

Junior *FIRST*LEGO® League 2005 Ocean Odyssey Challenge Instructions



Welcome teams! This year's Junior *FIRST*LEGO League (JFLL) Challenge aligns with the 2005 *FIRST*LEGO League (FLL) Challenge: **Ocean Odyssey**. Like the older students in FLL, your team will explore through building and research. 99% of our oceans have not been explored and this is your team's chance to invent marine life you think we may discover.

Scientists are always discovering new plants and animals beneath the surface of the ocean. What do you think we will find? This is your chance to build a model of newly-discovered marine life, plant or animal, and a motorized submarine, water vehicle or scuba diver to explore your model and others. At your tournament, you will connect your base plate to other plates to create a huge underwater scene.

Building your team

A JFLL team consists of up to 5 members, ages 6 to 9 years old and at least one adult mentor. We also encourage mentorship from FLL team members, family and school or community volunteers who support the JFLL team.

It's customary for teams to come up with a team name. Deciding on the team name can be an activity at the team's first meeting. Share the team name on the team's poster at the JFLL Expo.

Release and Consent forms

Each team member, coach and mentor participating at a JFLL Expo event must complete a Release and Consent form and bring to the event. Coaches will turn in all Release and Consent forms to JFLL Expo organizers on arrival. A PDF file of the Release and Consent forms can be found on the JFLL section of the www.firstlegoleague.org/us web site.

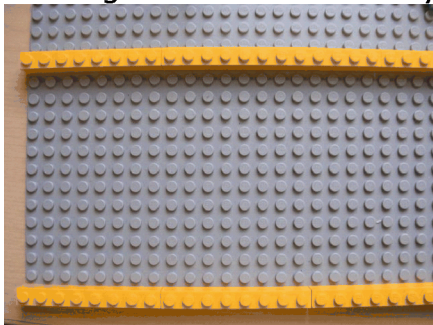
Before the tournament, your team will

1. Decide on a plant or animal you think could be discovered someday.
2. Visit or interview experts in marine sciences about plants and animals that already exist. You might visit a local aquarium, university or even a pet store that sells fish and other aquatic animals and plants.

3. Think about the habitat where your plant or animal might live. Does it live in warm water or cold? Deep water or shallow? Near a coast or far, far away? In a coral reef, under an iceberg or in a kelp forest? Does it dwell on a rocky or sandy ocean floor or does it float on the surface of the water? What does it eat and what eats it? Talk about how your plant or animal might change to survive in its environment. Does it change color or is it a plant or animal that looks like a rock? What do you do to impact the plant or animal you have created?
4. Create a "Show Me" poster about your new marine life. Use pictures and words to explain the life form you think we might find in our oceans. Be sure to name your new marine life!



5. Build your segment of the travel way (12 dots wide) on the grey baseplate. Your travel way can run along one edge of the baseplate or across the middle of it. See the following base plate set up picture showing the correct travel way size.

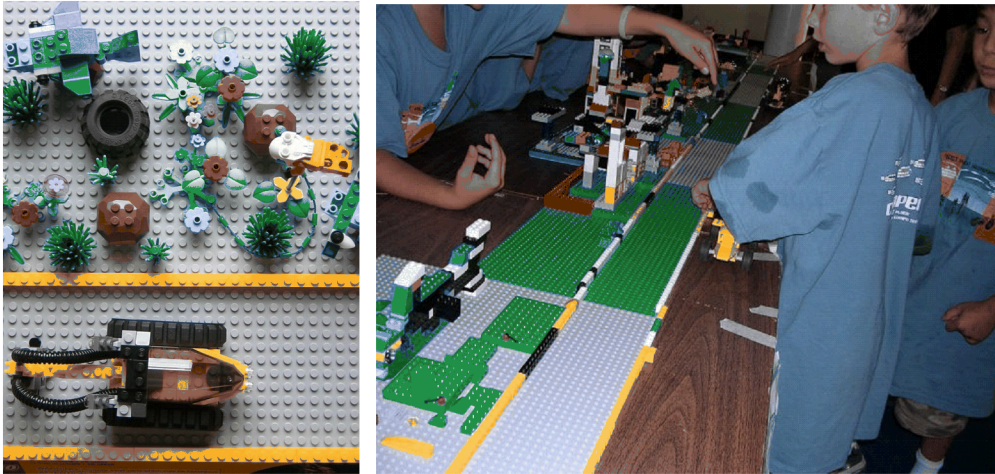


6. Use the motor provided to build a motorized object that can travel down in front of your model. This might be a submarine, a scuba diver, a boat or something your team invents. The motorized object should be able to move far enough to travel along several base plates while viewing the sea life along the way.
7. As a team, use any LEGO bricks to build a model of your plant or animal in its environment (please refrain from using real water!). Unless you

would like it to be touched by passing vehicles and divers, keep your marine life model out of the travel way.

8. Prepare to talk to the Model Reviewers at the Expo about why you chose and built your model.

You will be connecting your baseplate to other team's plates when you get to the Expo, so the travel ways must be a uniform width and your model must not extend beyond the perimeter of the baseplate. See the following Base Plate and Field Set up pictures:



Teams will drive their motorized objects through the connected models at the tournament. With the exception of the motorized object, there is an open parts policy – use whatever LEGO bricks you wish except electronic pieces (such as the LEGO MINDSTORMS RCX and motors). There is an optional LEGO Ocean Odyssey kit (#W974888) available to purchase separately.



Go to www.legoeducation.com for more details.

Note to Team Coach or Mentor: Teams can and should fine-tune their models during the build meetings. Ask why they built things a certain way, or what would an animal's babies look like, what an animal eats, how a plant gets nourishment, where plants grow, etc. Challenge the kids to think past their first thoughts. Help them explore more details.

At the tournament, your team will

1. Connect your baseplate to other baseplates to make a line of models and make it possible for teams to move their motorized objects down the waterway.
2. Display your drawings on a poster at your table area (in the JFLL pit).
3. Present your drawings and describe your model to the Model Reviewers. Be ready to talk about:
 - a. The marine life you created.
 - b. Where and how it lives.
4. Have a chance to take turns moving your motorized object down the waterway.
5. Have time to think of ways to make your motorized object work better or improve upon your marine model based on the others you see. Be sure to bring some extra LEGO bricks!

Team Roles

The coach's job is to:

- Help the team brainstorm.
- Mentor the team.
- Facilitate teamwork.
- Divide the project work.
- Provide tips for building the motorized object.
- Help test the motorized object's abilities: Does it fit within the travel way? Can it go the distance?
- Discuss tie-in of this project to the 2005 FLL challenge: Ocean Odyssey.
- Manage emotions and expectations. Talk about teamwork.

The student's jobs are to:

- Brainstorm ideas.
- Work as a team to build, communicate and to learn.
- Appreciate each other's input.
- Have fun!

Support

For any LEGO Ocean Odyssey Make & Create related questions, teams should contact LEGO Consumer Services via phone (800-835-4386) or email via the www.LEGO.com site and clicking on Customer Service.

For any JFLL challenge related questions, teams should contact JFLLsupport@usfirst.org.

For any FLL or JFLL program related questions, teams should contact the FIRST Operations group at 800-871-8326.

For any JFLL Expo support related questions, teams should contact the Operational Partner holding the event.



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