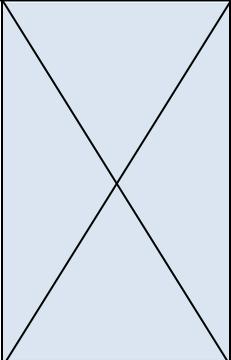


**STARBASE Louisiana Correlation to Mathematics and English/Language Arts Common Core State Standards,
Next Generation State Standards, Louisiana State Comprehensive Science Curriculum, Louisiana State Technology Standards,
International Society in Education Standards – Grade 5**

STARBASE Lesson	Grade 5 - LA Science Standards (LASS), Next Generation Science Standards(NGSS) Mathematics and ELA Common Core State Standards (CCSS), LA Technology Standards (LATS) , International Society for Technology in Education Standards (ISTES), LASStudies (LASST)	NGSS Science and Engineering Practices or CCSS Mathematical Practices (Indices A, B)	NGSS Disciplinary Core Ideas	NGSS Crosscutting Concepts	NGSS Understanding the Nature of Science	LA Science Comprehensive Curriculum (LASCC) Grade Level Expectations (GLE)
<p>S.T.E.M. Career Investigations</p> <ul style="list-style-type: none"> Scavenger Hunt Business Lunches Career Videos STEM Base Tours STEM Bingo Guided Review 	<p>LASS–SI-M-B1; SI-M-B6;SI-M-B7 NGSS - ETS2:1; ETS2: 2</p> <p>CCSS ELA- Reading for Informational Text – Key Ideas & Details: 2; Craft & Structure: 4; Integration of Knowledge and Ideas: 7, 9; Reading– Foundational Skills, Fluency: 4a, 4c; Writing – Research to Build and Present Knowledge: 7, 9; Speaking and Listening – Comprehension & Collaboration: 1d; Language – Vocabulary Acquisition and Use: 4a, 4b, 4c.</p> <p>LATS: 3, 5, 6 - Indicators: D, E, H, I ISTES: 1d;3c;4c;5c – Profiles: 4, 9</p>	<p>NGSS: 1, 3, 8</p>	<p>ETS2: Links Among Engineering, Technology, Science and Society: Interdependence of Science, Engineering, Technology</p>	<p>Influence of Engineering, Technology, and Science on Society and the Natural World: Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands.</p>	<p>Scientific investigations use a variety of methods, tools, and techniques; Science is a way of knowing used by many people; Men and women from all backgrounds choose careers as scientists and engineers; Science affects everyday life.</p>	<p>Science as Inquiry: 27,28,29,34,38,39,40</p>
<p>Metric Mission:</p> <ul style="list-style-type: none"> Introduction Eggbert - Mass Robotic Garages – Length, Volume, Capacity Density Liquids – Liquid Volume 	<p>LASS –SI-M-A3; SI-M-B3; PS-M-A1 NGSS – 5-PS1-3</p> <p>CCSS Math – 5.OA.A.2; 5.NBT.A.1; 5.NBT.A.3a.; 5.NBT.A.4; 5.NBT.B.7; 5.MD.A.1; 5.MD.C.3a; 5.MD.C.3b; 5.MD.C.4; 5.MD.C.5a, 5.MD.C.5b; 5.MD.C.5c</p> <p>CCSS ELA – Reading for Informational Text – Craft and Structure: 4; Range of Reading and Level of Text Complexity – 10; Speaking and Listening – Comprehension and Collaboration – 1a, 1b, 1c, 1d Language- Vocabulary Acquisition and Use: 6</p> <p>ISTES – 6a – Profiles: 6, 8</p>	<p>NGSS: 1, 2, 3, 4, 5, 8</p> <p>CCSS Mathematics: 1, 2, 4, 5, 6, 8</p>	<p>5-PS1A: Structure and Properties of Matter: Measurements of properties can be used to identify materials.</p>	<p>Scale, Proportion, and Quantity: Natural objects exist from very small to immensely large; Standard units are used to measure and describe quantities such as weight, time, temperature, and volume.</p>	<p>Science investigations use a variety of methods, tools, and techniques; Science uses tools and technologies to make accurate measurements and observations; Science findings are limited to what can be answered with empirical evidence.</p>	<p>Science as Inquiry: 6, 7, 8, 11, 19 Physical Science: 1,2</p>
<p>PTC ProEngineer</p> <ul style="list-style-type: none"> Introduction Lab Module Space Station Assembly Exploration Mission Pack: UAV Assembly 	<p>LASS –SI-M-B3; SI-M-B7; ESS-M-C8 NGSS – 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3</p> <p>CCSS Math – 5.G.B.3</p> <p>CCSS ELA – Reading for Informational Text – Range of Reading and level of text complexity – 10; Language – Vocabulary Acquisition and Use – 6</p> <p>LATS: 1,5,6 – Indicators: B, E, G, H, I, J ISTE: 1a,b,c; 5a,b,c; 6a,b,c,d – Profiles: 2, 8, 10</p>	<p>NGSS: 1, 2, 4, 5, 6</p> <p>CCSS Mathematics: 2, 4, 5, 6</p>	<p>ETS1: Interdependence of Science, Engineering, and Technology: A. Defining & Delimiting Engineering Problems- Possible solutions to a problem are limited by available materials and resources; The success of a design solution is determined by considering the desired features of a solution. C. Optimizing the Design Solutions – Different solutions need to be tested in order to determine which of the m best solves the problem, given the criteria and the constraints.</p>	<p>Influence of Science, Engineering, Technology on Society and the Natural World: People’s needs and wants change over time, as do their demands for new and improved technologies.</p>	<p>Science uses tools and technologies to make accurate measurements and observations; Men and women from all backgrounds choose careers as scientists and engineers; Science affects everyday life; Creativity and imagination are important to science.</p>	<p>Science As Inquiry: 3, 7 Earth and Space Science: 8</p>

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Engineering Design Process <ul style="list-style-type: none"> • Introduction – EDP Wheel • Eggbert’s Crash Landing • Straw Rocket Design and Redesign 	<p>LASS – SI-M-A1; SI-M-A2; SI-M-A3; SI-M-A4; SI-M-A5; SI-M-A6; SI-M-A7; SI-M-B3; SI-M-B4; PS-M-A1;MS-M-A2; PS-M-A3;MS-M-A4; MS-M-A5</p> <p>NGSS – 5-PS2-1; 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3</p>	<p>NGSS: 1, 2, 3, 5, 6</p>	<p>PS2.B: Types of interactions: The gravitational force of Earth acting on an object near Earth’s surface pulls that object toward the planet’s center.</p> <p>ETS1.A: Defining and Delimiting Engineering Problems – Possible solutions to a problem are limited by available materials and resources. The success of a designed solution is determined by considering the desired features of a solution. Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. ETS1.B: Developing possible solutions – Research on a problem should be carried out before beginning to design solution. Testing involves investigating how well it performs under a range of likely conditions. Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved.</p> <p>ETS1.C: Optimizing the design solution – Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints.</p>	<p>Influence of Engineering, Technology, and Science on Society and the Natural World – Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands.</p>	<p>Science investigations use a variety of methods, tools, and techniques.</p>	<p>Science as Inquiry: 1,2,4,6, 22, 23, 27, 31, 33,34,36, 37, 38,39, 40</p> <p>Physical Science: 8, 9</p>
	<p>CCSS Math – 5.NBT.B.5; 5.NBT.B.6; 5.NBT.B.7</p>	<p>CCSS Mathematics: 1, 5, 6</p>				
	<p>CCSS ELA – Language – Vocabulary Acquisition and Use: 6</p>					

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<p>Newton's Laws of Motion:</p> <ul style="list-style-type: none"> Crash Test Dummies Newton Launcher Newton Pop Rockets 	<p>LASS-M-A1;SI-M-A2; SI-M-A3; SI-M-A5; SI-M-A7; SI-M-A8; SI-M-B4; SI-M-B7; PS-M-B1; PS-M-B2; PS-M-B3; PS-M-B4; PS-M-B5;ESS-M-C3; ESS-M-C8</p> <p>NGSS – 5-PS2-1; 3-5-ETSI-3</p> <p>CCSS Math: 5.OA.A.1; 5.OA.A.2; 5.NBT.A.3</p> <p>CCSS ELA: Reading - Craft & Structure: 4; Integration of Knowledge and Ideas: 7, 8; Range of Reading and Level of Text Complexity: 10; Key Ideas and Details: 1, Fluency: 4 . Speaking and Listening – Comprehension & Collaboration: 1, 3. Language – Vocabulary Acquisition and Use: 4, 6.</p> <p>LATS: 2, 3, 4, 6, Indicators: A, B, D, G, J ISTE: 3. Research and Information Fluency: 3a, 3b, 3c, 3d. Critical Thinking, Problem Solving & Decision Making: 4a, 4b, 4c. Profiles – 4, 6</p>	<p>NGSS: 1, 2, 3, 4, 5, 6, 7, 8</p> <p>CCSS Math: 1, 2, 4, 5, 6</p>	<p>PS2.B: Types of Interactions: The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.</p>	<p>Cause and Effect: Cause and effect relationships are routinely identified and used to explain change.</p>	<p>Science methods are determined by questions. Science investigations use a variety of methods, tools, and techniques. Science findings are based on recognizing patterns. Science uses tools and technologies to make accurate measurements and observations. Science theories are based on a body of evidences and many tests. Science explanations describe the mechanisms for natural events. Science affects everyday life. Science findings are limited to what can be answered with empirical evidence.</p>	<p>Science as Inquiry: 1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 15, 16, 18, 19, 23, 27, 29, 31, 34, 36, 37 Motion and Forces: 7, 8, 9 Earth and the Solar System: 47</p>
<p>Robotics:</p> <ul style="list-style-type: none"> Introduction Robotics Programming Surveillance Challenge 	<p>LASS: SI-M-A7; SI-M-A5; SI-M-B4; PS-M-A2; PS-M-3; PS-M-A4; PS-M-A5</p> <p>NGSS: 3-5 ETS1-3</p> <p>LASST: G-1A-M1; G-1A-M2; G-1A-H2</p> <p>ITSE: Creativity and Innovation – 1c; Communication and Collaboration – 2d; Research Information Fluency – 3a, Critical Thinking, Problem Solving and Decision Making – 4b, 4c; Technology Operations and Concepts – 6a, 6b, 6c; Profiles – 4, 6, 9 LATS: 4, 6, Indicators D, E, F, G, I, J</p>	<p>NGSS: 1, 2, 3, 4, 5, 8</p>	<p>ETS1.A: Defining and Delimiting Engineering Problems – The success of a designed solution is determined by considering the desired features of a solution. ETS1.B: Developing Possible Solutions – Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions.</p>	<p>Influence of Engineering, Technology, and Science on Society and the Natural World: Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands.</p>	<p>Science is a Human Endeavor – Creativity and imagination are important to science. Scientific Knowledge is Based on Empirical Evidence – Science uses tools and technologies to make accurate measurements and observation.</p>	<p>Science as Inquiry: 1,2,3,4,14,15 Physical Science: 2,3,4</p> <p>The World in Spatial Terms: 1, 3, 4</p>

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What's the Matter? Molecular Models	<p>LASS: SI-M-A7; SI-M-A5; SI-M-B4; PS-M-A2; PS-M-A3; PS-M-A4; PS-M-A5 NGSS: 5-PS1-1</p>	<p>NGSS: 1, 2, 4, 5, 7, 8</p>	<p>PS1A: Matter of any type can be subdivided into particles that are too small to see, but even then, matter still exists and can be detected by other means.</p>	<p>Cause and Effect; Scale, Proportion, Quantity. Natural objects exist from very small to immensely large.</p>	<p>Scientific knowledge assures consistent patterns in natural systems. Basic laws of nature are the same everywhere in the universe. Scientific findings are based on recognized patterns. Science models, laws, mechanisms, and theories explain natural phenomena.</p>	<p>Science as Inquiry: 1, 2, 3, 4, 5, 7, 11, 18, 19, 2 Physical Science: 2</p>
	<p>CCSS ELA : Reading for Informational Text-Craft and Structure, 4; Integration of Knowledge and Ideas, 9; Range of Reading and level of Text Complexity, 10; Speaking and Listening – Comprehension and Collaboration – 1, 2, 3; Language – Vocabulary Acquisition and Use, 6.</p>	X				
	<p>LATS: 2, 3, 4, 6 Indicators D, F ISTE: Research and Information Fluency, 3b; Digital Citizenship – 5a, 5b; Technology Operation and Concepts – 6a, 6B; Profiles: 1, 3, 6</p>					
Ocean of Air – Properties of Air	<p>LASS: SI-M-A1; SI-M-A2; SI-M-A3; SI-M-A4; SI-M-A5; SI-M-A6; SI-M-A7; SI-M-B3; SI-M-B4; PS-M-A1;MS-M-A2; PS-M-A3;MS-M-A4; MS-M-A5 NGSS: 5-PS1-1; 5-PS1-3; 5-PS2-1; 5-ESS2-2</p>		<p>NGSS: 1, 2, 3, 4, 5, 6, 7, 8</p>	<p>PS1.A: Structure and Property of Matter – Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model shows that gases are made from matter particles that are too small to see and are moving freely around in space and can explain many observations, measurements of a variety of properties can be used to identify materials. ESS2.A: Earth Materials and Systems – Earth's major systems are the geosphere, hydrosphere, and the atmosphere.</p>	<p>Scale, Properties, and Quantity: Natural objects exist from the very small to immensely large. Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. Systems and System Models: A system can be described in terms of its components and their interactions.</p>	<p>Science assumes consistent patterns in natural systems. Basic laws of nature are the same everywhere in the universe. Science findings are limited to what can be answered with empirical evidence. Science methods are determined by questions. Science investigations use a variety of methods, tools and techniques. Science uses tools and technologies to make accurate measurements and observations. Science explanations describe the mechanisms for natural events.</p>
	<p>CCSS Math: 5.OA.A1-2; 5.NBT.A.1-1; 5.NBT.A.1-2; 5.NIF.B.3; 5.MD.C.3</p>	<p>CCSS Math: 3, 4, 5, 6</p>				
	<p>CCSS ELA: Reading for Informational Text: Craft and Structure – 4; Range of Reading and Level of Text Complexity – 10; Speaking and Listening : Comprehension and Collaboration – 1; Presentation of Knowledge and Ideas – 6; Language : Vocabulary Acquisition and Use – 4a.</p>	X				
<p>LATS: 3, 4 Indicators: H ISTE: Communication and Collaboration 2d; Research and Information Fluency – 3a, 3c, 3d; Critical Thinking, Problem Solving, and Decision Making – 4b, 4c; Profiles – 4, 6</p>						
Warm Ups and Cool Downs: Physical and Chemical Changes	<p>LASS: SI-M-A1; SI-M-A2; SI-M-A3; SI-M-A4; SI-M-A7; SI-M-A8; SI-M-B3; SI-M-B7; PS-M-A1;PS-M-A3; PS-M-A5;PS-M-A6; PS-M-A7;PS-M-A8; PS-M-A9; PS-M-C7 NGSS: 5-PS1-3; 5-PS1-4</p>		<p>NGSS: 1, 2, 3, 4, 7, 8</p>	<p>PS1:B Chemical Reactions – When two or more different substances are mixed a new substance with different properties may be formed. No matter what reaction or change in properties occurs the total weight of the substance does not change.</p>	<p>Cause and effect relationships are routinely identified, tested, and used to explain change.</p>	<p>Science investigations use a variety of methods, tools, and techniques. Science uses tools and technologies to make accurate measurements and observations. Science explanations describe the mechanisms for natural events. Science affects everyday life. Science findings are limited to what can be answered with empirical evidence.</p>
	<p>CCSS Math: 5.MD.B.2</p>	<p>CCSS Math: 5, 6</p>				
	<p>CCSS ELA: Reading Standard for Informational Text: Craft and Structure – 4, Integration of Knowledge and Ideas – 7, Range of Reading and Level of Text Complexity – 10; Speaking and Listening: Comprehensions and Collaboration – 1a, 1c; Language: Vocabulary Acquisition and Use – 4a, 4b, 6.</p>	X				
<p>ISTE: Research and Information Fluency – 3c; Critical Thinking Problem Solving, Decision Making, 4c; Profiles 4, 6 LATS: 3, 4, Indicators: D, F</p>						

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Mapping Skills: <ul style="list-style-type: none"> Imagery Analysis Map Scale Mapping it Out Search and Rescue on the Big Island of Hawaii 	 	NGSS: 4, 5	Science and technology support each other. Tools and instruments are used to answer scientific questions, while scientific discoveries lead to the development of new technologies.	Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks and meet societal demands. When new technologies become available, they can bring about changes in the way people live and interact with one another.	Science uses tools and technologies to make accurate measurements and observations.	
	CCSS Math: 5.OA.A.1; 5.NBR.A1; 5.NBT.A.2; 5.NBT.B.6; 5.G.A.1	CCSS Math: 4, 5, 6, 7, 8				The World in Spatial Terms: 1, 3, 4, 8
	LASST: G-1A-M1; G-1A-M2; G-1B-M4; G-1C-M1	 				
	CCSS ELA: Reading: Craft and Structure – 4, Integration of Knowledge – 7, Range of Reading and level of Text Complexity – 10; Language: Vocabulary Acquisition and Use – 4, 6	 				
What's the Solution? <ul style="list-style-type: none"> Mass, Weight, Density of Liquids Finding the Percentage of a Solute Mystery Fluids 	LASS: SI-M-A1; SI-M-A3; SA-M-A5; SI-M-B3; PS-M-A1 NGSS: 5-PS1-3	NGSS: 3, 4, 6, 7	PST.1: Structure and Properties of Matter – Measurements of a variety of properties can be used to identify materials.	Scale, Proportion, Quantity – Standards units are used to measure and describe physical quantities such as weight, time, temperature, and volume.	Tools and instruments are used to answer scientific questions, while scientific discoveries lead to the development of new technologies. Science explanations describe the mechanisms for natural events. Science findings are limited to what can be answered with empirical evidence.	Science as Inquiry: 1, 4, 6, 7, 8, 11, 12, 13, 16 Physical Science 1
	CCSS Math: 5. NBT.A.2; 5.NBT.A.3a	CCSS Math: 3, 4				
	CCSS ELA: Reading Information Text: Craft and Structure – 4 Speaking and Listening: Comprehension and Collaboration – 1; Language: Vocabulary Acquisition and Use - 6	 				

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Straw Rocket Launch <ul style="list-style-type: none"> Engineering and Rocket Design Analyzing Variables Launch Analysis Straw Rocket Design and Redesign 	LASS: SI-M-A1; SI-M-A2; SI-M-A3; SI-M-A4; SI-M-A5; SI-M-A7; PS-M-B1; SI-M-B3; SI-M-B5 NGSS: 3-5-ETS-1; 3-5-ETSI-1; 3-5-ETS-3	NGSS: 1,3,4,5,6,7,8	ETSI.A. Defining and Delimiting Problems – The success of a design solution is determined by considering the desired feature of a solution. ETSI.B – Developing Possible Solutions – Testing a solution involves investigating how well it performs under a range of likely conditions. Tests are often designed to identify failure points or difficulties, which suggests the element of the design that need to be improved.	Cause and effect – Cause and effect relationships are routinely identified and used to explain change.	Science methods are determined by questions. Science investigations use a variety of methods, tools, and techniques. Science uses tools and technologies to make accurate measurements and observation. Science explanations describe the mechanisms for natural events. Basic laws of nature are the same everywhere in the universe. Most scientists and engineers work in a team. Science affects every day life. Science findings are limited to what can be answered with the empirical evidence.	Science as Inquiry: 1, 4, 5, 7, 12, 16, 23, 19, 32, 36 Physical Science: 7, 9
	CCSS Math: 5.OA.A.1; 5.OA.A.2; 5.MD.A.1; 5-MD.B.2	CCSS Math: 3, 4, 5, 6				
	CCSS ELA: Reading Informational Text: Craft and Structure – 4; Range of Reading: and Level of Text Complexity – 10; Speaking and Listening: Comprehension and Collaboration – 1; Language: Vocabulary Acquisition and Use – 4, 6	X				
Data Analysis and Graphing <ul style="list-style-type: none"> Intro to Data Analysis Communicating Your Results Spreadsheet Graphing 	LASS: SI-M-A-1; SI-M-A2; SI-M-A3; SI-M-A4; SI-M-A5; SI-M-B3; SI-M-B4 NGSS – 3-5-ETSI.2, 3-5-ETSI-3	NGSS: 4, 5, 8	ETSI.B Research on a problems should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions.	Science and technology support each other. Tools and instruments are used to answer scientific questions, while scientific discoveries lead to the development of new technologies.	Science findings are limited to what can be answered with empirical evidence. Science investigations use a variety of methods, tools, and techniques.	Science as Inquiry: 7, 9, 11, 12, 19, 31, 32, 26
	CCSS Math: 5.NBT.A.1; 5. NBT.A.3; 5.NBT.A.4; 5.MD.B.2	CCSS Math: 2, 3, 4, 6				
	CCSS ELA: Speaking and Listening: Presentation of Knowledge and Ideas – 5; Language : Conventions of Standard English – 2; Vocabulary Acquisition and Use – 4, 6	X				
	ISTE : Creativity and Innovation – 1a, 1b, 1d; Communication and Collaboration – 2a, 2b, 2d; Research and Fluency – 31, 3b, 3d; Critical Thinking, Problem Solving, and Decision Making – 4c; Digital Citizenship – 5a, 5b; Technology Operations and Concepts – 6b; Profiles – 4, 6 LATS: 2, 3, 4, 6; Indicators: D	X				

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Bernoulli's Principle Experiments: Fluid Mechanics and Aerodynamics	<p>LASS: SI-M-A5; SI-M-A7; SI-M-B6; PS-M-A5; PS-M-B2; PS-M-B4; PS-M-B5</p> <p>NGSS: 5-PS.2.1</p>	<p>NGSS: 1, 2, 3, 6, 7, 8</p>	<p>PS2.B: the gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.</p>	<p>Cause and effect relationships are routinely identified and used to explain change.</p>	<p>Tools and instruments are used to answer scientific questions while science discoveries lead to the development of new technologies. Science assumes consistent patterns in the natural systems. Basic laws of nature are the same everywhere in the universe. Science investigations use a variety of methods, tools, and techniques. Science explanations describe the mechanisms for natural events.</p>	<p>Science as Inquiry: 4, 7, 14</p> <p>Physical Science: 4, 5, 8, 9</p>
	<p>CCSS ELA: Reading for Informational Text: Key Ideas and Details – 3; Craft and Structure – 4; Range of Reading and Level of Text Complexity – 10; Speaking and Listening: Comprehension and Collaboration – 1c, 1d, 2; Language: Vocabulary Acquisition - 6</p>	X				
What is GPS: Navigation and Geocaching	<p>LASS: SI-M-B3; SI-M-B7; Ess-M-C8</p> <p>NGSS: 3-5-ETS1-1</p>	<p>NGSS: 1, 3, 4, 8</p>	<p>ETS1.A: Possible solutions to a problem are limited by available materials and resources.</p>	<p>People's needs and wants change over time, as do their demands for new and improved technologies. Engineers improve existing technologies ore develop new ones to increase their benefits, decrease known risks, and meet societal demands. When new technologies become available they can bring about changes in the way people live and interact with one another.</p>	<p>Science and technology support each other. Tools and instruments are used to answer scientific questions, while scientific discoveries lead to the development of new technologies.</p>	<p>Science as Inquiry: 29, 39</p> <p>Earth and Space Science: 47</p>
	<p>CCSS Math: 5.G.A.1; 5.G.A.2</p>	<p>CCSS Math: 5, 6</p>				<p>The World in Spatial Terms: 3</p>
	<p>LASST: G-1A-M2</p>	X				
	<p>CCSS ELA: Reading for Informational Text: Range of Reading and Level of Text Complexity -10; Speaking and Listening: Comprehension and Collaboration – 1d; Language: Vocabulary Acquisition and Use – 4, 6</p> <p>ISTE: Communication and Collaboration – 2d; Research and Information Fluency – 3b; Critical Thinking, Problem Solving, and Decision Making – 4b, 4c; Digital Citizenship – 5a, 5b; Technology Operations and Concepts: 6a, 6b, 6d; Profiles:5</p> <p>LATS: 5, 4; Indicators F,G, H, I</p>	X				
What's Up Dock? Determining Surface Area	<p>CCSS Math: 5.OA.A.1; 5.OA.A.2</p>	<p>CCSS Math: 1, 2, 3, 4, 5, 6, 7, 8</p>	X	X	X	X
	<p>CCSS ELA: Speaking and Listening: Comprehension and Collaboration – 1; Language: Vocabulary Acquisition and Use – 4, 6</p>	X				

STARBASE Lesson	Grade 5 - LA Science Standards (LASS), Next Generation Science Standards(NGSS) Mathematics and ELA Common Core State Standards (CCSS), LA Technology Standards (LATS) , International Society for Technology in Education Standards (ISTES), LASStudies (LASST)	NGSS Science and Engineering Practices or CCSS Mathematical Practices (Indices A, B)	NGSS Disciplinary Core Ideas	NGSS Crosscutting Concepts	NGSS Understanding the Nature of Science	LA Science Comprehensive Curriculum (LASCC) Grade Level Expectations (GLE)
Chromatography	<p>LASS: SI-M-A1; SI-M-A2; SI-M-A4; SI-M-A7; SI-M-A8; SI-M-B1; PS-M-A1; PS-M-A3</p> <p>NGSS:5-PS1-3; 5-PS1-4;3-5-ETS1-2</p>	<p>NGSS: 1, 3, 4, 5,6, 7, 8</p>	<p>ETS1.A: Possible solutions to a problem are limited by available materials and resources.</p> <p>PS1:A The amount of matter is conserved when it changes form, even in transitions in which it seems to vanish.</p>	<p>Cause and effect relationships are routinely identified, tested and used to explain change.</p> <p>Science assumes consistent patterns in natural systems.</p>	<p>Science is a way of knowing that is used by many people. Science assumes consistent patterns in natural systems. Science affects everyday life. Science findings are limited to what can be answered with empirical evidence. Science methods are determined by questions. Science investigations use a variety of methods, tools, and techniques. Science findings are based on recognized patterns. Science explanations describe the mechanisms for natural events.</p>	<p>Science as Inquiry: 1, 2, 3, 4, 5, 7, 13, 19</p> <p>Physical Science: 2</p>
	<p>CCSS ELA: Reading for Information: Craft and Structure – 4; Language: Vocabulary Acquisition and Use – 4, 4a, 4b; Language: Vocabulary Acquisition and Use - 6</p>	X				
<p>Mission Logs Group Discussions Pair Sharing Daily Review Sheets Guided Review Activities (Foldables) Content Writing Prompts Performance Assessment Tasks and Rubrics</p>	<p>CCSS ELA: Reading for Informational Text: Key Ideas or Details – 3; Craft and Structure – 4; Integration of Knowledge and ideas – 7; Range of Reading and Level of Text Complexity – 10; Writing: Text, Types and Purposes – 1, 2; Production and Distribution of Writing – 4; Research to Build and Present Knowledge – 7, 8; Range of Writing – 10; Language: Conventions of Standard English – 1; Knowledge of Language – 3; Vocabulary Acquisition and Use – 4, 6</p>	<p>NGSS: 1, 2, 5, 6, 7, 8</p> <p>CCSS Math: 2, 3, 4</p>	X	X	X	X

- | NGSS Science and Engineering Practices |
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| <ol style="list-style-type: none"> 1. Asking Questions (for science) and defining problems (for engineering) 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating, information |

- | CCSS Mathematical Practices |
|---|
| <ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. |