Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 1: Canopy Connections	Strand	Specific Expectations	Addressed
Introduction ● Think about the Core value of *Discovery*, give examples and record ways in which your team will learn new skills and investigate ideas **Activity 1 Tasks** ● Read the Explore story to learn about the Bioglow theme ● Discuss what you know about the rainforest and biodiversity ● Write or draw what your team shared and list your team goals **Activity 2 Tasks** ● Build the tree model from the Explore Set using the building instructions in Book 1 and the pieces in Bags 1 – 3 ● Discuss the different layers of the tree, and what animals live in the different layers (i.e., on the forest floor, in the canopy) **Share** ● Groups discuss what they think happened in the Explore Story and what they know about animals in the rainforest	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra		
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

● The standard is clearly addressed by program activities.
- This standard potentially could be addressed, either by actions taken when working with students or by conditions established by the program

Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 2: Creature Creators	Strand	Specific Expectations	Addressed
Introduction ● Think about how you will use the Core value of *Impact*, and give examples of ways in which to have a positive impact on others **Activity 1 Tasks** ● Build the animals in the Explore Sets using the building instructions in Book 2 and the pieces in Bags 4-6 ● Describe the animals that you built, including what makes them different from each other and where these animals live in the rainforest. **Activity 2 Tasks** ● Place the Explore Mat on a flat surface and discuss where each of the animals might live ● Change one of the animals by swapping its pieces with one of the other animals that you built and decide where this new kind of animal would live on the mat ● Describe the new animal, including its name, what it likes to eat, how it moves and whether it is friendly to other animals **Share** ● Discuss the differences between the animal models and label the animal habitats in their *Engineering Notebooks*	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra		
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 3: Animal Alarm	Strand	Specific Expectations	Addressed
Introduction ● Think about how you will use the Core value of *Teamwork* and give examples of ways in which your team works together. **Activity 1 Tasks** ● Learn to build and program a motorized model by completing Lesson 1: Animal Alarm in the *FIRST* LEGO League Explore Unit ● Change the program so that the colour changes when one of the animals from the Explore Set moves in front of the sensor **Activity 2 Tasks** ● Try other sound blocks for the Animal Alarm ● Record a new animal sound using the microphone icon ● Change the program so that your new sound plays when the animal moves by the sensor **Share** ● Groups share what they did during the session and the coding skills that they learned ● Groups discuss how scientists could detect animals with light or sound	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 4: Treehouse Camp	Strand	Specific Expectations	Addressed
Introduction ● Think about how your team demonstrates the Core value of *Fun*, and give examples of ways in which your team has fun together **Activity 1 Tasks** ● Learn to incorporate sensors into your motorized models by completing Lesson 2: Treehouse Camp in the *FIRST* LEGO League Explore Unit ● Change the program so that the treehouse roof can open slowly and talk to your team about how this model could help a scientist in the rainforest **Activity 2 Tasks** ● Change the Treehouse Camp model so that it can blend into the rainforest ● Change the program so that the roof opens for 5 seconds and then closes for 5 seconds and repeat two or three times **Share** ● Groups share what they did during the session and the coding skills that they learned ● Groups discuss how scientists study biodiversity in the rainforest	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 5: Science Helpers	Strand	Specific Expectations	Addressed
Introduction ● Think about how your team demonstrates the Core value of *Innovation*, and give examples of ways in which your team has been creative & solved problems **Activity 1 Tasks** ● Build the lifting platform from the Explore Set using the building instructions in Book 2 and the pieces in Bag 7. Add a scientist to the platform ● Try the sample code to activate the lift and raise the scientist and discuss how this model could help scientists in the rainforest **Activity 2 Tasks** ● Place the tree model and lifting platform on the mat and add two scientists to the platform ● Change the program for your lifting platform so it can be used to safely raise and lower the scientists to research something in the tree **Share** ● Groups share what they did during the session, show how they have applied coding skills, and explain how scientists collaborate and share their knowledge with each other	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 6: Research Tools	Strand	Specific Expectations	Addressed
Introduction ● Think about how your team demonstrates the Core value of *Inclusion*, and give examples of ways in which your team makes sure that everyone is respected, and their voices are heard **Activity 1 Tasks** ● Discuss what tools are used by scientists to study the rainforest, including tools needed for animal observation and to document and study plants ● Use the prototyping pieces to build a tool that could be used by a scientist to study the rainforest **Activity 2 Tasks** ● Use the building instructions in Book 2 and the pieces in bag 8 to build the research device ● Try the sample program to activate the research device, move it to different places on the mat to see what it does, and modify the program so that it is activated by different colours **Share** ● Groups discuss the tools and technology used to work in the rainforest and share what they have learned about biodiversity, so far	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
	F. Financial Literacy		

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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 7: Dream Treehouse	Strand	Specific Expectations	Addressed
Introduction ● Revisit the Core Values, with a focus on *Discovery* and record ways in which your team your team learns new skills and investigates ideas ● Use the prototyping pieces to represent this Core Value **Activity 1 Tasks** ● Read about the jobs related to biodiversity and design a treehouse where a wildlife biologist can safely watch animals ● Learn about the tools that the scientist would need to study an animal of your choice and use the prototyping pieces to build the treehouse you designed **Activity 2 Tasks** ● Use the prototyping pieces to build a tool for the treehouse that a scientist could use to study animals ● Add a plant scientist or botanist to the treehouse and build a tool or technology for the treehouse that the scientist could use to study plants **Share** ● Groups share what have learned about biodiversity jobs and about the jobs and technology used to study animals and plants in the rainforest	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra		
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 8: Team Model	Strand	Specific Expectations	Addressed
Introduction ● Revisit the Core Values, with a focus on *Teamwork* and *Fun*. Record ways in which your team works together and enjoys and celebrates what they do. ● Use the prototyping pieces to represent these Core Values **Activity 1 Tasks** ● Design and draw a team model that: ○ Includes all pats of the Explore Set and mat ○ Uses only LEGO elements ○ Uses the SPIKE Essential to motorize any part of your model **Activity 2 Tasks** ● Build your team model together on the Explore mat and discuss the different parts of your model **Share** ● Groups share what they did during the session by demonstrating and explaining their team model and program ● Review the list of required parts and identify them on the team model	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense	E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	●
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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 9: Team Poster	Strand	Specific Expectations	Addressed
Introduction ● Revisit the Core Values, with a focus on *Innovation* and *Inclusion*. Record ways in which your team solves problems and respects one another. ● Use the prototyping pieces to represent these Core Values **Activity 1 Tasks** ● Brainstorm and record what to include in each section of your team poster: ○ How you worked together as a team ○ What you learned about biodiversity ○ What you built as your team model ○ Anything else you want to share **Activity 2 Tasks** ● Use art supplies, poster board, words, drawings, and photos to create a team poster that describes your team's learning journey throughout the sessions **Share** ● Groups share what they did during the session by showing their team poster design, explaining their team journey and demonstrating how they will present their team poster to Reviewers	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
	E. Spatial Sense		
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Grade 2 – Ontario Mathematics Curriculum Alignment
2026-27 *FIRST* LEGO League Explore Bioglow Team Meeting Guide

Session 10: Prepare for Your Event	Strand	Specific Expectations	Addressed
Introduction ● Revisit the Core Values, with a focus on *Impact*. Record ways in which your team applies their learning to improve the world. ● Use the prototyping pieces to represent this Core Value **Session Tasks** ● Discuss how your team will use their team model and team poster to share their learning journey at a *FIRST* LEGO League Explore Festival, including: ○ How to describe your team model ○ How your team used innovation and creativity to explore biodiversity ○ What you learned about the season theme ○ How you used Core Values ○ What part is motorized and how you motorized it ○ What you included on your team poster ○ How your poster reflects your team's learning journey **Share** ● Look over the reviewing sheet and prepare and practice your team model and team poster presentations	A. Social-Emotional Learning (SEL) Skills in Mathematics and the Mathematical Process	problem solving: develop, select, and apply problem-solving strategies communicating: express and understand mathematical thinking selecting tools and strategies: select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	● ● ●
	B. Number		
	C. Algebra	C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events C3.2 read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	● ●
	D. Data		
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