



EXPLORE

Multimedijos Resursai



FIRST® LEGO® League Explore Multimedijos Resursai (anglų kalba)

Žemiau pateikiamas SUBMERGEDSM sezono daugialypės terpės išteklių sąrašas po sesijos. Šie ištekliai apima nuorodas į svetaines, vaizdo įrašus, kūrimo instrukcijas ir kitus internetinius įrankius, susijusius su kiekvienos sesijos turiniu.

Šiame dokumente yra nuorodų į trečiųjų šalių svetaines, kuriose gali būti straipsnių, vaizdų, teksto, grafikos, vaizdo įrašų, taikomųjų programų, programinės įrangos ir kito turinio, priklausančio turinio kūrėjams arba kilus iš jų. Nors atliekame pirminę tokių svetainių peržiūrą, FIRST nėra atsakinga už jokių trečiųjų šalių turinį, pasiekiamą per šį vadovą, įskaitant jo tikslumą, tinkamumą, išsamumą, įžeidžiamumą, nuomonės, patikimumą, privatumo politiką ar kitą šių svetainių praktiką. Jei lankotės bet kurioje iš šiame vadove išvardytų svetainių arba dalijatės šiuo trečiosios šalies turiniu su kitais, tai darote savo pačių rizika. Turėtumėte peržiūrėti bet kurios svetainės, į kurią naršote, taikomas sąlygas ir politiką, įskaitant privatumo ir duomenų rinkimo praktiką.

Sesijų metu galite dalytis ištekliais ir (arba) paskatinti savo mokinius juos tyrinėti tarp užsiėmimų (gavę tėvų ar globėjų leidimą ir priežiūrą).

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

LEGO Education Resources		
Self-Guided Professional Development	LEGO Education Teacher Community	LEGO Education Additional Lesson Content for SPIKE Essential and WeDo 2.0
Equity, Diversity, and Inclusion Resources		
FIRST Mentoring and Coaching with FIRST videos	Inclusive Recruitment & Enrollment Strategies	Additional Training & Resources

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

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

Team Management and Goal Setting Resources

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

Robot Design Resources

Technical Resources	Links to technical resources for Explore
Yoshihito Isogawa's YouTube Channel	SPIKE Essential building ideas from the author

Engineering Design Process, Design, and Computational Thinking

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

SUBMERGED Resources

General Ocean Resources

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

SUBMERGED Session Resources

Session 1: Dive In!

Video Resources	
Ocean View Ready, Set, Zoom! (youtube.com) (2:11)	Short video about exploring coral reefs

Brian Skerry: Swimming with Giants Explorer Academy: The Truth Behind (youtube.com) (2:46)	Short video about the life of an underwater photographer
Web Resources	
The Science Behind How Hobbies Can Improve Your Brain Health!	Article from Mautushi Paul on how hobbies improve brain health
Book Resources	
"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

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

Session 3: Sunlight Zone

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

Web Resources	
Deep in the Sea - TIME for Kids	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	
Octonauts - The Artificial Reef Cartoons for Kids Underwater Sea Education (youtube.com) (10:00)	Octonauts video about the creation and population of artificial reefs
How Do Deep Sea Fish Survive the Extreme Pressure? (youtube.com)	Video about how animals have adapted to live in extreme environments
Web Resources	
Reef of the World - National Geographic	Educational resource with information on reefs found all over the world
New Artificial Reefs Office of National Marine Sanctuaries (noaa.gov)	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	
Journey into the Deep Sea - VR National Geographic (youtube.com) (9:00)	A virtual reality video that allows you to pan and be immersed in the deep sea
Web Resources	
OceanX Deep Sea Vehicles	Images and information on the deep sea vehicles operated by OceanX

Science & Technology: Exploration Tools: NOAA Office of Ocean Exploration and Research	A comprehensive list of tools used in ocean exploration
Book Resources	
"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

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

Session 7: Exploration Station

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

Sessions 8 & 9: Team Model

Video Resources	
Recap of the 2019 FIRST LEGO League World Festival in Houston (1:10)	*Have your students watch for examples of team models in the video
Science of Innovation: What Is Innovation? (6:56)	Video from NBC News Learn about innovation and the process for improving
Designing and Building the LEGO Model & Creating the Team Poster (30:24)	Coach webinar from <i>FIRST</i> in Texas
Web Resources	
There's Got to be a Better Way – Developing a Product	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	
Sessions 10 & 11 - Poster (0:42)	Video of <i>FIRST</i> LEGO League Explore Poster
Recap of the 2019 World Festival (1:10)	*Watch for example team posters in the video
Web Resources	
6 tips to create awesome science posters	Fizzics Education
Team Poster - Explore	Tips from the IET in the United Kingdom

Session 12: Prepare for Event

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

Event Introduction	Overview of what the event will look like
Reviewing Sheet	Reviewing questions, rubric, and awards

Career Resources

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

Additional Resources

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

