

Team Meeting Guide Outcomes	Strand	Specific Expectations	Addressed
<p>Session 1:</p> <p>Introduction</p> <ul style="list-style-type: none"> Watch the Season Launch video & read Engineering Notebook to learn about RePLAY Challenge <p>Group 1</p> <ul style="list-style-type: none"> Learn to program the robot to travel forward, backward and turn by completing Robot Lesson 1 Learn about Robot Game by reviewing Field Layout and Robot Game Missions <p>Group 2</p> <ul style="list-style-type: none"> Read Project Spark 1 to learn about a problem associated with this year's Challenge Build Session 1 Mission Models that related to the problem presented and brainstorm other solutions <p>Share</p> <ul style="list-style-type: none"> Groups share robot skills and show how the missions work & where they go on the mat. 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy		
	Understanding Earth and Space Systems		

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<p>Session 2:</p> <p>Introduction</p> <ul style="list-style-type: none"> Read about the Core Values and record ways to ensure that everyone on the team is respected and heard, with a focus on Inclusion <p>Group 1</p> <ul style="list-style-type: none"> Learn to program their robot to avoid obstacles using a sensor and power an attachment by completing Robot Lesson 2 <p>Group 2</p> <ul style="list-style-type: none"> Read Project Spark 2 to learn about another problem associated with this year's Challenge Build Session 2 Mission Models related to the problem presented and brainstorm other solutions <p>Share</p> <ul style="list-style-type: none"> Groups share their newly acquired robot skills and show how the missions work and where they go on the mat. 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
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<p>Session 3:</p> <p>Introduction</p> <ul style="list-style-type: none"> Discuss and record team goals and responsibilities of team members <p>Group 1</p> <ul style="list-style-type: none"> Read Project Spark 1 to learn about a problem associated with this year's Challenge Build Session 3 Mission Models related to the problem presented and brainstorm other solutions <p>Group 2</p> <ul style="list-style-type: none"> Learn to program the robot to travel forward, backward and turn by completing Robot Lesson 1 Learn about Robot Game by reviewing Field Layout and Robot Game Missions <p>Share</p> <ul style="list-style-type: none"> Groups share their newly acquired robot skills and show how the missions work and where they go on the mat. 	Understanding Life Systems	<p>1. Analyse the effects of human activities on habitats and communities</p> <p style="padding-left: 40px;">1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	Understanding Structures and Mechanisms	<p>1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects;</p> <p>2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems</p> <p style="padding-left: 40px;">2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems</p> <p style="padding-left: 40px;">2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
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<p>Session 4:</p> <p>Introduction</p> <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Discovery, and record ways in which your team has learned new skills and ideas <p>Group 1</p> <ul style="list-style-type: none"> Read Project Spark 2 to learn about a problem associated with this year's Challenge Build Session 4 Mission Models related to the problem presented and brainstorm other solutions <p>Group 2</p> <ul style="list-style-type: none"> Learn to program their robot to avoid obstacles using a sensor and power an attachment by completing Robot Lesson 2 <p>Share</p> <ul style="list-style-type: none"> Groups share their newly acquired robot skills and show how the missions work and where they go on the mat. 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy	2. investigate the characteristics and properties of light and sound 2.2 investigate the basic properties of light 2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light. 2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound 3. demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties 3.6 describe how different objects and materials interact with light and sound energy	• • - • - -
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Session 5: Introduction <ul style="list-style-type: none"> • Create a team name and dyeing a poster with your team name and logo Team <ul style="list-style-type: none"> • Learn how to build a driving base and program it to move and follow a line by completing Robot Lesson 3 • Take turns coding the robot and showing what it can do • Review the Robot Game Missions and discuss what missions your team will tackle first • Complete pseudocode for the chosen missions Share <ul style="list-style-type: none"> • Gather around the mat to review the pseudocode and make changes if necessary 	Understanding Life Systems		
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy	2. investigate the characteristics and properties of light and sound 3. demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties 2.2 investigate the basic properties of light 2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light. 2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound 3.6 describe how different objects and materials interact with light and sound energy	• - • -
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<p>Session 6:</p> <p>Introduction</p> <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Teamwork, and record ways in which your team has learned to work together <p>Team</p> <ul style="list-style-type: none"> Learn to use more advanced programming blocks and coding skills by completing Robot Lesson 4 Take turns coding the robot and showing what it can do Read about the RePLAY Innovation Project and reflect on the solutions that were developed during the Project Spark sessions Identify and record your problem statement <p>Share</p> <ul style="list-style-type: none"> Gather around the mat to demonstrate any new coding skills that you have learned 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy	2. investigate the characteristics and properties of light and sound 2.2 investigate the basic properties of light 2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light. 2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound 3. demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties 3.6 describe how different objects and materials interact with light and sound energy	• • - • - -
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<p>Session 7:</p> <p>Introduction</p> <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Coopertition and Gracious Professionalism and record ways in which your team will demonstrate these at events <p>Group 1</p> <ul style="list-style-type: none"> Begin to research your problem and any existing solutions Use a variety of resources and remember to keep track of them <p>Group 2</p> <ul style="list-style-type: none"> Learn to apply coding principles to complete the guided mission by completing Robot Lesson 5 and continue to refine the mission until it works perfectly <p>Share</p> <ul style="list-style-type: none"> Groups share their research, discuss solution ideas and show how the robot scores points in the guided mission 	Understanding Life Systems	<p>1. Analyse the effects of human activities on habitats and communities</p> <p style="padding-left: 40px;">1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	Understanding Structures and Mechanisms	<p>1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects;</p> <p>2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems</p> <p style="padding-left: 40px;">2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems</p> <p style="padding-left: 40px;">2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	Understanding Matter and Energy	<p>2. investigate the characteristics and properties of light and sound</p> <p style="padding-left: 40px;">2.2 investigate the basic properties of light</p> <p style="padding-left: 40px;">2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light.</p> <p style="padding-left: 40px;">2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound</p> <p>3. demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties</p> <p style="padding-left: 40px;">3.6 describe how different objects and materials interact with light and sound energy</p>	<p style="text-align: center;">•</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
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<p>Session 8:</p> <p>Introduction</p> <ul style="list-style-type: none"> Decide as a team what your project solution will be based on your identified problem <p>Group 1</p> <ul style="list-style-type: none"> Learn to apply coding principles to complete the guided mission by completing Robot Lesson 5 and continue to refine the mission until it works perfectly <p>Group 2</p> <ul style="list-style-type: none"> Research and develop your selected solution using the Project Development page as a tool Sketch and label a diagram of the solution and explain how it solves the problem <p>Share</p> <ul style="list-style-type: none"> Groups share their research, discuss the project solution and show how the robot scores points in the guided mission 	Understanding Life Systems	<p>1. Analyse the effects of human activities on habitats and communities</p> <p>Specific Expectations:</p> <p style="padding-left: 40px;">1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	Understanding Structures and Mechanisms	<p>1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects;</p> <p>2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems</p> <p style="padding-left: 40px;">2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems</p> <p style="padding-left: 40px;">2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	Understanding Matter and Energy	<p>2. investigate the characteristics and properties of light and sound</p> <p style="padding-left: 40px;">2.2 investigate the basic properties of light</p> <p style="padding-left: 40px;">2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light.</p> <p style="padding-left: 40px;">2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound</p> <p>3. demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties</p> <p style="padding-left: 40px;">3.6 describe how different objects and materials interact with light and sound energy</p>	<p style="text-align: center;">•</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
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<p>Session 9:</p> <p>Introduction</p> <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Innovation, and record ways your team has been creative & solved problems <p>Innovation Project Group</p> <ul style="list-style-type: none"> Evaluate your solution and iterate and improve, if needed Plan how you will test your solution & share it with others Use the white bricks from bag 8 to build a model that represents your solution <p>Robot Group</p> <ul style="list-style-type: none"> Decide which additional mission to attempt and build any attachments you need Write and refine your program so that the robot completes the mission reliably <p>Share</p> <ul style="list-style-type: none"> Groups provide an update on their missions and how they will share their solution with others. 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy	2. investigate the characteristics and properties of light and sound 2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light. 2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound	- - -
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<p>Session 10:</p> <p>Introduction</p> <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Impact, and record ways your team has had a positive impact on others <p>Innovation Project Group</p> <ul style="list-style-type: none"> Plan your project presentation by writing a script and making any required props or displays <p>Robot Group</p> <ul style="list-style-type: none"> Continue to program the robot to complete missions, ensuring that you understand and can explain the code and strategy Practice a 2.5-minute Robot Game on the mat <p>Share</p> <ul style="list-style-type: none"> Group discusses progress on the project presentation, how everyone will be involved and what missions have been completed 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
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<p>Session 11:</p> <p>Introduction</p> <ul style="list-style-type: none"> ● Create a trading card for each person on the team on which you describe yourself and how you enjoy FLL Challenge <p>Innovation Project Group</p> <ul style="list-style-type: none"> ● Continue to work on your project presentation by planning what each person on the team will say <p>Robot Group</p> <ul style="list-style-type: none"> ● Program your robot to complete mission 1 using the white brick model of your project solution ● Write a script for and rehearse your robot design presentation, using the rubric as a guide for what to include <p>Share</p> <ul style="list-style-type: none"> ● Group discusses each person's role in the project and robot design presentations and show what missions are completed by running a 2.5-minute match 	<p>Understanding Life Systems</p>	<p>1. Analyse the effects of human activities on habitats and communities</p> <p style="padding-left: 40px;">1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	<p>Understanding Structures and Mechanisms</p>	<p>1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects;</p> <p>2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems</p> <p style="padding-left: 40px;">2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems</p> <p style="padding-left: 40px;">2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">•</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
	<p>Understanding Matter and Energy</p>	<p>2. investigate the characteristics and properties of light and sound</p> <p style="padding-left: 40px;">2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light.</p> <p style="padding-left: 40px;">2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound</p>	<p style="text-align: center;">-</p> <p style="text-align: center;">-</p> <p style="text-align: center;">-</p>
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Session 12: Introduction <ul style="list-style-type: none"> Revisit the Core Values, with a focus on Fun, and record ways your team has had fun throughout this experience Team <ul style="list-style-type: none"> Rehearse your project and robot design presentations, remembering to demonstrate and mention how your team has used the Core Values Hold 2.5-minute Robot Game matches Share <ul style="list-style-type: none"> Review all of the rubrics and use them to evaluate and improve upon your presentations 	Understanding Life Systems	1. Analyse the effects of human activities on habitats and communities 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities	- -
	Understanding Structures and Mechanisms	1. Investigate ways in which pulleys and gears modify the speed and direction of, and the force exerted on, moving objects; 2. demonstrate an understanding of the basic principles and functions of pulley systems and gear systems 2.2 use scientific inquiry/experimentation skills to investigate changes in force, distance, speed, and direction in pulley and gear systems 2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	- • - -
	Understanding Matter and Energy	2. investigate the characteristics and properties of light and sound 2.4 use technological problem-solving skills to design, build, and test a device that makes use of the properties of light. 2.5 use scientific inquiry/research skills to investigate applications of the properties of light or sound	- - -
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