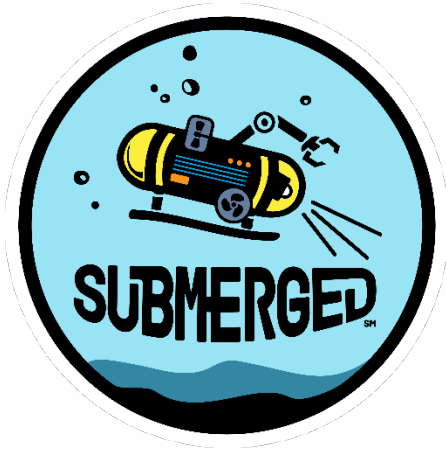




EXPLORE

# Multimedia Resources



# FIRST® LEGO® League Explore Multimedia Resources

Below is a session-by-session list of Multimedia Resources for the SUBMERGED<sup>SM</sup> season. These resources include links to websites, videos, building instructions, and other online tools related to the content of each session.

This document contains links to third-party websites which may contain articles, images, text, graphics, video, applications, software, and other content belonging to or originating from the content creators. While we conduct an initial review of such websites, FIRST is not responsible for any third-party content accessed through this guide, including its accuracy, appropriateness, completeness, offensiveness, opinions, reliability, privacy policies, or other practices of these sites. If you visit any of the sites listed in this guide, or share this third-party content with others, you do so at your own risk. You should review the applicable terms and policies, including privacy and data gathering practices, of any website to which you navigate.

You could share resources during sessions and/or encourage your students to explore them between sessions (with permission and supervision from a parent or guardian).

Go To Resources		
<a href="#">Email for General Support</a>	<a href="#">FIRST LEGO League Explore: How It Works</a>	<a href="#">Getting Started with FIRST LEGO League Explore video</a>
<a href="#">FIRST LEGO League YouTube Channel</a>	<a href="#">SUBMERGED General Season Resources</a>	<a href="#">Teamwork Makes the Dream Work FIRST LEGO League Music Video</a>
General Resources		
<a href="#">LEGO Education Support</a>	<a href="#">FIRST LEGO League (global)</a>	<a href="#">FIRST LEGO League (US)</a>
<a href="#">Impact of FIRST Programs</a>	<a href="#">Buying Replacement Parts</a>	<a href="#">FIRST LEGO League Support Videos</a>
Coach and Mentor Resources		
<a href="#">FIRST Youth Protection</a>	<a href="#">FIRST Mentor Network</a>	<a href="#">FIRST Volunteer Resources</a>
Educator Resources		
<a href="#">Skills Progression</a>	<a href="#">Standards Alignments</a>	<a href="#">Scope and Sequence Options</a>
<a href="#">FIRST Certified Professional Development</a>	<a href="#">FIRST Education Philosophy</a>	

LEGO Education Resources		
<a href="#">Self-Guided Professional Development</a>	<a href="#">LEGO Education Teacher Community</a>	<a href="#">LEGO Education Additional Lesson Content for SPIKE Essential and WeDo 2.0</a>
Equity, Diversity, and Inclusion Resources		
<a href="#">FIRST Mentoring and Coaching with FIRST videos</a>	<a href="#">Inclusive Recruitment &amp; Enrollment Strategies</a>	<a href="#">Additional Training &amp; Resources</a>

## SUBMERGED Season Resources

[Season resources](#) page includes:

- Season Launch Resources
- Links to Season Videos
- Explore Overview
- Explore Welcome Letter
- Explore Introduction
- Explore Set Building Instructions
- Student Participation Certificates
- Individuals Session Slides
- SUBMERGED Season video resources on [FIRST LEGO League YouTube Channel](#)
- [Season content](#) (logos, templates, graphics, posters, wallpapers)

## Core Values Resources

Book Resources	
The Squirrels who Squabbled by Rachel Bright	Fiction book about conflicts
A Little SPOT of Teamwork: A Story About Collaboration and Leadership by Diane Alber	Fiction book about teamwork
Brave Irene by William Steig	Fiction book about perseverance
The Invisible Boy by Patrice Barton	Fiction book about inclusion
My Mouth is a Volcano! by Julia Cook	Fiction book about taking turns
The Little Red Pen by Janet Stevens	Fiction book about cooperation
Going Places by Paul and Peter Reynolds	Fiction book about creativity
Web Resources	

## Robotics Resources

<a href="#">FIRST at Home activities</a>	A variety of free resources, activities and links
<a href="#">FIRST Core Values through Social, Emotional Learning Activities</a>	Part of <i>FIRST</i> at Home
<a href="#">33+ Awesome Team-Building Games and Activities for Kids</a>	We Are Teachers
<a href="#">Team Building for Kids: A Complete Guide</a>	Venture Team Building

### Team Management and Goal Setting Resources

<a href="#">How to Do Goal Setting With Your Students This School Year</a>	Article from Weareteachers.com about setting goals with your students
<a href="#">How To Set Goals (4 Easy Steps) (4:40)</a>	Video from Rocket Kids about ways to set goals
<a href="#">LearnStorm Growth Mindset: How to write a SMART goal (2:52)</a>	Video from Khan Academy about writing SMART goals
<a href="#">Keeping Organized</a>	Tips from Droid Robotics on staying organized
<a href="#">The 9 Best Online Tools For Student Collaboration</a>	Article from Weareteachers.com with great tools for student collaboration digitally

### Robot Design Resources

<a href="#">Technical Resources</a>	Links to technical resources for Explore
<a href="#">Yoshihito Isogawa's YouTube Channel</a>	SPIKE Essential building ideas from the author

### Engineering Design Process, Design, and Computational Thinking

<a href="#">What is Computational Thinking?</a>	Article by Teach Your Kids Code about coding
<a href="#">The Engineering Process: Crash Course Kids #12.2 (5:16)</a>	Video by Crash Course Kids to explain the engineering design process to your students
<a href="#">Engineering Design Process Curriculum</a>	Various lessons from Teach Engineering.org
<a href="#">Design Thinking Resources for Educators</a>	Article by Innovation Training for educators to understand design thinking
<a href="#">Design Thinking: A Problem Solving Framework (5:22)</a>	Video from Edutopia providing examples of design thinking for educators

## LEGO Education SPIKE Essential Resources

- [Software Download](#)
- [FIRST LEGO League Explore Unit](#)
- [Getting Started with SPIKE Essential](#)
- [SPIKE Essential Unit Plans](#)
- [Product Support Resources](#)

## LEGO Education WeDo 2.0 Resources

- [Getting Started with WeDo 2.0](#)
- [Download WeDo 2.0 Software and View System Requirements](#)
- [WeDo 2.0 Product Support](#)
- [WeDo 2.0 Lessons](#)

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## SUBMERGED Resources

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### General Ocean Resources

Video Resources	
<a href="#">OceanX - YouTube</a>	Informational videos from OceanX
<a href="#">Live cams   Monterey Bay Aquarium</a>	Observe ocean animals at the Monterey Bay Aquarium
Web Resources	
<a href="#">Just for Kids (noaa.gov)</a>	A range of activities and videos about the ocean and marine life.
<a href="#">Ocean   NASA Space Place – NASA Science for Kids</a>	Games, crafts, activities and media from NASA
Book Resources	
Questioners Series by Andrea Beaty	Great series of books on STEAM topics

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## SUBMERGED Session Resources

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### Session 1: Dive In!

Video Resources	
<a href="#">Ocean View   Ready, Set, Zoom! (youtube.com)</a> (2:11)	Short video about exploring coral reefs

<a href="#">Brian Skerry: Swimming with Giants   Explorer Academy: The Truth Behind (youtube.com)</a> (2:46)	Short video about the life of an underwater photographer
<b>Web Resources</b>	
<a href="#">The Science Behind How Hobbies Can Improve Your Brain Health!</a>	Article from Mautushi Paul on how hobbies improve brain health
<b>Book Resources</b>	
"Ocean Animals: Who's Who in the Deep Blue" by National Geographic Kids	Introduces young children to the types of animals that live in the ocean.

## Session 2: Ocean Layers

<b>Video Resources</b>	
<a href="#">Ocean Trivia for kids (youtube.com)</a>	Video with ocean trivia
<a href="#">Coolest Ocean Facts!   SciShow Kids Compilation (youtube.com)</a>	Video by SciShow Kids about exciting ocean facts
<b>Web Resources</b>	
<a href="#">Smithsonian Ocean Layers</a>	Images and graphics to illustrate the different ocean layers
<a href="#">Discover your World - NOAA</a>	Activities and graphics related to the exploration of the planet
<b>Book Resources</b>	
"The Big Book of the Blue" by Yuval Zommer	A book about general ocean facts

## Session 3: Sunlight Zone

<b>Video Resources</b>	
<a href="#">Explore the layers of the ocean and animals   Science for kids   Ocean science   Jocelyn Presents (youtube.com)</a> (5:03)	Video introducing and exploring different ocean layers
<a href="#">Kids Meet a Marine Biologist   HiHo Kids (youtube.com)</a>	Kid-friendly interview with a Marine Biologist

Web Resources	
<a href="#">Deep in the Sea - TIME for Kids</a>	Graphics and information on ocean layers and the life found in each zone
Book Resources	
"Over and Under the Waves" by Kate Messner	Explores ocean life found in the sunlight zone

## Session 4: Twilight Zone

Video Resources	
<a href="#">Octonauts - The Artificial Reef   Cartoons for Kids   Underwater Sea Education (youtube.com)</a> (10:00)	Octonauts video about the creation and population of artificial reefs
<a href="#">How Do Deep Sea Fish Survive the Extreme Pressure? (youtube.com)</a>	Video about how animals have adapted to live in extreme environments
Web Resources	
<a href="#">Reef of the World - National Geographic</a>	Educational resource with information on reefs found all over the world
<a href="#">New Artificial Reefs   Office of National Marine Sanctuaries (noaa.gov)</a>	Article on the creation of artificial reefs in the United States
Book Resources	
"A House for Hermit Crab" by Eric Carle	A books that introduces the concept of creating homes for ocean animals

## Session 5: Abyssal Zone

Video Resources	
<a href="#">Journey into the Deep Sea - VR   National Geographic (youtube.com)</a> (9:00)	A virtual reality video that allows you to pan and be immersed in the deep sea
Web Resources	
<a href="#">OceanX    Deep Sea Vehicles</a>	Images and information on the deep sea vehicles operated by OceanX

<a href="#">Science &amp; Technology: Exploration Tools: NOAA Office of Ocean Exploration and Research</a>	A comprehensive list of tools used in ocean exploration
<b>Book Resources</b>	
"The Abyss: Exploring the Deep Ocean" by Sally M. Walker	Book about the mysterious and fascinating world of the ocean abyss

## Session 6: Deep Sea Discovery

<b>Video Resources</b>	
<a href="#">Top 10 Most UNUSUAL Deep Sea Creatures Ever Discovered (youtube.com)</a>	Video showing unusual creatures found at the bottom of the ocean
<a href="#">10 Amazing Sea Creatures You've Never Seen Before (youtube.com)</a>	Video showing unusual creatures found in other parts of the ocean
<b>Web Resources</b>	
<a href="#">New Artificial Reefs   Office of National Marine Sanctuaries (noaa.gov)</a>	Article about the creation of artificial habitats in the Florida Keys
<a href="#">Newly Discovered Species   STEM</a>	Lesson plans and teacher notes for activities about discovering new animals

## Session 7: Exploration Station

<b>Video Resources</b>	
<a href="#">Ocean Explorer: Katy Croff Bell   Best Job Ever   Nat Geo Kids (youtube.com) (2:30)</a>	Oceanographers talk about the work they do to explore and understand the seas
<a href="#">What's NASA Trying to Find at the Bottom of the Ocean? (youtube.com)</a>	Video about scientists and what they hope to learn by working at the bottom of the ocean
<b>Web Resources</b>	
<a href="#">Rehabilitation   The Marine Mammal Center</a>	Article about the ways different animals are rescued and returned to the ocean
<a href="#">NOAA, the Proteus group plan 'underwater space station' for research (usatoday.com)</a>	Article about the futuristic plans scientists have to live and work underwater



## Sessions 8 & 9: Team Model

Video Resources	
<a href="#">Recap of the 2019 FIRST LEGO League World Festival in Houston</a> (1:10)	*Have your students watch for examples of team models in the video
<a href="#">Science of Innovation: What Is Innovation?</a> (6:56)	Video from NBC News Learn about innovation and the process for improving
<a href="#">Designing and Building the LEGO Model &amp; Creating the Team Poster</a> (30:24)	Coach webinar from <i>FIRST</i> in Texas
Web Resources	
<a href="#">There's Got to be a Better Way – Developing a Product</a>	Resources from Fun Kids – UK children's Radio Station on how to develop a product and share it

## Sessions 10 & 11: Team Poster

Video Resources	
<a href="#">Sessions 10 &amp; 11 - Poster</a> (0:42)	Video of <i>FIRST</i> LEGO League Explore Poster
<a href="#">Recap of the 2019 World Festival</a> (1:10)	*Watch for example team posters in the video
Web Resources	
<a href="#">6 tips to create awesome science posters</a>	Fizzics Education
<a href="#">Team Poster - Explore</a>	Tips from the IET in the United Kingdom

## Session 12: Prepare for Event

Video Resources	
<a href="#">How to Prepare for your Festival</a> (1:39)	Video by IET on the basics of hosting an event
<a href="#">Celebrate - GoNoodle Dance Song</a> (2:34)	Video & Song to play for students to dance along
<a href="#">Presentation Skills, Part 1</a> (1:44) <a href="#">Presentation Skills, Part 2</a> (1:31)	Videos from Green Ivy Schools to teach students how to give a great presentation
Web Resources	
<a href="#">Customizable Student Certificates</a>	Printable certificates to award to each student

<a href="#">Event Introduction</a>	Overview of what the event will look like
<a href="#">Reviewing Sheet</a>	Reviewing questions, rubric, and awards

## Career Resources

General Career Resources	
Visit the <a href="#">Learning Lab</a> and search careers	PBS Learning Media
<a href="#">Amazon Future Engineer Class Chat</a>	Amazon
<a href="#">Career Exploration Lesson Plans</a>	Nebraska Department of Education
<a href="#">Career Resources for Elementary Grades</a>	Workforce Solutions
<a href="#">Career Exploration</a>	Profiles from the US Bureau Labor & Statistics
<a href="#">Career Exploration Kahoot Course</a>	Kahoot Courses for learning about careers
<a href="#">X-STEM All Access</a>	YouTube Playlist with STEM interviews

## Additional Resources

Extension Activity Resources	
<a href="#">What is a Robot?</a>	Lesson plan from PBS Learning Media
<a href="#">Wild-Inspired Robotic Arms</a>	Activities from PBS Learning Media
<a href="#">Engineering for Good</a>	Project-based Unit from PBS Learning Media
<a href="#">Books on Inventors</a>	Inventive Kids
<a href="#">Invention Education Curricula</a>	Links to invention lesson plans from Invent Ed
<a href="#">Drawing Designs in Detail</a>	Hands-on activities from teachengineering.org

