-Chemical vs. Physical Foldable, Chemical vs. Physical Sorting Cards, Exit Ticket
 Vocab: chemical change, chemical properties, physical change, physical properties

Lesson 7: What is the Law of Conservation of Mass?
 LT: *I can explain the law of conservation of mass using a chemical equation.*
 Activities: BrainPOP-Conservation of Mass, Conservation of Mass Lab, Exit Ticket
 Vocab: law of conservation of mass, reactant, product, chemical equation

Lesson 3: How do kinetic and potential energy compare?
 LT: *I can compare and contrast kinetic and potential energy in at least 3 ways.*
 Activities: Foldable, BrainPOP-Kinetic Energy, Potential Energy, Graph Analysis, Exit Ticket
 Vocab: kinetic energy, potential energy

Lesson 5: How do chemical and physical changes occur?
 LT: *I can identify and describe chemical and physical changes using evidence.*
 Activities: Gobstopper Lab, Exit Ticket
 Vocab: chemical change, chemical properties, physical change, physical properties

***Lesson 8: How do you balance a chemical equation?**
 LT: *I can balance a chemical equation to show that mass is conserved in a chemical reaction.*
 Activities: BrainPOP-Chemical Equations, Chemical Equation Race, Exit Ticket
 Vocab: law of conservation of mass, reactant, product, chemical equation, coefficient, subscript, atom, molecule

<p>Focus Question</p> <p>How is energy transferred between objects and converted into different forms? Why are changes in matter accompanied by changes in energy?</p>	<p>Summative Assessment</p> <p>DYO-Bouncy Ball Performance Task</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence
<p>Unit Teaching Thesis</p> <p>Energy is the ability to do work. Energy is transformed from one form to another during changes in matter. The amount of energy before a transformation is equal to the amount of energy after the transformation. Matter can be described by its physical and chemical properties. Everything on Earth is made up of matter, which is made up of smaller particles, called atoms (not matter- light, heat, sound). Neither matter nor energy can be created or destroyed; however, they may be converted to other forms of energy or matter.</p>				

8 th Grade Science	Standard: Physical Science 4	Teacher: Adrienne Bones
Last Unit 4- Energy and Matter	Current Unit 5- Waves; 14-16 days	Next Unit 6- Earth, Sun and Moon

is about

Recognize that waves such as electromagnetic, sound, seismic, and water have common characteristics and unique properties.

Lesson 1: What is a wave and what are the different forms?
 LT: I can describe a wave and identify the different forms.
 Activities: Waves GO, BrainPOP-Waves, Exit Ticket
 Vocab: energy, electromagnetic wave, mechanical wave, seismic wave, water wave, sound wave, longitudinal, compressional

Lesson 6: How do light waves move?
 LT: I can diagram and explain the ways in which light waves move.
 Activities: BrainPOP-Refraction and Diffraction, Reading-Light, Vocab GO, Light Waves Lab, Exit Ticket
 Vocab: transmission, absorption, reflection, refraction, diffraction

Lesson 2: What are the properties of waves?
 LT: I can diagram and explain the major properties of waves.
 Activities: Wave Parts Diagram, Wave Demos, Making Waves Lab, Exit Ticket
 Vocab: longitudinal, compressional, wavelength, amplitude, crest, trough, wave speed, frequency, energy, medium

Lesson 4: What is the relationship between frequency and pitch in sound?
 LT: I can explain the relationship between frequency and pitch in sound.
 Activities: BrainPOP-Sound, Reading-Sound, Vocab GO, Sound Lab, Exit Ticket
 Vocab: sound, compressional, frequency, pitch, amplitude, loudness, vibration, particle, hertz

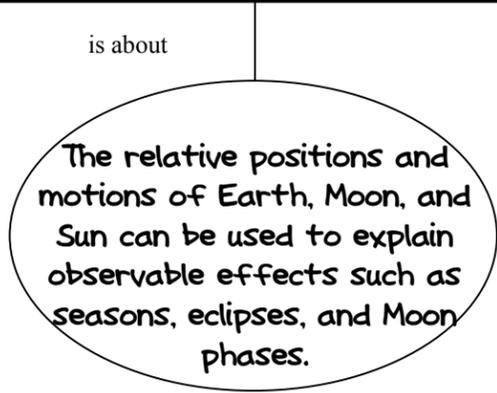
Lesson 7: How do electromagnetic and mechanical waves compare?
 LT: I can compare and contrast electromagnetic and mechanical waves in at least 3 ways.
 Activities: Crave the Wave Lab, Exit Ticket
 Vocab: energy, electromagnetic wave, mechanical wave, seismic wave, water wave, sound wave, longitudinal, compressional, vibration

Lesson 3: How do waves move?
 LT: I can measure the motion of waves.
 Activities: Wave Demos, Finish Making Waves Lab, Exit Ticket
 Vocab: longitudinal, compressional, wavelength, amplitude, crest, trough, wave speed, frequency, energy, medium

Lesson 5: What is the electromagnetic spectrum?
 LT: I can describe the major components of the electromagnetic spectrum with examples.
 Activities: BrainPOP-Light, EM Spectrum GO, Light Spectrum Lab, Exit Ticket
 Vocab: radio waves, gamma rays, microwave rays, infrared, ultra violet, visible light, ROYGBIV, electromagnetic spectrum

Focus Question	Summative Assessment	DYO Performance Task?	Scientific Thinking	Scientific Patterns	Literacy Practices
How do waves transfer energy?			<ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence
Unit Teaching Thesis Waves transfer energy, not matter. In electromagnetic waves, energy is transferred through vibrations of electric and magnetic fields. In sound waves, energy is transferred through vibration of air particles or particles of a solid through which the sound travels. In water waves, energy is transferred through the vibration of the water particles.					

8 th Grade Science	Standard: Earth Science 4	Teacher: Adrienne Bones
Last Unit 5- Waves	Current Unit 6- Earth, Sun and Moon; 18-20 days	Next Unit 7- Weather, Climate and Human Impacts



Lesson 1: How does the Earth, moon and Sun move in space?
LT: I can describe and model the rotation and revolution of the Earth, moon and Sun in space.
 Activities: Study Jams Video, Notes-Rotation and Revolution, Card Sort-Rotation vs. Revolution, Exit Ticket
 Vocab: rotation, revolution, tilt, axis, hemisphere, orbit

Lesson 5: What causes eclipses on Earth?
LT: I can explain and model the cause of eclipses on Earth.
 Activities: BrainPOP-Eclipses, Eclipses Diagram, Lunar Stations Lab, Exit Ticket
 Vocab: solar eclipse, lunar eclipse, umbra, penumbra, refraction

Lesson 2: Why do we have seasons on Earth?
LT: I can explain and diagram the reason for 4 seasons on Earth.
 Activities: BrainPOP-Solstices and Equinoxes, Seasons Diagram, Tilted Earth Lab, Exit Ticket
 Vocab: equinox, solstice, tilt, equator, hemisphere, orbit, rotation, revolution

Lesson 4: What causes the phases of the moon?
LT: I can identify moon phases and explain the cause of moon phases.
 Activities: BrainPOP-Moon Phases, Moon Phases Diagram, Lunar Stations Lab, Exit Ticket
 Vocab: crescent, gibbous, waning, waxing, quarter, reflection

Lesson 6: What causes tides on Earth?
LT: I can explain and model the cause of tides on Earth.
 Activities: BrainPOP-Tides, Tides Diagram, Lunar Stations Lab, Exit Ticket
 Vocab: spring tide, neap tide, high tide, low tide

Lesson 3: Where did our moon come from?
LT: I can explain the origin of our moon and its major features.
 Activities: BrainPOP-Moon, Impact Craters Lab, Exit Ticket
 Vocab: crater, maria, ray

***Lesson 7: What would happen if we had no moon?**
LT: I can develop an evidence-based prediction about the impacts of an Earth with no moon.
 Activities: Video Clip-If we had no moon, CER, Exit Ticket
 Vocab: gravity

***Lesson 8: How does the motion of the Earth, moon and sun change over time?**
LT: I can
 Activities: , Exit Ticket
 Vocab:

<p>Focus Question How do the relative positions of Earth, Moon and Sun affect natural phenomenon on Earth day/night, seasons, moon phases, eclipses and tides?</p>	<p>Summative Assessment Literacy-CER Task</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections
<p>Unit Teaching Thesis The Earth, moon and sun move in a predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, seasons tides and eclipses. The tilt of Earth's axis of rotation as it orbits the Sun points in the same direction with respect to the stars. The tilt and the orbital motion of Earth around the Sun cause variation in the amount of solar radiation striking a location on the Earth's surface which results in variation in the length of day/night and seasons. The moon's orbit around the Earth once in about 28 days changes what part of the moon is lighted by the sun and how much of that part can be seen from the earth. Moon phases occur because the relative positions of Earth, Moon, and Sun change, thereby enabling us to see different amounts of the Moon's surface. A lunar eclipse occurs when the moon passes through the Earth's shadow. A solar eclipse occurs when the moon passes between the Earth and the sun. The gravitational pull from the moon, and the spinning of the earth, causes ocean water to bulge, producing the tides. The Moon has a greater impact on tides because of its proximity to Earth.</p>		<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV
		<p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence

8 th Grade Science	Standard: Earth Science 1, 2; Life Science 1	Teacher: Adrienne Bones						
Last Unit 6- Earth, Sun and Moon	Current Unit 7- Weather, Climate and Human Impacts; 26-28 days	Next Unit 8- Solar System						
<p>*Lesson 1: What is Earth's atmosphere composed of? LT: I can describe the major layers of the atmosphere. Activities: Graphing the Atmosphere, Exit Ticket Vocab: atmosphere, troposphere, stratosphere, mesosphere, ionosphere, thermosphere, ozone layer, radiation, temperature inversion.</p>	<p>is about</p> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: fit-content; margin: 0 auto;"> <p>Weather is a result of complex interactions of Earth's atmosphere, land and water, that are driven by energy from the sun, and can be predicted and described through complex models. Earth has a variety of climates defined by average temperature, precipitation, humidity, air pressure, and wind that have changed over time in a particular location. Human activities can deliberately or inadvertently alter ecosystems and their resiliency.</p> </div>	<p>Lesson 8: What is the difference between weather and climate? LT: I can compare and contrast weather and climate in at least 3 ways. Activities: , Exit Ticket</p>						
<p>Lesson 2: Why does weather vary from day to day? LT: I can explain what weather is and describe the factors that determine weather. Activities: Weather Foldable, Exit Ticket Vocab: weather, humidity, air pressure, precipitation, air mass</p>	<p>Lesson 5: How do you prepare for severe weather? LT: I can develop a safety plan for severe weather conditions. Activities: , Exit Ticket Vocab: hurricane, tornado, thunderstorm</p>	<p>Lesson 9: How has Earth's climate changed over time? LT: I can describe the causes and effects of long-term cycles in Earth's climate. Activities: , Exit Ticket Vocab:</p>						
<p>Lesson 3: How is weather forecasted? LT: I can analyze data to develop a weather prediction. Activities: What's the Weather? WS, Exit Ticket Vocab: high pressure, low pressure, cold front, warm front, stationary front, occluded front</p>	<p>Lesson 6: How does the climate in one area compare and contrast with another area? LT: I can compare and contrast the different climates in at least 3 ways. Activities: , Exit Ticket Vocab: climate, tropical, polar, temperate, latitude</p>	<p>Lesson 10: What evidence supports and/or contradicts human influence on climate change? LT: I can develop and justify an evidence-based example of the causes of climate change. Activities: , Exit Ticket Vocab:</p>						
<p>*Lesson 4: What are the strengths and limitations of different types of weather models? LT: I can compare and contrast the strengths and limitations of different types of weather models. Activities: , Exit Ticket Vocab: Doppler radar</p>	<p>Lesson 7: Why are there different climates on Earth? LT: I can explain why there are different climates on Earth using 3 pieces of evidence. Activities: , Exit Ticket Vocab: climate, tropical, polar, temperate, latitude</p>	<p>*Lesson 12: What is the short and long term effects of human impacts on ecosystems? LT: I can analyze and interpret data about human impact on local ecosystems. Activities: , Exit Ticket Vocab:</p>						
<p>Focus Question How do human activities affect our global weather and climate patterns and thus ecosystems?</p>	<p>Summative Assessment Choice Board? - 3 tasks</p>	<table border="0"> <tr> <td>Scientific Thinking</td> <td>Scientific Patterns</td> <td>Literacy Practices</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections </td> <td> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV </td> <td> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence </td> </tr> </table>	Scientific Thinking	Scientific Patterns	Literacy Practices	<ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence
Scientific Thinking	Scientific Patterns	Literacy Practices						
<ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence 						
<p>Unit Teaching Thesis Describe how factors limit an ecosystem and how humans can have a positive/negative effect on it.</p>								

8 th Grade Science	Standard: Earth Science 3	Teacher: Adrienne Bones
Last Unit 7- Weather, Climate and Human Impacts	Current Unit 8- Solar System, 14-16 days	Next Unit 9- Health

is about

The solar system is comprised of various objects that orbit the Sun and are classified based on their characteristics.

Lesson 1: How is our solar system organized?
 LT: *I can explain and diagram the major bodies in our solar system.*
 Activities: , Exit Ticket
 Vocab: solar system, sun, inner planets, outer planets, asteroid belt, Kuiper belt, oort cloud, moons, ecliptic, elliptical orbit

Lesson 6: How big is our solar system?
 LT: *I can calculate distances in our solar system using AUs (astronomical units).*
 Activities: , Exit Ticket
 Vocab: astronomical unit

Lesson 2: How do the inner and outer planets compare?
 LT: *I can compare and contrast the inner and outer planets in at least 3 ways.*
 Activities: , Exit Ticket
 Vocab: terrestrial, jovian, gas giant, satellite, rotation, revolution

Lesson 4: How do astronomers study space?
 LT: *I can describe the methods and equipment used to explore space.*
 Activities: , Exit Ticket
 Vocab:

Lesson 7: Why do objects such as satellites, Moons and planets stay in orbit?
 LT: *I can explain how and why objects in the solar system move in orbits.*
 Activities: , Exit Ticket
 Vocab: gravity, orbit, ellipse

Lesson 3: How did the solar system form?
 LT: *I can explain the formation of our solar system according to Nebular Theory.*
 Activities: , Exit Ticket
 Vocab: nebular theory, nebula, accretion, planetesimal, protoplanet

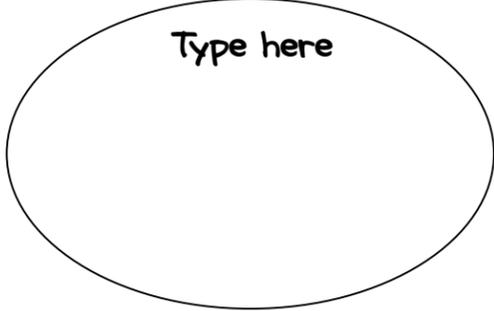
Lesson 5: What are the other small bodies in the solar system?
 LT: *I can compare and contrast meteors, comets and asteroids.*
 Activities: , Exit Ticket
 Vocab: meteor, meteorite, meteoroid, comet, asteroid, coma, tail

Lesson 8: How is the life cycle of a star such as the Sun similar to the cycle of life on Earth?
 LT: *I can compare and contrast the life cycle of our Sun to the cycle of life on Earth.*
 Activities: , Exit Ticket
 Vocab:

<p>Focus Question</p> <p>How are the various bodies in the solar system similar and different?</p>	<p>Summative Assessment</p> <p>???</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence 	
<p>Unit Teaching Thesis</p> <p>The Solar System consists of comets, asteroids, planets, and their respective satellites, most of which orbit the Sun on a plane called the ecliptic. The planets in our Solar System revolve in the same direction around the Sun in elliptical orbits that are very close to being in the same plane. Most planets rotate in the same direction with respect to the Sun. Planets can be categorized as inner or outer planets according to density, diameter and surface features. Planets and their moons have been shaped over time by common processes such as cratering, volcanism, erosion, and tectonics.</p>					

8 th Grade Science	Standard: Physical Science 1, 2, 4; Earth Science 3	Teacher: Adrienne Bones
Last Unit	Current Unit Challenger Mission; 8-12 days	Next Unit
<p>Lesson 1: ? LT: Activities: Mission Patch, Student Roles, Job Application, Pre-Mission Evaluation Vocab:</p>	<p>is about</p> <p>The year is 2076. A permanent base has just been established in the Chryse Planitia region of Mars, just northeast of Valles Marineris. The Alpha Crew is wrapping up 24 months of exploration, the period required for the orbits of Mars and Earth to cycle back into a position favorable for their return to Earth. The Beta crew has nearly completed their six-month journey to Mars. It is now time to exchange crews at Chryse Station.</p>	<p>Lesson 4: ? LT: Activities: Mars Rocks! Webquest Vocab:</p>
	<p>*Lesson 3: ? LT: Activities: Mapping out a Trip to Mars, Latitude and Longitude, Navigating a Space Craft Vocab:</p>	
<p>Lesson 2: ? LT: Activities: Mission Survival Activity, Mars Fact Sheet, Martian Jeopardy, Mission Patch Vocab:</p>		<p>*Lesson 5: ? LT: Activities: Challenger Stations for each Job Vocab:</p>
<p>Focus Question How can we safely travel as a team of astronauts to and from Mars to complete our mission?</p>	<p>Summative Assessment Challenger Mission-Voyage to Mars</p>	<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections <p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV <p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence
<p>Unit Teaching Thesis Type here</p>		

Bigger Picture- Unit Map Template

8 th Grade Science		Standard:		Teacher: Adrienne Bones		
Last Unit 8- Solar System		Current Unit 9-Health; 4-6 days		Next Unit N/A		
<p>Lesson 1: ? LT: Activities: Types of STDs, modes of Transmission, Video, Exit Ticket Vocab:</p>		<p>is about</p> <p>Type here</p> 		<p>*Lesson 3:? LT: Activities: , Exit Ticket Vocab:</p>		
		<p>Lesson 2:? LT: Activities: Types of Contraceptives, STD Transmission Activity, Exit Ticket Vocab:</p>				
Focus Question ?	Summative Assessment N/A			<p>Scientific Thinking</p> <ul style="list-style-type: none"> • Questioning • Inference • Predictions • Observations • Reflections 	<p>Scientific Patterns</p> <ul style="list-style-type: none"> • Relationships • Processes • Cause/Effect • Structure/Function • Variables-DV/IV 	<p>Literacy Practices</p> <ul style="list-style-type: none"> • Evidence-based reasoning • Analysis/Evaluation • Translating charts and graphs to words • Distinguish between relevant and irrelevant evidence
Unit Teaching Thesis Type here						

