

FIRST® LEGO® League Discover SUBMERGEDSM Building Instructions

Welcome to text-based instructions from Bricks for the Blind. Before you start building, here are some terms we'll be using:

- In Front of/Front: towards you.
- Behind/Back: away from you.
- Up: towards the ceiling.
- Down: towards the floor.
- Stud: the bump on a LEGO brick. Example: A 2x1 brick has two studs on it.
- Vertically: going from front to behind.
- Horizontally: going from left to right.
- Upright: pointing up towards the ceiling.
- That one/ppp: previously placed piece.
- Plate: piece with studs.
- Tile: smooth piece without studs (unless otherwise specified)
- Symmetrically: a mirror image. Example: If you place a 2x1 brick with technic connector on the front wall at the right, connector to the front, and then place another such piece symmetrically on the back wall, at the right, the technic connector of the second piece should point to the back, since it will be placed symmetrically.
- Centered-vertically: even amount of space in front of and behind the piece
- Centered-horizontally: even amount of space left and right of the piece.
- Row: studs lined up horizontally (left to right/side to side).
- Column: studs lined up upright or vertically (top to bottom/back to front).
- Standing upright: the piece is perpendicular to the ground, like a wall.
- Lying flat: the piece is parallel to the ground, like a piece of toast which fell off the table.
- Anti-stud: the portion of a piece which accepts studs, like the bottom of a plate.
- Jumper plate: a 1x2 plate with a single stud on top, or a 1x3 plate with only two studs on top.

For builders with low vision, or a sighted building partner who may want to follow along with the printed visual instructions that come with each set.

PDF versions will be provided. As low vision users may benefit from viewing the instructions on a personal device where they can zoom in on content and use assistive technologies to enhance the visuals.

Sorting the pieces:

To begin a successful build, it helps to sort the pieces into groups, bags or small containers. Have a sighted friend or family member do this in advance following the instructions below. You will see that the pieces should be sorted into groups according to the building steps in the set. Doing this in advance makes locating the pieces easier. See below on how to sort the pieces to correspond to the steps in this set. Number the containers using letters A-Z, numbers or meaningful names. The parts will be collected into a small number of steps in the instructions. Example: Steps 1-3 means collect all the parts used in steps 1, 2 and 3, and put them in one container.

Build 1: Submersible

This build is 6 pieces, and 6 building steps.

Sorting Instructions:

This LEGO set comes in the bag labeled 0. Sort the pieces into groups as described below. Note that there are no visual instructions for these builds. If you are following along, you can find pictures in the FLL Discover Division instructions.

Build 1 (1 group of bricks)

Group 1 contains all pieces for the first build, which includes the following pieces:

- The little girl minifigure
- The diver minifigure
- The yellow camera
- The yellow submarine base
- The blue submarine top
- The yellow propeller

Building Instructions:

Minifigures.

1. The first minifigure is a little girl. She is wearing light blue pants, a white polka dot shirt, and a pink vest. She has red hair in two buns on top of her head.
2. The second minifigure is a diver wearing a teal wetsuit and a snorkel. Put the yellow camera in the diver's hands. Cool!

Main build 1: Submarine

1. Put the yellow submarine bottom in front of you so the fin (on the bottom) is on the right. Great job!
2. Now you can lift the top of the submarine off to put the little girl minifigure inside the submarine while the diver swims outside.
3. Put the blue submarine top, with the three fins on the right side, on top of the submarine bottom. There should be a pin sticking out the right side. Awesome!
4. Push the hole in the center of the yellow propeller onto the pin on the submarine. The smooth side of the propeller should be on the right. Push hard until it clicks and can spin easily. You may need to ask an adult for help, this is hard to push on! Well done!

Congratulations! Now this build is complete!

Build 2: Small Reef

This build is 11 pieces, and 11 building steps.

Sorting Instructions:

Build 2 (5 groups of bricks)

Group 1 contains the following pieces for steps 1-2:

- A pale yellow 4x8 half circle plate.
- A light blue 1x1 brick with five-pointed flower petals

Group 2 contains the following piece for step 3:

- A light green 1x1 plate with five leaves which form a shallow dish shape

Group 3 contains the following piece for step 4:

- A pink 1x1 brick with five rounded flower petals which curve slightly downward

Group 4 contains the following pieces for steps 5-7:

- A light green 1x1 brick with a flat bush which stands upright
- A yellow 2x3 brick with one rounded bottom edge
- A light green 2x4 arch brick

Group 5 contains the following pieces for steps 8-9:

- A purple 1x1 brick with five rounded flower petals which curve slightly downward
- A light green 4x4 brick which looks like a bumpy rock

Group 6 contains the following pieces for steps 10-11:

- An orange 1x1 brick with a flat bush which stands upright
- An orange butterfly fish

Main build 2: Coral Reef

Open group 1.

1. Put a light-yellow half circle plate, in front of you, with the straight side on the left. Nice work!
2. Put a blue piece with five-pointed flower petals on the yellow plate so it is on the fourth row from the front, on the third stud from the left. There should be one stud to the right of it and two in front of it.

Open group 2.

3. Put a piece with five pointy light green leaves on the yellow plate so it is on the second row from the front and all the way to the left. Well done!

Open group 3.

4. Finish the flower by putting a piece with pink five rounded petals on the piece with leaves. Yay!

Open group 4.

5. Count back two rows from the first, blue flower and put a tall, flat light green bush piece there. Great work!

6. Find a bright yellow orange 2x3 piece that has a curve under on one side. Put this piece on the back two rows of the yellow plate with the curve on the left. Make sure the curve part overhangs on the left. The piece will connect to three studs. Whew!

7. Put a light green arch, horizontally, on the left column of the last piece. It will overhang. Nice work!

Open group 5.

8. Count three studs from the left on the front row of the arch and put a purple flower there. Excellent!

9. Find a light green bumpy rock. Using the right studs, push it under the left side of the arch. Super!

Open group 6.

10. Put an orange tall, flat bush on the front stud of the previous piece. Almost there!

11. Now put an orange butterfly fish with black and white stripes in front of the reef. He can swim around and look at the flowers and coral, or maybe he can swim past the submarine!

Congratulations! Now this build is complete!

Build 3: Beach

This build is 14 pieces, and 14 building steps.

Sorting Instructions:

Build 3 (5 groups of bricks)

Group 1 contains the following pieces for steps 1-2:

- A pale yellow 4x8 half circle plate
- A yellow 1x2 tall brick

Group 2 contains the following pieces for steps 3-4.

- A transparent blue 1x2 tall brick
- A light green 2x2 plate with round edges like leaves which are flat on top

Group 3 contains the following piece for step 5:

- A pink 1x1 brick with five rounded flower petals which curve slightly downward

Group 4 contains the following pieces for steps 6-9:

- A red 1x1 brick with five rounded flower petals which curve slightly downward
- A light green 2x3 brick with one rounded bottom edge
- A green flexible tube with leaves on it
- A yellow 2x2 brick

Group 5 contains the following pieces for steps 10-14:

- A pale green slide
- A light blue 4x4 quarter circle plate
- A yellow 1x1 brick with five rounded flower petals which curve slightly downward
- A gray whale
- A green turtle

There are four additional bags of bricks labeled 1-1, 1-2, 1-3 and 1-4. Each bag contains 6 differently colored bricks (red, light blue, blue, yellow, orange, green). These bricks are to be used {FIRST to help here, by giving some idea what these bricks are to be used for}

Main build 3: Beach

Open group 1.

1. Find a light yellow half circle plate. Put it in front of you, with the straight side at the back like a smiley mouth. Great!
2. Put a yellow 1x2 tall brick, horizontally long, all the way to the left, on the back row of the yellow plate. Nice job!

Open group 2.

3. Put a see-through blue 1x2 tall brick, vertically long, in front of the right stud of the yellow tall piece. Woohoo!
4. Put a light green 2x2 plate with rounded edges on the last two pieces so it covers all of the studs except the front one of the see-through blue piece.

Open group 3.

5. Put a pink flower with five rounded petals on the front left stud of the previous piece. Nicely done!

Open group 4.

6. Count one stud in from the front left stud on the baseplate and put a red flower one stud back. The petals of this flower should be just to the right of the see-through tall brick.

7. Put a light green 2x3 brick with one side curved under, on the second and third columns from the right on the yellow plate. This piece will connect with four studs. The curve side should be facing back and overhang to the back. Awesome job!

8. Put a green flexible tube with leaves on the back right stud of the previous piece. One end of this should be left loose for now.

9. Put a bright light orange 2x2 brick in front of the last piece. This goes on top of the light green 2x3 brick and the front sides of these two pieces should be even.

Open group 5.

10. Put the top part of a light green slide on the right two studs of the previous piece. The slide should slide down and to the right.

11. Put a light blue 4x4 quarter circle plate (like a big pizza slice), with the straight sides at the back and the left, under the slide so the slide connects all the way to the back and left on the blue plate. Awesome job!

12. Put a yellow flower on the second row from the front and all the way to the right on the blue plate. You got this!

13. Now, attach the other end of the flexible tube with leaves on the back right corner of the blue quarter circle plate. Well done!

14. Now put a gray whale and a green turtle in front of the beach. They can swim around offshore!

Congratulations! Now this build is complete!

Thank you so much for building this set!

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