

Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

Team Meeting Guide Outcomes	Strand	Specific Expectations	Addressed
<p>Session 1:</p> <p>Six Bricks Warm-Up The children will use the Six Bricks both in the classroom and at home with the Discover More set to learn new skills and explore new ideas.</p> <p>Explore Task</p> <p>Introduce the idea of a hobby or an interest. Have a discussion to discover what the children like to do or what they are interested in and how they share it with others.</p>	<p>A. STEM Skills and Connections</p>	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> ● ● ● ● ● -
<p>Create Task</p> <p>Have the children build using the different pieces in STEAM Park. Encourage them to play freely and build anything they want that</p>	<p>B. Life Systems</p>		

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>relates to their hobby or interest and how or where it could be shared with others.</p> <p>Share Task Have the children share and explain what they built and how the pieces they identified relate to their interests.</p>	C. Matter and Energy		
	D. Structures and Mechanisms	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • •
	E. Earth and Space Systems		

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>Session 2:</p> <p>Six Bricks Warm-Up Discover Six Bricks 11</p> <p>Explore Task Explain FIRST ® LEGO® League Discover to the children. Read the Discover Story to the group. Tell them they will explore how musicians make an exciting concert. Locate the music elements found on the mat (i.e., music notes, speakers, etc.)</p>	<p>STEM Skills and Connections</p>	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> ● ● ● ● ● -
<p>Create Task Have each team build the stage from the Discover set, using the building card. They can place the stage on top of the music area on the mat. Then, they use the STEAM Park set to build additional effects for their concert or change the type of concert.</p> <p>Share Task In their Engineering Notebooks, have the children write about or draw a picture of their concert. The children could also share and describe what they built.</p>	<p>Understanding Life Systems</p>		
	<p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> ● ● ●

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

	Understanding Matter and Energy		
	Understanding Earth and Space Systems		

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<p>Session 3:</p> <p>Six Bricks Warm-Up</p> <p>What Can You Build? (see Appendix for full activity)</p> <p>Explore Task</p> <p>Ask the children if they have ever visited a museum and have them share what types of exhibits they saw.</p> <p>Locate the museum elements</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> ● ● ● ● ● ●

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>found on the mat (i.e., dinosaur bones, lights, speakers).</p>			
<p>Create Task Have each team build a place to display an object that is important to them and place the display on the mat. They can use the building card to help them get started. Use the Discover set and allow them to add pieces from the STEAM Park set.</p> <p>Share Task Have each team share what they chose to put on display. They could explain why the object is important, what people should learn about it, and what technology might be needed to help teach people</p>	<p>Understanding Life Systems</p>		
	<p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •
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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

	Understanding Earth and Space Systems		
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<p>Session 4:</p> <p>Six Bricks Warm-Up Build the Picture (see Appendix for full activity)</p> <p>Explore Task Have the children think about a time they have seen or have participated in a play in a theatre. What things does a play have to help tell a story? Locate the theatre elements on the mat (i.e., masks, lights, speakers).</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> ● ● ● ● ● ●

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>Create Task Have each team build a stage using the Discover set. Have them create their own play. They can use the building cards and STEAM Park pieces to help get started. The children should work together to tell a short story using their stage and extra STEAM Park pieces.</p> <p>Share Task In their Engineering Notebooks, have the children write or draw a picture of different technology or moving pieces that their stage uses.</p>	Understanding Life Systems		
	Understanding Structures and Mechanisms	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> ● ● ●
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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

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<p>Session 5: Six Bricks Warm-Up Rhythms and Moves (see Appendix for full activity)</p> <p>Explore Task Have the children recall some of the different types of shows and places where people share their interests, talents, or hobbies. Identify different places that haven't previously been discussed.</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> • • • • • •
<p>Create Task Have the children build their own place using the Discover set. The place should use technology or innovation to showcase a hobby, special object, talent, or piece of art, in a different way than in previous sessions.</p>	Understanding Life Systems		
<p>Share Task Have the teams describe the movement in their builds. The teams could share together to give them more confidence in talking in front of people. They can talk about what is being shared but</p>	Understanding Structures and Mechanisms	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

should focus on the place where the sharing is happening. Ask them to use the word innovative where possible.	Understanding Matter and Energy		
	Understanding Earth and Space Systems		

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<p>Session 6:</p> <p>Six Bricks Warm-Up Back-to-Back (see Appendix for full activity)</p> <p>Explore Task Have the children think about the different jobs people have when they work in a theatre, a museum, or a music hall. Have some children act out (mime) the different jobs and select others to</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> ● ● ● ● ● ●

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>guess what they are miming. Then repeat, swapping the children miming and guessing.</p>			
<p>Create Task Have each team build objects, tools, or vehicles that would help someone be successful in a job that was discussed in the Explore Task. They should think about people who are working on stage and behind the scenes.</p> <p>Share Task In their Engineering Notebooks, have the children write or draw a picture of a person in a job previously discussed. They can also draw a picture of the tools, objects or vehicles needed for the job.</p>	<p>Understanding Life Systems</p>		
	<p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •
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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

	Understanding Earth and Space Systems		
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<p>Session 7:</p> <p>Six Bricks Warm-Up Build a Bridge (see Appendix for full activity)</p> <p>Explore Task Have a discussion about how an audience at a music show might be different from an audience for a museum exhibit. Help the children recognize that people have different interests and needs. The children could share where they would like to be an audience member.</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> • • • • • •
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<p>Create Task Create a place where there would be a stage or something on display. Ask the children to think about who would be in the audience for their show. Think about how the audience would get in and out of the place safely. You</p>	<p>Understanding Life Systems</p> <p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p>	<ul style="list-style-type: none"> •
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2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>could use ramps from the STEAM Park set to make it easier and more accessible for people to enter.</p> <p>Share Task Have the teams share their solution and show what they have built to engage and entertain the people in the audience. Each team should also share how their audience will enter and exit the space they created.</p>	<p style="text-align: center;">Understanding Matter and Energy</p> <p style="text-align: center;">Understanding Earth and Space Systems</p>	<p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • •
<p>Session 8:</p> <p>Six Bricks Warm-Up Future Car (see Appendix for full activity)</p> <p>Explore Task Discuss the different types of places where people share their interests. Have the children think about what kinds of places they want to be built in the future. Examples could include a concert arena on the moon, a museum on top of a skyscraper, or a theatre under the sea.</p>	<p>STEM Skills and Connections</p>	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> • • • • • •

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2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>Create Task Before building, have each team decide who will build each part of their place. Each child should build their idea within their team and then combine them for what you imagine a future place could look like. Have the children think about who the space is for. Use pieces from the Discover and STEAM Park sets to create more possibilities.</p> <p>Share Task In their Engineering Notebooks, have the children write or draw their future space where hobbies or interests are shared. Ask them to explain how they combined their ideas to create an awesome solution.</p>	Understanding Structures and Mechanisms	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •
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2023-24 FIRST LEGO League Discover Team Meeting Guide

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<p>Session 9</p> <p>Six Bricks Warm-Up It Takes a Team (see Appendix for full activity)</p> <p>Explore Task Ask the children to reflect on their experiences throughout the sessions. Discuss the different needs of your community. What things would people in the community like to share?</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	<ul style="list-style-type: none"> • • • • • •
<p>Create Task Tell the teams to put everything they have learned about together and build a place as a team where everyone can share what they love doing with an audience. They should think about the audience that will be in the place, the people that work there, and what creative ways they will use to entertain everyone.</p> <p>Share Task Have the children share what they have built with the whole</p>	<p>Understanding Life Systems</p> <p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p>D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p>D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

class. Have them explain their place and what the audience will experience. Have teams reflect on which ideas they chose, why, and how they worked together in this session	Understanding Matter and Energy		
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<p>Session 10:</p> <p>Let's Celebrate</p> <p>Preparing the Teams Welcome the children to the event and tell them what they will do during the session. They will use their ideas to build a model together during the special challenge and share their Engineering Notebooks</p> <p>Challenge 1 and 2 At the event, challenge the teams to</p>	STEM Skills and Connections	<p>*A1.1 use a scientific research process and associated skills to conduct investigations</p> <p>*A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p>*A1.4 follow established health and safety procedures during science and technology investigations</p> <p>*A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p>*A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>*A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p>	

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Grade 1 - Science Curriculum Alignment
2023-24 FIRST LEGO League Discover Team Meeting Guide

<p>build their team model on the Discover mat in 10 minutes or less. After 10 minutes, introduce a special challenge and have them update their team model.</p>			
<p>Create Task Have each team talk about how they updated their team model for the special challenge. They can describe their favourite parts of the model and explain how they came up with their ideas.</p> <p>Reviewing the Teams</p> <ul style="list-style-type: none"> Reviewers visit teams during challenge, asking questions and seeing their Engineering Notebooks <p>Celebrate Allow time to celebrate each team's achievements.</p>	<p>Understanding Life Systems</p>		
	<p>Understanding Structures and Mechanisms</p>	<p>D2.2 identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects D2.4 describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses D2.6 identify properties of materials that enable the objects made from them to perform their intended function</p>	<ul style="list-style-type: none"> • • •
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