Grade 6 YAG						
Weeks	Book	Umbrella Topic	Chapter/ Lesson	Weekly Topic	Big Idea Question for Chapter	Essential Question for Lesson
Week 1				Meeting Students!		
Week 2	8.20.18	Case Study				
Week 3	F: Life: Structure and Function	LS: Cell	Ch. 1, L.1	Characteristics of Life	What are Living Things and How Can They be Classified?	What characteristics do all living things share?
Week 4			Ch. 1, L.3	Exploring Life		How did microscopes change our ideas about living things? What are the types of microscopes and how do they compare?
Week 5			Ch. 2, L.1	Classification & Cell and Life	How do the structures and processes of a cell enable it to survive?	How did scientists' understanding of cells develop? What basic substances make up a cell?
Week 6			Ch. 2, L.2	The Cell		How are prokaryotic and eukaryotic cells similar, and how are they different? What do the structures in a cell do?
Week 7			Ch. 2, L.3	Cells and Energy		How does a cell obtain energy? How do some cells make food molecules?
Week 8		LS: Cellular Reproduction	Ch. 3, L.1 Ch. 4, L.1	Cell Cycle/Division; Sexual Reproduction	How can one cell become a multicellular organism? Why do living things reproduce?	What are the phases of the cell cycle? Why is the result fo the cell cycle important?; What is sexual reproduction and why is it beneficial? What is the order of the phases of meiosis and what happens during each phase? Why is meiosis important?
Week 9			Ch. 4, L.2	Asexual Reproduction	Why do living things reproduce?	What is asexual reproduction and why is it beneficial? How do the types of asexual reproduction differ?
Week 10		LS: Structure and Function	Ch. 3, L.2	Levels of Organization	How can one cell become a multicellular organism?	How do unicellular and multicellular organisms differ? How does cell differentiation lead to the organization wihin a multicelluar organism?
Week 11	H: Animals		Ch. 11, L.1	What Defines an Animal?	What are the major groups of animals and how do they differ?	What characteristics do all animals have? How are animals classified?
Week 12			Ch. 11, L.3	Phylum Chordata		What are the characteristics of all chordates? What are the characteristics of all vertebrates? How do the classes of vertebrates differ?
Week 13			Ch. 12, L.1	Support, Control, and Movement	Why do animals have different structures that perform similar functions?	How are the types of support alike and how are they different? How do the types of control compare and contrast? How do the types of movement compare and contrast?
Week 14	STEM	Project STEM		Design Prosthetic Device	Project STEM	
Week 15	A: Exploring Earth	ES: Minerals and Rocks	Ch. 3, L.1	What is a Mineral?	What are minerals and why are they useful?	What is a mineral? What are the common rock-forming minerals? How do minerals form?
Week 16			Ch. 3, L.2	How are Minerals Identified?		Why is it necessary to use more than one property for mineral identification? What properties can you use to identify minerals?
Week 17			Ch. 4, L.2	Igneous Rocks	How do the three main types of rocks form?	How do igneous rocks form? What are the common types of igneous rocks?
Week 18			Ch. 4, L.3	Sedimentary Rocks		How do sedimentary rocks form? What ar ethe three types of sedimentary rocks?
Week 19			Ch. 4, L.4	Metamorphic Rocks		How do metamorphic rocks form? How do types of metamorphic rocks differ?
Week 20			Ch. 4, L.1	Rocks and the Rock Cycle		How are rocks classified? What is the rock cycle?
Week 21		ES: Weathering and Soil	Ch. 5, L.1	Weathering	What natural processes break down rocks and begin soil formation?	How does weathering break down or change rock? How do mechanical processes break big rocks into smaller pieces? How do chemical processes change rocks?
Week 22			Ch. 5, L.2	Soil		How is soil created? What are soil horizons? Which soil properties can be observed and measured? How are soils and soil conditions related to life?
Week 23	D: Water and Other Resources	ES: Natural Resources	Ch. 18, L.2	Renewable/Nonrenewable Resouces	Why is it important to manage natural resources wisely?	What are the main sources of renewable energy? What are the advantages and disadvantages of using renewable energy resources? what can individuals do to encourage the use of renewable energy resources?
Week 24			Ch. 18, L.3	Land Resources		Why is land considered a resource? What are the advantages and disadvantages of using land as a resource? How can individuals help manage land resouces wisely?
Week 25			Ch. 18, L.4	Air and Water Resources		Why is it important to mange air and water resources wisely? How can individuals help manage air and water resouces wisely?
Week 26	STEM	Project STEM		Designing a Water Purification System		
Week 27						

Week 28	L: Energy and Matter	PS: Energy	Ch. 5, L.1	Forms of Energy: Potential & Kinetic	What is energy and what are energy resources?	What is energy? What are potential and kinetic energy? How is energy related to work? What are different forms of energy?
Week 29			Ch. 5, L.2	Energy Transformation		What is the law of conservation of energy? How does friction affect energy transformations? How are different types of energy used?
Week 30			Ch. 6, L.1	Thermal Energy	How can thermal energy be used?	How are temperature and kinetic energy related? How do heat and thermal energy differ?
Week 31			Ch. 6, L.1	Temperature and Heat		How are temperature and kinetic energy related? How do heat and thermal energy differ?
Week 32		PS: Matter	Ch. 7, L.1	Classifying Matter	What is matter and how does it change?	What is a substance? How do atoms of different elements differ? How do mixtures differ from substances? How can you classify matter?
Week 33			Ch. 7, L.2	Physical Properties		What are some physical properties of matter? How are physical properties used to separate mixtures?
Week 34			Ch. 7, L.3	Physical Changes		How can a change in energy affect the state of matter? What happens when something dissolves? What is meant by conservation of mass?
Week 35			Ch. 7, L.4	Chemical Properties and Changes		What is a chemical property? What are some signs of chemical change? Why are chemical equations useful? What are some factors that affect the rate of chemical reactions?
Week 36		PS: States of Matter	Ch. 8, L.1	Solids, Liquids, and Gases	What physical changes and energy changes occur as matter goes from one state to another?	How do particles move in solids, liquids, and gases? How are the forces between partices different in solids, liquids, and gases?
Week 37			Ch. 8, L.2	Changes in States		How is temperature related to particle motion? How are temperature and thermal energy different? What happens to thermal energy when matter changes from one state to another?
Week 38	K: Motion and Forces	PS: Motion	Ch. 1, L.1	Position and Motion	What are some ways to describe motion?	How does the descriptionof an object's position depend on a reference point?
Week 39			Ch. 1, L.2	Speed		What is speed? How can you use a distance-time graph to calculate average speed?

Hücre: B16
Yorum: Designing Prosthetic Device
-Margie Penzinski

Hücre: B28
Yorum: Water Purification System
-Margie Penzinski

Unit Name: _____			**Chapters/Lessons**: _____		
Expected Length: _____ **weeks/days** (**Actual weeks/days**: _____)					
Big Idea Question: _____					
Labs:			**Activities**:		
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Video Ideas:					
Assessment Ideas:					

Grade 7 YAG						
Weeks	Book	Umbrella Topic	Chapter/ Lesson	Weekly Topic	Big Idea Question for Chapter	Essential Question for Lesson
Week 1	K: Scientific Methods	Nature of Science	NOS, L.2	Understanding Science: Tools/Measurement	What is scientific inquiry?	Why did scientistss create the International System of Units (SI)? Why is scientific notation a useful tool for scientists? How can tools, such as graduated cylinders and triple-beam balances, assist physical scientists?
Week 2			NOS, L.3	Case Study		Why are evaluation and testing important in the design process? How is scientific inquiry used in a real-life scientific investigation?
Week 3	M: Atoms and Elements	PS: Atoms and Periodic Table	Ch. 9, L.2	Protons, Neutrons, Electrons; How Atoms Differ	What are atoms and what are they made of?	What happens during nuclear decay? How does a neutral atom change when its number of protons, electrons, or neutrons changes?
Week 4			Ch. 10, L.1	Using the Periodic Table	How is the periodic table used to classify and provide information about all known elements?	How are elements arranged on the periodic table? What can you learn about elements from the periodic table?
Week 5	N: Interactions of Matter	PS: Chemical Reactions and Mixtures	Ch. 12, L.1	Understanding Chemical Reactions	What happens to atoms and energy during a chemical reaction?	What are some signs that a chemical reaction might have occured? What happens to atoms during a chemical reaction? What happens to the total mass in a chemical reaction?
Week 6			Ch. 13, L.1	Substances and Mixtures	What are solutions and how are they described?	How do substances and mixtures differ? How do solutions compare and contrast with heterogeneous mixtures? In what three ways do compounds differ from mixtures?
Week 7			Ch. 13, L.2	Properties of Solutions		Why do some substances dissolve in water and others donot? How do concentration and solubility differ? How can the solubility of a solute be changed?
Week 8	L: Energy and Matter	PS: Energy and Energy Transformations	Ch. 5, L.1	Forms of Energy	What is energy and what are energy resources?	What is energy? What are potential and kinetic energy? How is energy related to work? What are different forms of energy?
Week 9			Ch. 5, L.2	Energy Transformation		What is the law of conservation of energy? How does friction affect energy transformations? How are different types of energy used?
Week 10			Ch. 6, L.2	Thermal Energy Transfer	How can thermal energy be used?	What is the effect of having a small specific heat? What happens to a material when it is heated? In what ways can thermal energy be transferred?
Week 11	etism		Ch. 19, L.2	Simple circuits and Describing circuits	How do electric circuits and devices transform energy?	What is the relationship between electric charge and electric current? What are voltage, current, and resistance, and how do they affect each other?

Week 12	O: Waves, Electricity, and Magn	PS: Electricity and Waves	Ch. 15, L.1	What are Waves?	How do waves travel through matter?	What is a wave? How do different types of waves make particles of matter move? Can waves travel through empty space?
Week 13			Ch. 15, L.2	Wave Properties		What are properties of waves? How ar the frequency and the wavelength of a wave related? What affects wave speed?
Week 14	J: Interactions of Life	LS: Matter and Energy in Ecosystem	Ch. 20, L.1	Abiotic Factors	How do living things and the nonliving parts of the environment interact?	What are the nonliving parts of an environment?
Week 15			Ch. 20, L.2	Cycles of Matter		How does matter move in ecosystems?
Week 16			Ch. 20, L.3	Energy in Ecosystems		How does energy move in ecosystems? How is the movement of energy in an ecosystem modeled?
Week 17		LS: Population and Communities	Ch. 21, L.1	Populations	How do populations and communities interact and change?	What defines a population? What factors affect the size of a population?
Week 18			Ch. 21, L.2	Changing Populations		How do populations change? Why do human populations change?
Week 19			Ch. 21, L.3	Communities		What defines a community? How do the populations in a community interact?
Week 20		LS: Biomes	Ch. 22, L.1	Land Biomes	How do Earth's biomes and ecosystems differ?	How do Earth's land biomes differ? How do humans impact land biomes?
Week 21			Ch. 22, L.2	Aquatic Ecosystems		How do Earth's aquatic ecosystems differ? How do humans impact aquatic ecosystems?
Week 22			Ch. 22, L.3	How Ecosystems change		How do land ecosystems change over time? How do aquatic ecosystems change over time?
Week 23		Project STEM	Ch. 18, L.2	STEM: Designing Eco-Friendly Dams		
Week 24			Ch. 18, L.3			
Week 25	C: Weather and Climate	ES: Earth's Atmosphere	Ch. 12, L.1	Describing Earth's Atmosphere	How does Earth's atmosphere affect life on Earth?	How did Earth's atmosphere form? What is Earth's atmosphere made of? What are the layers of the atmosphere? How do air pressure and temperature change as altitude increases?
Week 26			Ch. 12, L.2	Energy Transfer in the Atmosphere		How does energy transfer from the Sun to Earth and the atmosphere? How are air circulation patterns within the atmosphere created?
Week 27			Ch. 12, L.3	Air Currents		How does uneven heating of Earth's surface result in air movement? How are air currents on Earth affected by Earth's spin? What are the main wind belts on Earth?
Week 28		ES: Climate	Ch. 14, L.1	Climates of Earth	What is climate and how does it impact life on Earth?	What is climate? Why is one climate differnt from another? How are climates classified?
Week 29			Ch. 14, L.2	Climate Types		How has climate varied over time? What causes seasons? How does the ocean affect climate?
Week 30			Ch. 14, L.3	Recent Climate Change		How can human activities affect climate? How are predictions for climate change made?

Week 31	D: Water and Other Resources	ES: Earth's Water	Ch. 15, L.1	The Water Planet	What role does water play on Earth?	Why is water important to life? How is water distributed on Earth? How is water cycled on Earth?
Week 32			Ch. 16, L.1	Composition and Structure of Ocean	What are characteristics of oceans and why are oceans important?	Why are the oceans salty? What does the seafloor look like? How do temperature, salinity, and density affect ocean structure?
Week 33			Ch. 16, L.2	Ocean Waves and Tides		What causes ocean waves? What causes tides?
Week 34			Ch. 16, L.3	Ocean Currents		Wha re the major types of ocean currents? How do ocean currents affect weather and climate?
Week 35	E: Exploring Universe	ES: The Sun-Earth- Moon System	Ch. 20, L.1	Earth's Motion	What natural phenomena do the motions of Earth and the Moon produce?	How does Earth move? Why is Earth warmer at the equator and colder at the poles? Why do seasons change as Earth moves around the Sun?
Week 36			Ch. 20, L.2	Earth's Moon		How odes the Moon move around Earth? Why does the Moon's appearance change?
Week 37			Ch. 20, L.3	Eclipses and Tides		What is a solar eclipse? What is a lunar eclipse? How do the Moon and the Sun affect Earth's oceans?
Week 38	STEM	Project STEM	Ch. 1, L.1	STEM: Designing Space Vehicles		
Week 39			Ch. 1, L.2	STEM: Designing Space Vehicles		

Hücre: G33
Yorum: Margie:
Project WET: Incredilbe Journey

Hücre: B40
Yorum: Designing Space Vehicles
-Margie Penzinski

Unit Name: _____ **Chapters/Lessons**: _____

Expected Length: _____ **weeks/days** (**Actual weeks/days**: _____)

Big Idea Question: _____

Labs:

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Video Ideas:

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Assessment Ideas:

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Grade 8 YAG						
Weeks	Book	Umbrella Topic	Chapter/ Lesson	Weekly Topic	Big Idea Question for Chapter	Essential Question for Lesson
Week 1			NOS, L.3	Case Study	What processes do scientists use when they perform scientific investigatoins?	How are independent variables and dependent variables related? How is scientific inquiry used in a real-life scientific investigation?
Week 2	A: Exploring Earth	ES: Mapping Earth and Earth's Surface	Ch. 1, L.2	Technology and Mapmaking	How are Earth's surface features measured and modeled?	What can a topographic map tell you about the shape of Earth's surface? What can you learn from geologic maps about the rocks near Earth's surface? How can modern technology be used in mapmaking?
Week 3			Ch. 2, L.1	Spherical Earth	How is Earth structured?	What are Earth's major systems and how do they interact? Why does Earth have a spherical shape?
Week 4			Ch. 2, L.2	Earth's Interior		What are the interior layers of Earth? What evidence indicates that Earth has a solid inner core and a liquid outer core?
Week 5		ES: Erosion and Deposition	Ch. 6, L.1	Erosion & Deposition Process	How do erosion and deposition shape Earth's surface?	How can erosion shape and sort sediment? How are erosion and deposition related? What features suggest whether erosion or deposition created a landform?
Week 6			Ch. 6, L.2	Landforms Shaped by Wind & Water		What are the stages of stream develpment? How do water erosion and deposition change Earth's surface? How do wind erosion and deposition change Earth's surface?
Week 7			Ch. 6, L.3	Mass Wasting and Glaciers		What are some ways gravity shapes Earth's surface? How do glaciers erode Earth's surface?
Week 8	B: Changes	ES: Plate Tectonics	Ch. 7, L.1	Continental Drift	What is the theory of plate tectonics?	What evidence supports continental drift? Why did scientists question the continental drift hypothesis?
Week 9			Ch. 7, L.2	Development of a Theory		What is seafloor spreading? What evidence is used to support seafloor spreading?
Week 10			Ch. 7, L.3	Theory of Plate Tectonics		What is the theory of plate tectonics? What are the three tyes of plate boundaries? Why do tectonic plates move?
Week 11		ES: Earth Dynamics	Ch. 8, L.1	Forces that Shape Earth/Landforms at Plate Boundaries	How is Earth's surface shaped by plate motion?	How do continents move? What forces can change rocks? How does plate motion affect the rock cycle?
Week 12			Ch. 8, L.3; L.4	Mountain Building and Continent Building		How do mountains change over time? How do different types of mountains form? What are two ways continents grow? What are the differences between interior plains, basins, and plateaus?

Week 13	B: Geologic		Ch. 9, L.1; L.2	Earthquakes/Volcanoes	What causes earthquakes and volcanic eruptions?	What is an earthquake? Where do earthquakes occur? How do scientists monitor earthquake activity? How do volcanoes form? What factors contribute to the eruption style of a volcano? How are volcanoes classified?
Week 14		ES: Clues to Earth's Past	Ch. 10, L.1	Fossils	What evidence do scientists use to determine the ages of rocks?	What are fossils and how do they form? What can fossils reveal about Earth's past?
Week 15			Ch. 10, L.2	Relative-Age Dating		What does relative age mean? How can the positions of rock layers be used to determine the relative ages of rocks?
Week 16			Ch. 10, L.3	Absolute Age Dating		What does absolute age mean? How can radioactive decay be used to date rocks?
Week 17			Ch. 11, L.1	Geologic History and Evolution of Life	What have scientists learned about Earth's past by studying rocks and fossils?	How was the geologic time scale developed? What are some causes of mass extinctions? How is evolution affected by environmental change?
Week 18	K: Motion and Forces	PS: The Laws of Motion	Ch. 2, L.1	Gravity and Friction	How do forces change the motion of objects?	What are some contact forces and some noncontact forces? What is the law of universal gravitation? How does friction affect the motion of two objects sliding past each other?
Week 19			Ch. 2, L.2	Newton's First Law		What is Newton's first law of motion? How is motion rlated to balanced and unbalanced forces? What effect does inertia have on the motion of an object?
Week 20			Ch. 2, L.3	Newton's Second Law		What is Newton's second law of motion? How does centripetal force affect circular motion?
Week 21			Ch. 2, L.4	Newton's Third Law		What is Newton's third law of motion? Why don't the forces in a pair cancel each other? What is the law of conservation of momentum?
Week 22	Waves, Electricity, and Magnetism	PS: Electricity and Magnetism	Ch. 19, L.1	Electric Charge and Forces	How do electric circuits and devices transform energy?	How do electrically charged objects interact? How can objects become electrically charged? What is an electric discharge?
Week 23			Ch. 20, L.1	Magnets and Magnetic Fields	How are electric charges and magnetic fields related?	How do magnets exert forces on each other? Why are some materials magnetic? Why are some magnets temporary while others are permanent?
Week 24			Ch. 20, L.2	Making Magnets with an Electric current		Why does a magnet exert a force on an electric current? How is an electromagnet different from a permanent magnet? How are magnets used in electric motors?

Week 25	O:		Ch. 20, L.3	Making Electric current with Magnets		How can wire and a magnet produce an electric current? How do electric generators create an electric current? How are tranformers used to bring an electric current into your home?
Week 26	F: Life: Structure and Function	LS: Reproduction and Genetics	Ch. 3, L.1	The Cell Cycle and Cell Division	How can one cell become a multicellular organism?	What are the phases of the cell cycle? Why is the result of the cell cycle important?
Week 27			Ch. 4, L.1	Sexual Reproduction and Meiosis	Why do living things reproduce?	What is sexual reproduction and why is it beneficial? What is the order of the phases of meiosis, and what happens during each phase? Why is meiosis important?
Week 28			Ch. 4, L.2	Asexual Reproduction		What is asexual reproduction and why is it beneficial? How do the types of asexual reproduction differ?
Week 29			Ch. 5, L.1	Mendel and His Peas	How are traits passed from parents to offspring?	Why did Mendel perform cross-pollination experiments? What did Mendel conclude about inherited traits? How do dominant and recessive factors interact?
Week 30			Ch. 5, L.2	Understanding Inheritance		What determines the expression of traits? How can inheritance be modeled? How do some patterns of inheritance differ from Mendel's model?
Week 31		LS: The Environment and Change Over Time	Ch. 6, L.1	Fossil Evidence of Evolution	How do species adapt to changing environments over time?	How do fossils form? How do scientists date fossils? How are fossils evidence of biological evolution?
Week 32			Ch. 6, L.2	Natural Selection		Who was Charles Darwin? How does Darwin's theory of evolution by natural selection explain how species change over time? How are adaptatoins evidence of natural selection?
Week 33			Ch. 6, L.3	Biological Evidence of Evolution		What evidence from living species supports the theory that species descended from toher species over time? How are Earth's organisms related?
Week 34	Review			Review		
Week 35	EOY			EOY		
Week 36	STE	Engineering & Technology	Ch. 8, L.1	STEM: Building for Earthquakes		
Week 37			Ch. 8, L.2	STEM: Building for Earthquakes		
Week 38	STEM	Engineering & Technology	Ch. 1, L.1	STEM: Designing Roller Coaster		
Week 39			Ch. 1, L.2	STEM: Designing Roller Coaster		

Hücre: G3
Yorum: Margie:
Gummy Bear Lab

Hücre: G32
Yorum: Margie:
Paper Pets (NSTA)

Hücre: B38
Yorum: Design Building for Earthquakes
-Margie Penzinski

Hücre: B40
Yorum: Design Roller Coaster
-Margie Penzinski

Unit Name: _____ **Chapters/Lessons**: _____

Expected Length: _____ **weeks/days** (**Actual weeks/days**: _____)

Big Idea Question: _____

Labs:

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