

Our Lady of the Lake Roman Catholic School
Yearly Course Outline
Science
Fifth Grade
2024–2025

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Course Description

- I. **Project Lead the Way (PLTW) Launch Curriculum, Grade 5** – Students will study the following PLTW Launch modules:

Module 1 – Infection: Modeling and Simulation – Students investigate models and simulations and discover powerful ideas about computing. In the design problem students to look to model an infectious disease to simulate how an illness spread through their class. Applying their new understanding, students program their own models and collect data by running simulations with different parameters.

Module 2 – Infection: Detection – Students explore transmission of infection, agents of disease, and mechanisms the body uses to stay healthy. Through a simulation, they compare communicable and non-communicable diseases. Students tackle a design problem by examining evidence to deduce the agent of infection, the likely source of the outbreak, and the path of transmission through a school. They design and run an experiment related to limiting the spread of germs and apply results to propose appropriate prevention methods.

Module 3 – Matter: Properties and Reactions – Students learn about the three states of matter. They investigate mixtures of different materials that lead to new substances and conserve mass. Students design a test that demonstrate that an item has the required mechanical properties.

Module 4 – Ecosystems: Flow of Matter and Energy – Students learn about Earth's ecosystems and how energy flows from the Sun to plants, and from plants to animals. Students create a model to describe photosynthesis and explain how energy from the Sun is introduced into an ecosystem. Students use evidence to defend the claim that plants get the materials they need for growth mainly from air and water. Students learn how energy flows through an ecosystem and explore a simulation about how an ecosystem can become unbalanced. Finally, students use the design process to develop an action plan to protect an ecosystem that has become unbalanced due to human activity.

Module 5 – Patterns in the Universe – Students develop an understanding that stars are balls of hot gas. They learn that our Sun is a star at the center of our planetary system. Students learn about predictable patterns on Earth in relation to its place in the solar system. They design an exhibit that educates others about a concept they have learned throughout the module.

Module 6 – Earth's Water and Interconnected Systems – Students learn about Earth's systems: the atmosphere, hydrosphere, geosphere, and biosphere. Students examine how these systems interact and examine the role of gravity within each system. They take an in-depth look at how the processes of the water cycle intersect with each of the systems and apply this knowledge to investigate factors that impact the rate of evaporation. Students use the design process to develop a method for producing clean drinking water from samples of contaminated water.

Module 7 – Robotics and Automation – Students explore the ways robots are used in today’s world and their impact on society and the environment. Students learn about a variety of robotic components as they build and test mobile robots that may be controlled remotely. Students will be challenged to design, model, and test a mobile robot that solves a specific design problem.

Module 8 – Robotics and Automation: Challenge – Students expand their understanding of robotics as they explore mechanical design and computer programming. This module focuses on developing skills needed to build and program autonomous robots. Students will work with a group to apply their knowledge to design, build, test, and refine a mobile robot that meets a set of design constraints.

Methods of Assessment and Distribution

All test, quiz, and homework grades will be posted on PowerSchool (www.ollpowerschool.org). Please check for postings frequently. Each quarter, four test and four quiz-weighted assessments will be administered.

Assessment Weighting

60% Tests
30% Quizzes
10% Homework

Grading Scale

A: 100-94
B: 93-86
C: 85-78
D: 77-70
U: 69 and below

Tentative Course Calendar

**** Dates and course content are subject to change at discretion of teacher or administration. ****

Aug 8th – First day of school 4th -7th

Week	Standards	Objectives (The learner will . . .)	Instructional Materials	Assessments
1st Quarter				
Week 1 Aug. 12-16	NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-LS2-1 5-ESS3-1 5-PS1-1	Infection: Modeling and Simulation ...identify the agents and parameters in a simple system. ...explain that changing a parameter while running a simulation uncovers how the parameter affects the model system. ...organize and collaborate with group members by assigning roles and taking turns. ...use parameters in a preprogrammed simulation to investigate the model system, its agents, and the effects of its parameters.	Launch Logs iPads Red/Blue Construction Paper Health Status Data Sheet	Q1 Quiz 1 (Modeling and Simulation Vocabulary Quiz)
Week 2 Aug.11-23	NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS1-1 5-PS1-3	...identify the agents and parameters in a simple system. ...explain that changing a parameter while running a simulation uncovers how the parameter affects the model system. ...use parameters in a preprogrammed	Launch Logs iPads	Q1 Test 1 : Modes of Transmission

		simulation to investigate the model system, its agents, and the effects of its parameters.		
<p>Week 3 Aug. 26- Aug. 30</p>	<p>NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p><i>Science and Engineering Practices</i> 5-PS1-4 5-PS3-1</p>	<p>...identify parts of a computational solution that can be abstracted and modularized in order to make the solution efficient and generalizable.</p> <p>...identify events that drive a program's behavior such as external user interaction and internal variable counters.</p> <p>...use variables appropriately as part of a computational solution.</p> <p>...implement a loop when appropriate to make a program repeat a section of code until an ending condition is reached.</p> <p>...program actors to respond to both internal and external event triggers.</p> <p>...demonstrate persistence in the cycle of testing, finding, and fixing problems in computer programs.</p>	<p>Launch Logs IPads</p>	<p>Q1 Quiz 2 <u>Activity 1:</u> <u>Germs, Germs</u> <u>Everywhere!</u></p>

<p>Week 4 Sept. 34- Sept. 06 Labor Day 09/02 (No School)</p>	<p>NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p><i>Science and Engineering Practices</i> 5-PS3-1 5-ESS1-2</p> <p>5-PS3-1 5-LS2-1</p>	<p>...explain that changing a parameter while running a simulation uncovers how the parameter affects the model system. ...explain in simple terms how to clone an object to make a variable number of copies as determined at program runtime. ...decompose a problem and use a predefined set of commands to write an algorithm that will solve the problem. ...construct a class of objects with inherited properties and methods to create a variable number of agents in a program. ...construct a computer program using age-appropriate tools to model a simple system and to simulate how it works. ...demonstrate persistence in the cycle of testing, finding, and fixing problems in computer programs.</p>	<p>Launch Logs IPads</p>	<p>Q1, Test 2 (Modeling and Simulation Launch Log)</p>
<p>Week 5 Sept. 09-13</p>	<p>NGSS: LS2.A ETS1-1 ETS1-2 ETS1.A ETS1.B</p> <p><i>Science and</i></p>	<p>Infection Detection</p> <p>...recognize that germs can make a person sick, and that bacteria and viruses are germs.</p>	<p>Simulated germ powder UV flashlights Launch Logs IPads Colored pencils Popplet Lite Lensoo Create</p>	

	<p><i>Engineering Practices</i> 5-ESS1-2 5-PS1-3 5-PS2-1</p> <p>5-PS1-3</p>	<p>...describe the various ways germs can be passed from person to person. ...identify behaviors that promote good health. ...maintain a notebook to document work. ...share findings and conclusions with others. ...organize and analyze medical data to determine a likely source of an infection.</p> <p>...demonstrate the spread of infection using a graphical organizer and justify connections between infected individuals.</p>		
<p>Week 6 Sept. 16-20</p>	<p>NGSS: LS2.A ETS1-1 ETS1-2 ETS1.A ETS1.B</p> <p><i>Science and Engineering Practices</i> 5-PS1-3 5-LS1-1 5-PS1-2</p> <p>5-PS1-4</p>	<p>...identify behaviors that promote good health. ...perform an investigation in order to draw conclusions. ...maintain a notebook to document work. ...share findings and conclusions with others.</p>	<p>Simulated germ lotion UV flashlight Disposable transfer pipettes Various soaps (bar soap, liquid hand soap, antibacterial liquid hand soap, foaming antibacterial soap) Launch Logs IPads Colored pencils Rulers Scientific Inquiry Process resource sheets Experiments Resource Sheets Experiment Data Sheets</p>	<p>Q1 Quiz 3 (Infection Detection Vocabulary Quiz)</p>
<p>Week 7 Sept. 23-27 Spirit Week 9/27 – Fun Run Kickoff</p>	<p>NGSS: LS2.A ETS1-1 ETS1-2 ETS1.A ETS1.B</p> <p><i>Science and</i></p>	<p>...identify the ways that the body protects and defends itself against infection. ...maintain a notebook to document work. ...share findings</p>	<p>Battle with the Bugs: An Imaginative Journey Through the Immune System Launch Logs IPads Body's Defenses Against Infection presentation Body Outline Colored pencils</p>	<p>Q1 Test 3 (Interview with a Healthcare Provider)</p>

	<i>Engineering Practices</i> 5-PS1-1 5-PS2-1	and conclusions with others.		
Week 8 Sept. 30- Oct. 03 10/03 Living Rosary 10/04 No School	NGSS: LS2.A ETS1-1 ETS1-2 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS1-1 5-ESS1-2	...recognize that germs can make a person sick, and that bacteria and viruses are germs. ...recognize that bacteria and viruses are microscopic in size and that they cannot be seen with the naked eye. ...use scientific tools to examine cells or organisms that are microscopic. ...maintain a notebook to document work. ...share findings and conclusions with others. ...organize and analyze medical data to determine a likely source of an infection.	Launch Logs IPads Colored pencils Disease cards (1 print per group) Microorganisms PDF Microorganisms Resource Sheet (1 per student) Patient Information Resource Sheet (1 print per group)	Q1 Quiz 4 (Infection Fighters)
Week 9 Oct. 07-11 10/11 ½ Day Fun Run (11:15 dismissal)	NGSS: LS2.A ETS1-1 ETS1-2 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS1-1 5-ESS1-2	...recognize that germs can make a person sick, and that bacteria and viruses are germs. ...recognize that bacteria and viruses are microscopic in size and that they cannot be seen with the naked eye. ...use scientific tools to examine cells or organisms that are microscopic. ...maintain a notebook to document work.	Launch Logs IPads Colored pencils Disease cards (1 print per group) Microorganisms PDF Microorganisms Resource Sheet (1 per student) Patient Information Resource Sheet (1 print per group)	Q1, Test 4 (Infection Detection Launch Log)

		<p>...share findings and conclusions with others.</p> <p>...organize and analyze medical data to determine a likely source of an infection.</p>		
2nd Quarter				
<p>Week 10 Oct. 14-18</p>	<p>5-ESS1-1 3-5-ETS1</p>	<p>Patterns in the Universe</p> <p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems.</p> <p>...compare and contrast the Sun to other stars.</p> <p>...understand the universe includes all the natural bodies in space.</p> <p>...apply mathematical thinking to solve problems.</p> <p>...collaborate effectively on a diverse and multidisciplinary team.</p> <p>...communicate effectively for specific purposes and settings.</p> <p>...practice ethical behavior in all settings.</p>	<p>Introduction Story: A Shooting Star</p> <p>Launch Logs</p> <p>IPads</p> <p>Inkling</p> <p>Star Chart</p> <p>Stars in the Sky Video</p> <p><input type="checkbox"/> Pencils or colored pencils for sketching</p> <p><input type="checkbox"/> Chart paper</p> <p><input type="checkbox"/> Markers</p>	<p>Q2 Quiz 1 (Patterns in the Universe Vocabulary)</p>
<p>Week 11 Oct. 21-25 10/25 CFR Reward Day</p>	<p>5-ESS1-1 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems.</p> <p>...identify the observable patterns that</p>	<p>Launch Logs</p> <p>IPads</p> <p><input type="checkbox"/> Inkling</p> <p><input type="checkbox"/> Compass</p> <p><input type="checkbox"/> SmartCompass</p> <p><input type="checkbox"/> Camera</p> <ul style="list-style-type: none"> • Model tree and shrub kit • Card stock • Flashlights (15) • Measuring tapes (9) 	<p>Q2 Quiz 2 (Part 1: Shadow Exploration)</p>

		<p>occur related to Earth. ...apply mathematical thinking to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<ul style="list-style-type: none"> • Compass • Modeling clay <p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Grid chart paper (1 piece) <input type="checkbox"/> Markers <input type="checkbox"/> Resealable plastic bag</p>	
<p>Week 12 Oct. 28-Oct. 25 11/2 OLL Festival</p>	<p>5-ESS1-1 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...compare and contrast the Sun to other stars. ...understand the universe includes all the natural bodies in space. ...identify the observable patterns that occur related to Earth. ...apply mathematical thinking to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<p>Launch Logs IPads Our World: Moon Phases video Our World:Sun's Position video</p> <ul style="list-style-type: none"> • Inking • Star Chart • What Causes the Seasons? by NASA Space Place • <i>The Next Time You See a Sunset</i> by Emily Morgan (2) • <i>The Moon Book</i> by Gail Gibbons (2) • Blue modeling clay • Gray modeling clay • Wooden dowels • Rounded toothpicks • Flashlights (4) <p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Resealable plastic bags (2)</p>	<p>Q2 Test 1 (Predictable Patterns Investigations 1 – 4: Constellations, Day and Night, Moon Phases, Earth's Orbit)</p> <p>Q2 Test 2 (Patterns in the Universe Launch Log)</p>
<p>Week 13 Nov. 04- 08</p>	<p>5-PS2-1 5-ESS2-1</p>	<p>Earth's Water and</p>	<p>Introduction Story: The Big Hike</p>	

<p>11/6 - 11/7 Saints Alive</p>	<p>5-ESS2-2 5-ESS3-1 3-5-ETS1</p>	<p>Interconnected Systems</p> <p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...analyze interactions between two Earth systems at a time. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<p>Launch Logs IPads Inkling <input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Chart paper <input type="checkbox"/> Markers <input type="checkbox"/> Index cards</p>	<p>Q2 Quiz 3 (Earth's Water and Interconnected Systems Vocabulary)</p>
<p>Week 14 Nov. 11-15</p>	<p>5-PS2-1 5-ESS2-1 5-ESS2-2 5-ESS3-1 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...analyze interactions between two Earth systems at a time. ...understand how the water cycle connects the hydrosphere to the other spheres. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings.</p>	<p>Launch Logs IPads</p> <ul style="list-style-type: none"> • Inkling • Camera • Aquarium/terrarium, plastic, without cover, 1 ½ gallon (8) • Petri dishes (8) • Plastic wrap • Ice cube tray • Large rubber bands (8) • <i>A Drop Around the World</i> by Barbara Shaw McKinney • Plastic cups <p> <input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Chart paper <input type="checkbox"/> Markers <input type="checkbox"/> Fast-growing seeds, such as: <ul style="list-style-type: none"> • Alfalfa • Radish • Chia </p>	<p>Q2 Quiz 4 (Building a Terrarium, Hydrosphere, The Water Cycle: Participation and Questions)</p>

		...practice ethical behavior in all settings.	<ul style="list-style-type: none"> • Lettuce • Basil • Marigold • Morning glory <ul style="list-style-type: none"> ☐ Potting soil ☐ Water ☐ Spray bottle 	
Week 15 Nov. 27-Nov. 22	5-PS2-1 5-ESS2-1 5-ESS2-2 5-ESS3-1 3-5-ETS1	...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...analyze the fractional amounts of salt water, fresh water, and accessible fresh water. ...apply mathematical thinking to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.	<p>Launch Logs iPads</p> <ul style="list-style-type: none"> • Inking • Calculator • Presentation app, such as: <ul style="list-style-type: none"> ◦ Popplet Lite ◦ Mindomo ◦ ShowMe Interactive Whiteboard • WaterSense for Kids • AuthaGraph world map • Map cut into eight pieces • Transparencies, with grid • Dry-erase markers (1 package per group) <p>Pencils or colored pencils for sketching</p>	Q2 Test 3 (Grid/AuthaGraph World Map + Written Assessment on Salt Water and Fresh Water)
Thanksgiving Holidays Nov. 25-29				
Week 16 Dec. 02-Dec. 06	5-PS2-1 5-ESS2-1 5-ESS2-2 5-ESS3-1 3-5-ETS1	...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...analyze interactions between two Earth systems at a time.	<p>Launch Logs iPads Inking</p> <ul style="list-style-type: none"> • 300-watt incandescent clamp light • 250-watt incandescent lamp bulb • Petri dishes (16) • Fan with clamp • Dry-erase markers (8) 	Q2 Test 4 (Earth's Water and Interconnected Systems Launch Log)

		<p>...understand how the water cycle connects the hydrosphere to the other spheres. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Water <input type="checkbox"/> Terrariums from Activity 2</p>	
<p>Week 17 Dec. 09-13</p> <p>Week 18 Dec. 16-20 <small>12/20 ½ day 11:15 dismissal</small></p>	<p>5-PS2-1 5-ESS2-1 5-ESS2-2 5-ESS3-1 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to acquire knowledge and solve problems. ...analyze interactions between two Earth systems at a time. ...understand how the water cycle connects the hydrosphere to the other spheres. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<p>Launch Logs iPads Inkling</p> <ul style="list-style-type: none"> • 300-watt incandescent clamp light • 250-watt incandescent lamp bulb • Petri dishes (16) • Fan with clamp • Dry-erase markers (8) <p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Water <input type="checkbox"/> Terrariums from Activity 2</p>	
<p>Christmas Holidays Dec. 21- Jan. 05</p>				
<p>3rd Quarter</p>				
<p>Week 19 Jan. 06-10</p>	<p>5-PS1-1 5-PS1-2 5-PS1-3 3-5-ETS1</p>	<p>Matter: Properties and Reactions</p>	<p>Introduction Story: Testing Things Out Launch Logs iPads Inkling</p>	<p>Q3 Quiz 1: Matter: Properties and Reactions Vocabulary</p>

		<p>...follow a step-by-step method to solve a problem. ...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...conduct investigations to develop an understanding of the properties of matter. ...make observations to describe materials based on their mechanical properties. ...apply mathematical thinking to solve problems. ...apply measurement and data to solve problems. ...apply geometry to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice al behavior in all settings.</p>	<p>PhET® States of Matter: Basics simulation Ice cube tray 100 mL beakers (2) Vanilla scents (2) Colored pencils Water Chart paper markers</p>	
<p>Week 20 Jan. 13-17 01/20 No School</p>	<p>5-PS1-1 5-PS1-2 5-PS1-3 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...conduct investigations to</p>	<p>Launch Logs iPads</p> <ul style="list-style-type: none"> • InKling • ShowMe Interactive Whiteboard • 50 mL graduated cylinders (16) 	<p>Q3 Quiz 2 (Conservation: It's the Law! Mixtures Worksheet</p>

		<p>develop an understanding of the properties of matter. ...apply mathematical thinking to solve problems. ...apply measurement and data to solve problems. ...apply geometry to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice all behavior in all settings.</p>	<ul style="list-style-type: none"> • 100 mL beakers (10) • Stir sticks (10) • Tablespoons (8) • Digital scales (4) • Disposable transfer pipettes (30) • Sponges (9) • Test tube brushes (10) • Safety glasses (31) • Coarse kosher salt <ul style="list-style-type: none"> <input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Pure cane granulated sugar (1 lb) <input type="checkbox"/> Iodized salt (26 oz) <input type="checkbox"/> Water <input type="checkbox"/> Rubbing alcohol (32 fl oz) <input type="checkbox"/> All-purpose flour (5 lb) <input type="checkbox"/> Liquid dish soap (1 bottle) <input type="checkbox"/> Chart paper <input type="checkbox"/> Markers 	
<p>Week 22 Jan. 27-31 Catholic Schools Week 1/31 Pep Rally</p>	<p><i>5-PS1-1</i> <i>5-PS1-2</i> <i>5-PS1-3</i> <i>3-5-ETS1</i></p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...conduct investigations to develop an understanding of the properties of matter. ...apply mathematical thinking to solve problems. ...apply measurement and data to solve problems. ...collaborate effectively on a diverse and</p>	<ul style="list-style-type: none"> • Launch Log • iPads • Device applications: <ul style="list-style-type: none"> ◦ InKling ◦ Stopwatch ◦ ShowMe Interactive Whiteboard • Pencils or colored pencils for sketching • 50 mL graduated cylinders (16) • 100 mL beakers (10) • Disposable transfer pipettes (30) • Tablespoons (8) • Stir sticks (10) • Safety glasses (31) • Sponges (9) • Test tube brushes (10) • Paper clips (8) • Cooking oil (16 fl oz) • Water • Sand • Iodized salt (26 oz) • Baking soda (1 lb) 	<p>Q3 Test 1 (Mixing Matter/New Substances)</p>

		<p>multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice al behavior in all settings.</p>	<ul style="list-style-type: none"> • Distilled white vinegar (32 oz) • Liquid dish soap (1 bottle) • Chart paper • Markers 	
<p>Week 23 Feb.03-Feb. 07</p>	<p>5-PS1-1 5-PS1-2 5-PS1-3 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...conduct investigations to develop an understanding of the properties of matter. ...apply mathematical thinking to solve problems. ...apply measurement and data to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice al behavior in all settings.</p>	<ul style="list-style-type: none"> • Launch Log • IPads • Device applications: <ul style="list-style-type: none"> ◦ Inklings ◦ Stopwatch ◦ ShowMe Interactive Whiteboard • Pencils or colored pencils for sketching • 50 mL graduated cylinders (16) • 100 mL beakers (10) • Disposable transfer pipettes (30) • Tablespoons (8) • Stir sticks (10) • Safety glasses (31) • Sponges (9) • Test tube brushes (10) • Paper clips (8) • Cooking oil (16 fl oz) • Water • Sand • Iodized salt (26 oz) • Baking soda (1 lb) • Distilled white vinegar (32 oz) • Liquid dish soap (1 bottle) • Chart paper • Markers 	<p>Q3 Test 2 (Matter: Properties and Reactions Launch Log)</p>
<p>Week 24 Feb. 10-Feb. 14</p>	<p>5-PS3-1 5-LS1-1 5-LS2-1 3-5-ETS1</p>	<p>Ecosystems: Flow of Matter and Energy</p> <p>...follow a step-by-step method to solve a problem. ...use scientific reasoning to ask questions, make observations, and</p>	<p>Introduction Story: The Coyote Mystery Launch Logs IPads</p> <ul style="list-style-type: none"> • Inklings • Camera • Pipe cleaners • Pom-poms • Tacky glue • Masking tape 	<p>Q3 Quiz 3 (Ecosystems: Flow of Matter and Energy Vocabulary Quiz)</p>

		<p>investigate ideas to make sense of phenomena and solve problems. ...analyze how plants grow. ...describe how matter and energy flow among living things. ...evaluate the delicate balance of interactions within an ecosystem. ...apply mathematical thinking to solve problems. ...apply geometry to solve problems. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<ul style="list-style-type: none"> • Colored paper <p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Chart paper <input type="checkbox"/> Markers <input type="checkbox"/> Optional materials for the photosynthesis models:</p> <ul style="list-style-type: none"> • Colorful beads • Poster board <p>Photosynthesis Key Element cards</p>	
<p>Week 25 Feb. 17-21 2/21 Eve Parade</p>	<p>5-PS3-1 5-LS1-1 5-LS2-1 3-5-ETS1</p>	<p>...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...analyze how plants grow. ...collaborate effectively on a diverse and multidisciplinary team. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.</p>	<p>Launch Logs IPads <input type="checkbox"/> Inkling <input type="checkbox"/> Camera</p> <p>Observation Charts Worksheet</p> <ul style="list-style-type: none"> • Seed sprouter inner trays (10) • Seed sprouter bottom trays (10) • Alfalfa seeds • Plastic wrap • Seed paper • 2-cup measuring cup • Digital scale <p><input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Chart paper</p>	<p>Q3 Test 3 (What Do Plants Need to Grow? Observation Charts Worksheet)</p>

			<input type="checkbox"/> Markers <input type="checkbox"/> Permanent marker <input type="checkbox"/> Bowl <input type="checkbox"/> Tablespoon <input type="checkbox"/> Water <input type="checkbox"/> Optional: Grid chart paper (1 piece)	
Week 26 Feb. 24- March 28 <small>02/28 ½ Day: Grandparents Day</small>	5-PS3-1 5-LS1-1 5-LS2-1 3-5-ETS1	...use scientific reasoning to ask questions, make observations, and investigate ideas to make sense of phenomena and solve problems. ...analyze how plants grow. ...describe how matter and energy flow among living things. ...apply mathematical thinking to solve problems. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.	Launch Logs IPads <input type="checkbox"/> Inking Food Web Game <ul style="list-style-type: none"> • <i>Pass the Energy, Please</i> by Barbara Shaw McKinney • Tokens • Labels • Resealable plastic bags <input type="checkbox"/> Pencils or colored pencils for sketching <input type="checkbox"/> Chart paper <input type="checkbox"/> Markers <input type="checkbox"/> Bucket, bin, or hat labeled "Soil"	Q3 Quiz 4 (Food Web Game Questions)
Mardi Gras Holidays March 3 - 7				
Week 27 March 10- 14 <small>03/14 ½ Day</small>	5-PS3-1 5-LS1-1 5-LS2-1 3-5-ETS1	...describe how matter and energy flow among living things. ...evaluate the delicate balance of interactions within an ecosystem. ...communicate effectively for specific purposes and settings. ...practice ethical behavior in all settings.	Launch Logs IPads Inking The Habitable Planet: Ecology Lab , Pencils or colored pencils for sketching Simulation Worksheet	Q3 Test 4 (Ecosystems: Flow of Matter and Energy Launch Log)
4th Quarter				

<p>Week 28 March 17-21</p>	<p>5-PS3-1 5-LS1-1 5-LS2-1 3-5-ETS1</p>	<p>...describe how matter and energy flow among living things. ...evaluate the delicate balance of interactions within an ecosystem. ...communicate effectively for specific purposes and settings. ...practive ethical behavior in all settings.</p>	<p>Launch Logs IPads Inkling The Habitable Planet: Ecology Lab, Pencils or colored pencils for sketching Simulation Worksheet</p>	
<p>Week 29 March 24-28</p>	<p>NGSS: 5-ESS3-1 ESS3.C 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-LS1-1 5-ESS3-1</p>	<p>Robotics and Automation</p> <p>...explain what happens at each step of the design process. ...state questions that engineers may ask when gathering information about a situation people want to change. ...identify the differences between invention and innovation. ...identify application of robot technology used to complete dangerous tasks. ...share findings and conclusions with an audience. ...draw evidence from informational texts to support analysis, reflection, and research on robotics.</p>	<p>Launch Logs IPads Robots for iPad Lensoo Create Popplet Lite</p> <p>Optional: National Geographic Readers: Robots DK Eyewitness Books: Robot TIME for Kids Explorers: Robots</p>	
<p>Week 30</p>	<p>NGSS: 5-ESS3-1</p>	<p>...identify inputs and outputs</p>	<p>Launch Logs IPads</p>	<p>Q4 Quiz 1 (Robotics and</p>

<p>March 31- April 04</p>	<p>ESS3.C 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p><i>Science and Engineering Practices 5-ESS1-2</i></p>	<p>within a robotic system.</p>	<p>Inventor Publisher files VEX IQ Robot Design Kits</p>	<p>Automation Vocabulary)</p>
<p>Week 31 April 07-12</p>	<p>NGSS: 5-ESS3-1 ESS3.C 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p>Science and Engineering Practices 5-ESS2-1</p>	<p>...identify the differences between invention and innovation.</p>	<p>Launch Logs IPads VEX IQ Construction Kits</p>	<p>Q4 Test 1 (Introduction to Robotics – Research and Presentation)</p>
<p>Week 32 April 14-17 4/17 Passion Play 4/18 Good Friday</p>	<p>NGSS: 5-ESS3-1 ESS3.C 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p>Science and Engineering Practices 5-ESS2-1</p>	<p>...identify the differences between invention and innovation.</p>	<p>Launch Logs IPads VEX IQ Construction Kits</p>	<p>Q4 Quiz 2 (Inputs and Outputs)</p>
<p>Easter Break April 21-25</p>				
<p>Week 33 April 28-May 2 05/02 Field Day ½ Day</p>	<p>NGSS: 5-ESS3-1 ESS3.C 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B</p> <p><i>Science and Engineering Practices 5-ESS2-1</i></p>	<p>...use motors and sensors to solve robotic problems. ...design a control system to use sensor feedback to make decisions.</p>	<p>Launch Logs IPads VEX IQ Design Kits Colored blocks Inventor Publisher</p>	<p>Q4 Test 2 (Robotics and Automation Launch Log)</p>

	5-PS1-3 5-ESS2-2			
Week 34 May 05-May 09 05/06 May Crowning	NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS1-3 5-ESS2-2	Robotics and Automation: Challenge ...identify inputs and outputs within a robotic system. ...identify software and hardware within a robotic system.	Launch Logs iPads	Q4 Quiz 3 (R & A Challenge Vocabulary Quiz)
Week 35 May 12-16	NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS3-1 5-PS1-3 5-ESS2-2	...identify inputs and outputs within a robotic system. ...identify software and hardware within a robotic system. ...apply basic commands used to program a robotic system.	Launch Logs iPads VEX IQ Robot Design Kit Inventor Publisher files Rulers Colored tape Classroom computer Inventor Publisher Modkit for VEX	Q4 Quiz 4 (Activity 3: Input Output Programming)
Week 36 May 19-22 05/21 05/22 ½ Day	NGSS: 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 ETS1.A ETS1.B <i>Science and Engineering Practices</i> 5-PS1-3 5-ESS1-2 5-ESS2-2	...apply basic commands used to program a robotic system. ...design a control system to use sensor feedback to make decisions.	Launch Logs iPads VEX IQ PLTW Launch chassis built in Activity 3 VEX IQ Robot Design Kit, remaining parts VEX IQ field, configured in 2 half-fields 3 Blocks per team Modkit for VEX	Q4 Test 3 Project: Programming Challenge (Design Process) Q4 Test 4 (Robotics and Automation: Challenge Launch Log)