EdgED CONSULTING
The Edge in Education

2018-2019

District: Merrillville Community School Corporation								
Grade: 6th Grade								
Subject: Science								
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources
SEPS.2 SEPS.4 SEPS.5 *6-8.DI.3 - This standard can be incorporated in lesson 3.* Computer Science Standards that will be incorporated throughout the year through blog posts. 6-8.NC.1 6-8.NC.2 6-8.IC.1 6-8.IC.2 6-8.IC.3 6-8.IC.4 *CSS = Computer Science Skills encompases everything in pink on the map!	Science and Technology Textbook Chapter 3: Tools of Science Lesson 5: Safety in the Science Laboratory pg. 100-105 Lesson 1: Measurement - A Common Language pg. 70-79 Lesson 2: Mathematics and Science pg. 80-87 *Lesson 3: Graphs in Science pg. 88-91 Lesson 4: Models as Tools in Science pg. 92-99 *Data and Information (DI)* Networking and Communication (NC) Impact and Culture (IC)	SEPS.2 SEPS.4 SEPS.5 SEPS.4 SEPS.7	I can explain why scientist use a standard measurement system. I can identify the SI units of measure for length, mass, volume, density, time and temperature. I can describe what math skills scientist use in making measurements. I can identify the math tools scientist use to analyze data. I can explain why graphs are powerful tools in science. *I can represent data in a variety of ways, and use different visual representations of problems, structures, and data.* I can collaboratively design, develop, publish, and present products using technology resources that demonstrate and communicate curriculum concepts. I can provide useful feedback, integrate feedback, and understand and accept multiple perspectives. I can exhibit legal and ethical behaviors when using technology and information and discuss the consequences of misuse. I can analyze the positive and negative impacts of technology on one's personal life, society, and our culture. I can evaluate the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources. I can describe ethical issues that relate to	Safety Symbols Field Metric System SI Mass Weight Volume Meniscus Graduated Cylinder Density Mean Median Mode Range Anomalous Data Linear Graph Nonlinear Graph Model System Input Output Process Feedback *Data Collaboratively Digital Citizenship Accuracy Relevance Appropriateness Comprehensiveness Bias	3 Weeks Sept. 17th - Oct. 8th On-going	Quizzes Labs Test Blog Posts	Daily Science Warm-up Scoot Partner reading Note-taking/ coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations Current Events in Technology	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science Blogging Document

			computers and networks, and discuss how unequal distribution of technological resources in a global economy raises issues of equity, access, and power.					
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources
6-8.E.1 6-8.E.2 6-8.E.3 6-8.E.4 *CSS	Science and Technology Textbook Chapter 1: What is Science Lesson 1: Science in the Natural World pg. 4-9 Lesson 2: Thinking Like a Scientist pg. 10-17 Lesson 3: Scientific Inquiry pg. 18-27	SEPS.1 SEPS.3 SEPS.6 SEPS.7	I can Identify the criteria of a design to ensure a successful solution. I can Identify the constraints of a design to ensure a successful solution. I can Evaluate design solutions using a systematic process to identify how they meet the criteria and constraints of the problem. I can Analyze data from investigations to determine similarities and differences among several design solutions. I can Identify the best characteristics of similarities and differences of design solutions that can be combined into a new solution to better meet the criteria for success. I can Develop a prototype to generate data for repeated investigations I can Modify a proposed object, tool, or process such as that an optimal design can be achieved.	Describe Example Explain Identify Predict *(words above to be utilized throughout the year; ISTEP Vocab)* Scientific Inquiry Hypothesis Criteria Constraints Variable Manipulated Variable Responding Variable Controlled Variable Data Scientific Theory Scientific Law	3 Weeks Oct. 8th - 29th	Quizzes Labs Test	Daily Science Warm-up Jig-saw activities Partner reading Note-taking/ coding Writing Response/Exit Cards/Journals Self-guiding assignments Online Assignments	Pearson - Interactive Science Book Pearsonrealize.com website Science Lab
Remediation /Enrichment	Timeline			Process Standards	Activities		Assessment	
Criteria/design constraints Using sound scientific principles Potential impacts on life Design solutions	1-2 Days (no more than 2 days)			SEPS.1 SEPS.2	"I Wouldn't Drink That" Stem Activity – groups		Stem activity worksheet	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources

6-8.ESS.1 6-8.ESS.2 6-8.ESS.3 *CSS Coding Activity 6-8.DI.1 6-8.DI.2 6-8.DI.4 6-8.PA.1 6-8.PA.2 6-8.PA.3	Astronomy and Space Textbook Chapter 1 : Earth, Moon, and Sun Lesson 1: The Sky from Earth pg. 4-9 Lesson 2: Earth in Space pg. 10-17 Lesson 3: Gravity and Motion pg. 18-21 Lesson 4: Phases and Eclipses pg. 22-27 *Lesson 5: Tides pg. 28-31 Lesson 6: Earth's Moon pg. 32-35 Data and Information (DI) Programs and Algorithms (PA)	SEPS.2 SEPS.4 SEPS.7	I can Describe how gravity and inertia maintain regular and predictable motions of celestial bodies. I can Design models to describe how Earth's revolution, tilt, and interactions with the sun and moon causes seasons. I can Design models to describe how Earth's rotation and interaction with the sun causes changes in daylight hours. I can Design models to describe how Earth's interaction with the sun and moon cause tides and phases of the moon. I can use the basic steps in algorithmic problem-solving to design solutions. I can describe the process of parallelization as it relates to problem solving. I can understand the notion of hierarchy and abstraction in computing including high-level languages, translation, instruction set, and logic circuits. I can select appropriate tools and technology resources to support learning and personal productivity, publish individual products, and design, develop, and publish data, accomplish a variety of tasks, and solve problems. I can implement problem solutions using a programming language that includes looping, behavior, conditional statements, logic, expressions, variables, and functions. I can demonstrate dispositions amenable to open-ended problem solving and programming.	Meteor Rotation Revolution Axis Orbit Gravity Mass Weight Inertia Phase Eclipse Tide Meteoroid Maria Algorithm Parallelization Abstraction Hierarchy Programming	5 Weeks Oct. 8th - Nov. 4th 1-2 Days	Quizzes Labs Test Finished Scratch Project	Daily Science Warm-up Jig-saw activities Partner reading Note-taking/ coding Writing Response/Exit Cards/Journals Self-guiding assignments online Phases of the Moon-Oreo Cookie/Rap Hands-On Activity Videos	Pearson - Interactive Science Book Pearsonrealize.com website Science Lab Star Map Video References/links Google CS First High Seas Activity
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources

6-8.ESS.1 6-8.ESS.2 6-8.ESS.3 *CSS	Challenger Learning Center - Mission to Mars	SEPS.1 SEPS.2 SEPS.3 SEPS.4 SEPS.5 SEPS. 6 SEPS. 7 SEPS. 8	I can Describe how gravity and inertia maintain regular and predictable motions of celestial bodies. I can Describe how gravity and inertia maintain regular and predictable motions of celestial bodies. I can Compare and contrast the size of the Earth, its moon, and other planets, including comets and asteroids I can Compare and contrast the surface features of the Earth, its moon, and other planets, including comets and asteroids I can Compare and contrast the atmospheric characteristics of the Earth, its moon, and other planets, including comets and asteroids I can Compare and contrast the ability to support life on the Earth, its moon, and other planets, including comets and asteroids	carbon dioxide static electricity humidity symbiotic relationship probe velocity simulator trajectory sustainable	2 Weeks Nov. 4th - 19th	Exit tickets halfway through each lesson	Challenger Mission-Purdue University (Stem) "Space Visit" (PBL)	http://www.clcnwi.com/for-educators/curriculum-materials.html
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Criteria/design constraints Size Surface features	1-2 Days				“Life on Mars” STEM Activity		STEM activity worksheet	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources

6.ESS.3 *CSS	Astronomy and Space Science Text Ch. 3 The Solar System Lesson 1: Models of the Solar System pg. 78-81 Lesson 2: Introducing the Solar System pg. 82-87 *Skip Lesson 3* Lesson 4: The Inner Planets pg. 94-101 Lesson 5: The Outer Planets pg. 102-109 Lesson 6: Small Solar System Objects pg. 110-115	SEPS.2	I can describe the geocentric and heliocentric model of the solar system. I can recognize the impact that Copernicus, Kepler and Galileo had on the creation of the heliocentric model of the solar system. I can identify the objects that make up the solar system. I can identify the differences between planets and dwarf planets. I can explain how the solar system was formed. I can describe the characteristics that the inner planets have in common. I can identify the main characteristics that distinguish each of the inner planets. I can describe the characteristics that gas giants have in common. I can identify characteristics that distinguish each outer planet. I can compare and contrast asteroids and meteors. I can describe the features of an asteroid and meteor.	Geocentric Heliocentric Ellipse Terrestrial Planet Greenhouse Effect Gas giant Ring Asteroid belt Kuiper Belt Oort cloud Comet Coma Nucleus Asteroid Meteoroid Meteor Meteorite	3 Weeks *Needs to be finished by Christmas Break!*	Quizzes Labs Test	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations	Pearson - Interactive Science Book Pearsonrealize.com website Kesler science Leveled Readers
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	

Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources

6-8.LS.1 6-8.LS.3 6-8.LS.4 6-8.LS.5 *CSS	Ecology and the Environment Textbook Chapter 1: Populations and Communities Lesson 1: Living Things and the Environment pg. 5-9 Lesson 2: Populations pg. 10-17 Lesson 3: Interactions Among Living Things pg. 18-27 *Skip Lesson 4*	SEPS.2 SEPS.5 SEPS.8	I can identify the needs that must be met by an organism's surroundings. I can identify biotic and abiotic parts of a habitat. I can describe the levels of organization within an ecosystem. I can describe how populations change in size. I can identify the factors that limit population growth I can explain how adaptations help an organism survive I can describe competition and predation I can identify the three types of symbiosis	Organism Habitat Biotic Factor Abiotic Factor Species Ecology Death Rate Birth Rate Immigration Emigration Population Density Limiting Factor Carrying Capacity Adaptations Niche Competition Predation Symbiosis Mutualism Commensalism Parasitism	2 Weeks Jan. 7th - 21st	Quizzes Labs Test	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources
6-8.LS.2 6-8.LS.3 *CSS	Ecology and the Environment Textbook Chapter 2: Ecosystems and Biomes Lesson 1: Energy Flow in Ecosystems pg. 42-49 Lesson 2: Cycles of Matter pg. 50-57 Lesson 3: Biomes pg. 58-67 *Skip Lesson 4 & 5*	SEPS.2 SEPS.5 SEPS.8	I can name and describe energy roles that organisms play in an ecosystem. I can explain how energy moves through an ecosystem. I can name and describe processes involved in the water cycle. I can explain how the carbon and oxygen cycles are related. I can define and describe the nitrogen cycle. I can name the six major biomes found on Earth.	Producer Consumer Herbivore Carnivor Omnivore Scavenger Decomposer Food Chain Food Web Energy Pyramid Evaporation Precipitation Condensation Biomes	2 Weeks Jan. 21st - Feb. 4th	Quizzes Labs Test	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Standard/Indicator	Concept	Process Standar	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources

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6-8.LS.2 *CSS	Photosynthesis - No Textbook (Resources to come)	SEPS.2 SEPS.5 SEPS.8	I can identify the characteristics that all plants share. I can name all the things that a plant needs to live successfully on land.	Photosynthesis Chlorophyll Chloroplast Carbon Dioxide Autotrophs Heterotrophs Glucose Oxygen	1 Week Feb. 4th - 11th	Quizzes Labs Test	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science Brainpop Safari Montage
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	
Standard/Indicator	Concept	Process Standard	Skill	Vocabulary	Suggested Timeline	Assessment	Instructional Strategies	Resources
6-8.PS.3 *CSS Makerspace Activity - Build a Computer 6-8.CD.1 6-8.CD.2 6-8.CD.3 6-8.CD.4 6-8.DI.4	Science and Technology Textbook Chapter 4: Technology and Engineering Lesson 1: Understanding Technology Lesson 2: Technological Design Lesson 3: Technology and Society Lesson 4: Engineering Computing Devices and Systems (CD) Data and	SEPS.1 SEPS.2 SEPS.4 SEPS.7	I can identify factors that cause technology to progress. I can describe the parts of a technological system. I can demonstrate an understanding of the relationship between hardware and software. I can apply troubleshooting strategies to identify and solve routine hardware and software problems that occur during everyday computer use. I can describe the major components and functions of computer systems and network. I can describe what distinguishes humans from machines focusing on human intelligence versus machine intelligence and ways we can communicate, as well as ways in which computers use models of intelligent behavior.	Technology Engineer Obsolete Brainstorming Constraint Trade-off Prototype Troubleshooting Patent Types of Engineers Hardware Software Troubleshooting Network Abstraction Hierarchy	2 Week Feb. 11th - 25th 1-2 Days	Item Specification Questions for each standard	Makerspace - Hands on Learning	Hello Ruby Website My First Computer Activity & Lesson Plan What is a Computer Video What is Computational Thinking Video

	Information (DI)		I can understand the notion of hierarchy and abstraction in computing including high-level languages, translation, instruction set, and logic circuits.					
Remediation/Enrichment	Timeline			Process Standards	Activities		Assessment	

Standard/Indicator	Concept	Process Standard	Skill	Suggested Timeline	Assessment	Instructional Strategies	Resources
Month: March 5th-9th	Energy						
6.PS.1 6.PS.2 6.PS.3 6.PS.4 *CSS	Forces and Energy Ch. 4 Lesson 1 Lesson 3		I can explain how energy work and power are related. I can name and describe the two basic types of energy. i can list multiple forms of energy. I can explain how different forms of energy are related. I can state the	1 week	Exit tickets Check & Connects	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Stations	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science

			law of conservations of energy.				
Remediation/Enrichment	Timeline			Process Standards		Activities	Assessments
Month: March 12th-23	Concept	Process Standard	Skill	Suggested Timeline	Assessment	Instructional Strategies	Resources
6.PS.1 6.PS.2 6.PS.3 6.PS.4 *CSS	Describing & State of Matter			2 weeks	Exit tickets Check & Connects	Daily Science Warm-up Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Station	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science
Remediation/Enrichment	Timeline			Process Standards		Activities	Assessments
Month: March 26th-30th	Concept	Process Standard	Skill	Suggested Timeline	Assessment	Instructional Strategies	Resources
6.PS.1 6.PS.2 6.PS.3 6.PS.4 *CSS				1 week	Exit tickets Check & Connects	Scoot Partner reading Note-taking/coding Writing Response/Exit Cards/Journals Self-guiding assignments online Station	Pearson - Interactive Science Book Pearsonrealize.com website Kesler Science
Remediation/Enrichment	Timeline			Process Standards		Activities	Assessments
Month: April 8th-12th	Concept	Process Standard	Skill	Suggested Timeline	Assessment	Instructional Strategies	Resources
6.IC.1 6.IC.2 6.IC.3 6.IC.4 *CSS	-Ilearn						

Remediation/Enrichment	Timeline		Process Standards	Activities	Assessments