

FIRST® LEGO® League Challenge SUBMERGEDSM Building Instructions

Build 6: Shipwreck Aft

This build is 142 pieces, and 63 building steps.

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.

A note on LEGO Technic™ part names. These parts are somewhat different from regular LEGO bricks. Here are some definitions in case the builder or helper is not familiar with LEGO Technic™.

Axles - An axle is a connector which has an X shaped cross-section. Because their cross section is not round, anything connected to an axle using an axle-hole will rotate with that axle. Axles are longer than they are wide, and the length of an axle corresponds with how many bricks long it is. Aka a 3L axle is three bricks long. Axles come in a variety of lengths, with a 2L axle being the shortest available. They may be combined with pins, or have circular stops on them. A stop prevents the axle from sliding through an axle-hole at a specific point on the axle.

Pins - A pin is a connector which has a circular cross section and a flanged notch out of one or both ends. This flanged notch allows them to click into bricks with a pin-hole. Pins come with and without friction ridges, which are small bumps on the pin which prevent them from rotating freely. For standard pins, black is a high friction pin, and gray is a low friction pin. A standard length pin is two brick lengths long, with a stop in the middle. This prevents a brick from being pushed from one side of the pin to the other. A 1L pin is one brick long and still retains the stop, however it also includes a hollow stud at the other end. A 3L pin is three bricks long, and only contains a stop at one side, allowing two bricks to be pushed onto the other side of the pin. Pins may also have one side which is an axle.

Lift-arms - A lift-arm is a basic structural element, similar to a brick or a plate, but usually without any studs. It is a beam with rounded ends and with holes in it, with the same spacing as the studs on a LEGO brick. lift-arms come in a variety of lengths, including a 1x1 lift-arm which looks like a cylinder. Thick lift-arms are as wide as a LEGO brick, and thin lift-arms are half as wide as a LEGO brick, but not the same thickness as a LEGO plate! The holes in a lift-arm arm may accept axles or pins. They also come in a variety of shapes, including tees, ells and triangles.

Gears - A gear is a functional element. They are typically discs with teeth on the outside, there are also worm gears which look like a spiraling cylinder! Gears connected by axles transmit or even transform rotational motion!

Axle and Pin Connectors - These elements are typically smaller than lift-arms and are used to connect some combination of pins or axles. They might have pins or axles, as well as axle or pin-holes. They have a lot of different angle combinations! The simplest just connects two axles or pins together in a straight line.

Bushes/Bushings - LEGO Technic™ uses bushes largely as spacers, but they also can reduce friction between rotating parts, or can form useful elements such as handles. Bushes are typically light gray, generally cylindrical, and have an axle-hole running through the middle. They have a flange at the front and back to make them easier to pull on and off.

Technic™ Bricks and Plates – There are also regular bricks and plates that are adapted for use with Technic™ elements. Technic™ bricks have holes for either pins or axles on the sides and are only one brick wide. One of the most common of these is a 1x2 brick with a single pin hole. Most often, these bricks have pin holes, not axle holes. Technic™ plates have holes on the flat surface between the studs and are a minimum of two bricks wide. The holes in these plates can accept pins, or can allow an axle to pass through and still spin.

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. 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:

This LEGO set comes in the bags labeled 12-13. Sort the pieces into groups as described below. Note that where there are multiple colors of the same brick in a step, the colors will be split across two groups to make telling the difference easier for the builder! LEGO includes a few spare parts in case you lose something. Set these into their own group away from the rest, in case you need them later.

Build 5 (13 groups of bricks)

Group A contains all of the black 2L pins from this bag. These pins have friction ridges.

Group B contains all of the blue 3L pins from this bag. These pins have friction ridges.

Group C contains all of the blue 2L axle/pin combos from this bag. These pins have friction ridges.

Group 1 contains the pieces for steps 1-5.

Group 2 contains the pieces for steps 6-11.

Group 3 contains the pieces for steps 12-13.

Group 4 contains the pieces for steps 12-22.

Group 5 contains the pieces for steps 23-31.

Group 6 contains the pieces for steps 32-41.

Group 7 contains the pieces for step 42-48.

Group 8 contains the pieces for steps 49-63.

Building Instructions:

Main build.

Open bags 12-13:

Open groups A, B, C and 1. You will use the pins from groups A, B and C throughout the build.

1.1. Now we'll build the aft, or back part of the shipwreck. The ship has been down here for a long time, but there still might be some treasure to be found. Or maybe you should let the ship's new resident keep it. We'll start by building the base of the shipwreck. Place a dark gray 9L liftarm, vertically with the holes facing left and right, in front of you.

1.2. Push two blue 3L pins from group B, with the stop rings on the left side, from the right into the fourth holes from both the front and back of the previous piece. Push them in until they stop. They should extend 2L to the right. These also have friction ridges and should not spin easily.

2. Push a dark gray 9L liftarm, vertically with the holes facing left and right, from the right over the previous two pieces so its sides are even with the first 9L liftarm.

3. Find a dark gray 3x3x1 square liftarm. This piece is shaped like a square with five holes forming a cross on the flat sides. Two sides are rounded, and the other two sides have two holes each. Push this piece, laying flat with the rounded sides on the front and back, from the right onto the two pins on the right side of the build.

4. Push two blue 3L pins from group B, with the stop rings on the right side, from the left into the second holes from both the front and back of the left 9L liftarm. Push them in until they stop. They should extend 2L to the left. These also have friction ridges and should not spin easily.

5.1. Now we'll start building the wreck's new resident, a giant squid! We'll start with the two tentacles the squid is using to prop up its head. Find a red axle and pin connector #4. This piece has two 1L axle connectors which form an angle slightly less than 180 degrees, and a perpendicular pin hole between them. Place this piece in front of you, with one axle connector facing left and the other facing to the front right. The pin hole should face up.

5.2. Push a blue 3L pin from group B, with the stop ring at the bottom, down into the pin hole of the previous piece. It should extend 2L straight up.

5.3. Push a red 1L liftarm down over the previous piece. Push it all the way down.

5.4. Push another red axle and pin connector #4, in the same orientation as the first, down onto the pin.

5.5. Push two blue 2L axle/pin combos from group C, with the axle at the right, from the left into the axle holes on the left side of the two axle and pin connectors. Repeat this symmetrically on the other side of the axle and pin connectors.

5.6. Now, rotate these two tentacles so they are in a column with one pair of pins pointing down, and the other pointing up and to the left. Push this assembly down into the front and back holes on the square liftarm on the right side of the base.

Open group 2.

6.1. Now we'll build the squid's head. Set the wreck base aside for now. Find a red 7L liftarm with perpendicular holes. This looks like a normal 7L liftarm, except that every hole is perpendicular to its neighbors. Place this piece, horizontally with the smooth side on top, in front of you. The front end holes should be facing the front.

6.2. Push two blue 3L pins from group B, with the stop rings at the bottom, into the left two holes on top of the previous piece. These should extend 2L above the previous piece. These pins have friction ridges so they should not spin easily.

7. Push a red 7L perpendicular liftarm, horizontally with the smooth side on top, down on the pins from the previous step so the left side is even with the left side of the first 7L liftarm. Push another 7L perpendicular liftarm, in the same orientation, down over the previous piece.

8. Now we'll place a sucker. Push a white 1x1 round plate, upside down, into the right hole on top of the previous piece.

9. Push a blue 3L pin from group B, with the stop ring at the front, from the front into the leftmost front-facing hole on the middle liftarm. Push it all the way through so it extends 1L to the front and back.

10.1. Now we'll build the front side of the squid's face. Place a red 7L perpendicular liftarm, horizontally with the smooth side at the front, in front of you. The leftmost and rightmost holes on this piece should face up.

10.2. Push two blue 3L pins from group B, with the stop rings at the front, from the back into the left two holes on the back of the previous piece. These should extend 2L behind the previous piece. These pins have friction ridges so they should not spin easily.

10.3. Push a dark gray 1L pin with a hollow stud on one side, with the hollow stud on top, from above into the second hole from the right on top of the 7L perpendicular liftarm.

10.4. Place a black 1x1 round tile with an eye pattern onto the hollow stud of the previous piece.

10.5. Push a black 2L pin from group A, from the front into the rightmost hole on the front of the 7L perpendicular liftarm.

10.6. With the eye on top, and the two 3L pins extending to the back, push this side of the face into the two holes to the right of the 3L pin on the rest of the head. Push it all the way so the two 3L pins extend 1L past the head to the back.

11.1. Now we'll build the other side of the face. Place a red 7L perpendicular liftarm, horizontally with the smooth side at the front, in front of you. The leftmost and rightmost holes on this piece should face up.

11.2. Push a dark gray 1L pin with a hollow stud on one side, with the hollow stud on top, from above into the second hole from the left on top of the previous piece.

11.3. Place a black 1x1 round tile with an eye pattern onto the hollow stud of the previous piece.

11.4. Push a black 2L pin from group A, from the front into the leftmost hole on the front of the 7L perpendicular liftarm.

11.5. Rotate the rest of the head 180 degrees so the first side of the face is at the back and the sucker is at the top left. With the eye on top and the 2L pin extending to the front, push the second side of the face onto the left two pins on the front of the head so it is symmetrical to the first side of the head.

Open group 3.

12. Find two red 2x5x3 quarter ellipse curved panels. This piece has one smooth, curve side and one hollow side. It has a 2x5 L-shaped pattern of holes on two opposite sides. It has a through hole on the thinnest end. Push one, with the smooth side at the front, the through hole at the right, and the L-shaped hole patterns on the top and bottom, from the front onto the pin on the right side of the head. The 7L liftarm on the front of the head should fit into the hollow part of this piece. This piece should be immediately to the right of the eye. Repeat this symmetrically on the back side. The head should almost come to a point on the right side.

13. Now place the wreck base in front of you, with the two 11L liftarms vertically at the left and the pins on the tentacles pointing up and to the left. Keeping the pointed side of the head at the right, attach the head to the base by pushing the pins on the tentacles into the holes at the corners of the L-shaped hole patterns on the bottom of the head.

Open group 4.

14.1. Now we will start building tentacles. Set the base and head assembly aside for now. A real squid has ten tentacles, but our squid will have to settle for a few less than that. Find a red 1x11.5 bent liftarm. This looks like a 7L liftarm and a perpendicular 3L liftarm connected by a 45 degree angled liftarm. Place this in front of you so the holes are facing the top, the 7L part is horizontally on the right, and the 3L part is vertically at the front.

14.2. Push a tan 2L axle/pin combo, with the axle at the bottom, from the top into the rightmost hole of the previous piece, which is an axle hole.

15.1. Place a red 2L liftarm, horizontally with the holes facing the top, in front of you.

15.2. Push two blue 3L pins from group B, with the stop rings at the top, from the top into the holes on the previous piece. Push them in all the way so they extend 1L above and below the previous piece. These pins have friction ridges so they should not spin easily.

15.3. Push this assembly from the top into the third and fourth holes from the right on the bent liftarm. There should be one free hole between the 2L liftarm and the tan axle/pin combo.

16. Now we will add some suckers to the tentacle. Rotate the tentacle so the pins are at the bottom, the 7L liftarm is horizontally at the back, and the 3L liftarm is vertically at the right pointing forward. Push three white 1x1 round plates, upside down, into the fifth and seventh holes from the left, and the third hole from the front. The leftmost sucker should be just to the right of the two pins from the previous step.

17.1. Find a red 3L pin with a bushing on one side. This looks like a 2L pin with no stop rings and a thick cylinder on one side. This cylinder looks identical to a bushing, and has an axle hole through the center. Push this piece, with the bushing at the bottom, through the hole between the left two suckers from the previous step. Push it all the way up until the bushing touches the bent liftarm.

17.2. Push a blue 2L axle/pin combo from group C, with the axle at the top, from the bottom into the bushing side of the previous piece.

17.3. Find a red 2L pin connector. This piece looks like a smooth cylinder which is 2L long and has a small notch in the middle. Push this, with the holes at the top and bottom, from the top onto the 3L pin with a bushing.

18. Now place the base and head assembly back in front of you, with the two 11L liftarms vertically at the left and the pointed side of the head pointing up to the right. Find the pin hole on the head which faces front to back just to the left of the eyes. Rotate the tentacle so the pins point to the right, the 7L part is vertically on top pointing to the back, and the 3L part is upright pointing down at the front. Attach the tentacle by pushing the rightmost pin, from the back, into this hole. Because this pin doesn't have friction ridges, the tentacle should flop around if you lift the head.

19.1. Now we'll build another tentacle, which mirrors the first. Place a red 1x11.5 bent liftarm in front of you so the holes are facing the top, the 7L part is horizontally at the back and the 3L part is vertically at the right pointing forward.

19.2. Now we'll add the suckers just like we did before. Push three white 1x1 round plates, upside down, into the fifth and seventh holes from the left, and the third hole from the front.

19.3. Now, rotate this tentacle so it is in the same orientation as the first, except that the suckers are at the front. Push it from the front onto the pins on the front of the first tentacle. When you lift the 2L pin connector at the back of the first tentacle, both will lift up. If you let go, the squid's tentacles will drop down quickly to snack prey...or treasure!

20.1. We're not done building tentacles yet! Place a red 1x11.5 bent liftarm in front of you so the holes are facing the top, the 7L part is horizontally on the right, and the 3L part is vertically at the front.

20.2. This tentacle has even more suckers. Push four white 1x1 round plates, upside down, into the third, fifth, and seventh holes from the right, and the third hole from the front.

20.3. Find the front-facing pin below the front eye on the squid's head. Rotate this tentacle so it is in the same orientation as the second one, and attach it by pushing the hole between the second and third suckers from the right end onto the front-facing pin.

21.1. Ok, this is the last tentacle! Place a red 1x11.5 bent liftarm in front of you so the holes are facing the top, the 7L part is horizontally on the right, and the 3L part is vertically at the back.

21.2. This tentacle also has four suckers. Push four white 1x1 round plates, upside down, into the third, fifth, and seventh holes from the right, and the third hole from the back.

21.3. Find the rear-facing pin on the squid's head which mirrors the one for the last tentacle. Rotate this tentacle so it is in the same orientation as the last one, except that the suckers are at the back. Attach it by pushing the hole between the second and third suckers from the right end onto the rear-facing pin.

22.1. Now, we'll start making the squid's house, or the aft part of the shipwreck depending on who you ask! Find a black 7x11 hollow frame. This looks like two 11L liftarms connected by two 5L liftarms, forming an open rectangle. Place this piece horizontally in front of you.

22.2. Push two black 2L pins from group A, from the front into the left and right holes on the front side of the previous piece. These pins have friction ridges so they should not spin freely.

22.3. Push a black 9L liftarm, horizontally with the holes facing the front, from the front onto the pieces from the previous step.

22.4. Rotate this assembly so it is vertical and standing upright, with the 9L liftarm at the top. Push it, centered vertically, from the left onto the two pins on the left side of the base and squid assembly. You will have to thread the squid's legs through the hollow frame. Push it all the way to the right so the pins from the base extend 1L to the left.

Open group 5.

23.1. Now we'll extend the floor of the shipwreck. Set the base and squid assembly aside for now. Place a dark gray 9L liftarm, vertically with the holes facing up, in front of you.

23.2. Push two blue 3L pins from group B, with the stop rings at the bottom, from the top into the third holes from the front and back on the previous piece.

24. Push a dark gray 9L liftarm, vertically with the holes facing up, from the top onto the pins from the previous step.

25. Push two blue 3L pins from group B, with the stop rings at the bottom, from the top into the front and back holes on the previous piece.

26. Push a dark gray 9L liftarm, vertically with the holes facing up, from the top onto the pins from the previous step.

27. Push a dark gray 9L liftarm, vertically with the holes facing up, from the top onto the pins extending above the previous piece.

28. Push two blue 3L pins from group B, with the stop rings at the bottom, from the top into the second holes from the front and back on the previous piece.

29. Push two light gray 2L pin connectors, standing up right, from the top onto the pins from the previous step. Push them all the way down until they touch the liftarms.

30. Now place the base and squid assembly, with the hollow frame vertical and the tentacles at the left. Lay the floor assembly down, with the two pin connectors at the left. Lift the left side of the tentacles and push the floor, centered vertically, from the left onto the left-facing pins under the tentacles.

31.1. Now we will build one side of the ship. Place a black 2L liftarm, horizontally with the holes facing up, in front of you.

31.2. Push a black 2L pin from group A, from the top into the right hole of the previous piece.

31.3. Push a blue 3L pin from group B, with the stop ring at the bottom, from the top into the hole to the left of the previous piece.

31.4. Find a black panel fairing #18, large, smooth, Side B. This piece has one smooth, curved side and one hollow side. This has a 2x5 L-shaped pattern of holes on one side and no holes on the opposite side. It has three holes on one long side, and one perpendicular through hole on the opposite side. If you stand it up on the L-shaped hole pattern, with the smooth side at the back, the right side is taller than the left. Rotate this piece so the smooth side is at the bottom with the L-shaped hole pattern at the right. Push the 2L liftarm assembly, vertically with the pins pointing to the right, through the back two holes on the long side of the L-shaped hole pattern. Push it all the way to the right so the 3L pin extends 1L to the right of the fairing.

31.5. Push a black 2L pin from group A, from the right into the front hole of the L-shaped hole pattern of the fairing.

31.6. Rotate the base and squid assembly so the head of the squid is at the left and the tentacles are at the right. Rotate the ship side so that the smooth side is at the front and the two pins are at the left. Push the side, from the right into the hollow frame so that the bottom of the side of the ship is even with the bottom of the base.

Open group 6.

32.1. Now we'll make the back wall of the ship. Set the rest of the ship aside for now. Place a light gray 7L axle horizontally in front of you.

32.2. Push a light gray 3L pin with a bushing on one side, with the bushing at the left, from the right onto the previous piece. The axle will connect to the bushing side. Repeat this symmetrically on the left side.

33. Find a black 1L pin with a perpendicular pin hole on one side. This looks like a 1L pin which has a hollow cylinder on one side which is perpendicular to the pin. The hollow cylinder is a pin hole. Push this, with the pin at the bottom and the hole facing left and right, from the right onto the right piece from the previous step. Push it all the way to the left so the 3L pin extends 1L to the right. Repeat this symmetrically on the other side.

34.1. Find a black 5x11 panel. This piece has five pin holes on each short end, seven pin holes on each long side, and four pin holes on the top and bottom, one near each corner. One side is flat, and one side has a gap between the two long rows of pin holes. Place this piece in front of you, horizontally with the flat side at the bottom.

34.2. Push the two 1L pins on the bottom of the axle assembly, from the top into the two top facing pins on the back row of the previous piece.

35. Push the bottom hole of a black 5L liftarm, standing upright with the holes facing left and right, onto the right facing pin on the axle assembly. Repeat this symmetrically on the left side.

36.1. Find a black 2x4 L-shaped pin connector. This piece is shaped like a 2x4 L, with three pin holes, one at the corner, and one at the end of each leg. The hole on the short leg is perpendicular to the other two. Place this piece in front of you, with the long leg laying flat at the bottom and the short leg standing upright at the left.

36.2. Push two black 2L pins from group A, from the front into the two front-facing holes on the previous piece.

36.3. Push a light gray 2L pin, from the left into the hole on the left side of the previous piece. This pin does not have friction ridges so it should spin easily.

36.4. Keeping the long leg at the bottom, rotate this assembly 180 degrees so the previous piece points to the right and the other two pins point to the back. Push it from the front into the leftmost and fourth hole from the left on the 5x11 panel.

37.1. Now we will build the handle which raises and lowers the back of the ship. Set the back wall of the ship aside for now. Find a yellow 2L axle connector. This looks like a cylinder which has four shallow grooves cut out of the sides so it has a vaguely X-shaped cross section, kind of like a thick axle. Place this piece horizontally in front of you.

37.2. Push a black 2L axle, horizontally, from the right into the previous piece.

37.3. Push a yellow 2L axle connector, horizontally, from the right onto the previous piece.

37.4. Push a dark gray 3L axle/pin combo which has a 1L axle and a 2L pin, with the axle side on the left, from the right into the previous pieces. It should extend 2L to the left.

37.5. Push the front hole of a black 13L liftarm, vertically with the holes facing left and right, from the right onto the previous piece. Push it all the way to the left until it stops so the pin still extends 1L to the right.

37.6. Push three light gray 2L pins, from the right, one into the rearmost hole, one into the fourth from the back, and another into the seventh from the back of the previous piece. There should be two free holes between each pair of these pins.

37.7. Place the back wall of the ship in front of you so it is horizontal, with the smooth side down and the two 5L liftarms standing upright at the back. Rotate the 13L liftarm so it is standing upright, with the four pins on the right side, and the two axle connectors at the bottom on the left. Push the pin at the bottom of the handle into the front hole on the left side of the back wall. At the same time, push the top hole of the 5L liftarm on the left side of the back wall onto the lowest of the three pins on the 13L liftarm.

38.1. Keeping the handle on the left, rotate the front of the back wall up 90 degrees so the assembly rests on the 13L liftarm. Push a dark gray 1L pin with a hollow stud on one side, with the hollow stud at the front, into the top left hole on the front side of the 5x11 panel.

38.2. Find a dark orange 4x3 plate leaves. The piece looks like an arrow with two heads close to each other. It has six studs on one side, and two anti-stud on the other side. Place the top anti-stud of this piece, with the studs facing the front and the arrow heads at the top, onto the previous piece.

39. Now, place the rest of the shipwreck in front of you, with the squid's head at the left and the tentacles at the right. Find the top front-facing hole on the 7x11 hollow frame on the shipwreck base. Now, rotate the ship's back wall so the 13L liftarm is horizontal, with the wall itself on the right side and the two 2L axle connectors facing the front. Push the pin on the left end of the 13L liftarm back through the hole we identified on the 7x11 hollow frame. You should be able to use the two axle connectors to lift the back wall. If you let it down, the 13L liftarm should rest on the side of the ship.

40.1. Now, we will make a lever which holds the back of the ship up. You can also move this lever to close the back of the ship again. Place a dark gray 2x4 L-shaped liftarm in front of you, with the short leg laying flat at the bottom and the long leg standing upright at the left.

40.2. Push a light gray 3L axle, from the front through the top hole of the previous piece. Only push it in until the side is even with the back side of the L-shaped liftarm.

40.3. Now, find the last free pin on the back side of the 13L liftarm. This is just to the right of the 7x11 hollow frame. Push the hole below the axle on the L-shaped liftarm, from the back, onto this pin. The axle should extend forward past the side of the ship. If you lift the two axle connectors to lift the wall up past 45 degrees, then let them down, the L-shaped liftarm will catch on the side of the ship and hold the back wall of the ship up. You can move the axle on the L-shaped liftarm to the left to have the back wall of the ship close.

41.1. Now we will build the other side wall of the ship. Find a black panel fairing #18, large, smooth, Side A. This piece has one smooth, curved side and one hollow side. This has a 2x5 L-shaped pattern of holes on one side and no holes on the opposite side. It has three holes on one long side, and one perpendicular through hole on the opposite side. If you stand it up on the L-shaped hole pattern, with the smooth side at the back, the left side is taller than the right. Place this piece in front of you so the smooth side is at the bottom with the L-shaped hole pattern at the right.

41.2. Push two black 2L pins from group A, from the right one into the corner hole and one into the back hole on the L-shaped hole pattern of the previous piece.

41.3. Make sure the back wall of the ship is lowered. Rotate the ship 180 degrees so the back wall is on the left and the squid's head is on the right. Push the side, from the left into the hollow frame so that the bottom of the side of the ship is even with the bottom of the base. This should be the mirror image of the other side.

Open group 7.

42.1. Now we'll build the handle for this side of the ship. Set the rest of the ship aside for now. Place a yellow 2L axle connector horizontally in front of you.

42.2. Push a black 2L axle, horizontally, from the left into the previous piece.

43.1. Push a yellow 2L axle connector, horizontally, from the left onto the previous piece.

43.2. Push a dark gray 3L axle/pin combo which has a 1L axle and a 2L pin, with the axle side on the right, from the left into the previous pieces. It should extend 2L to the left.

44. Push the front hole of a black 13L liftarm, vertically with the holes facing left and right, from the left onto the previous piece. Push it all the way until it stops so the pin still extends 1L to the left.

45. Push two light gray 2L pins, from the left into the rearmost and seventh from the back holes of the previous piece. These pins do not have friction ridges so they should spin easily.

46.1. Push a dark gray 1L pin with a hollow stud on one side, with the hollow stud at the front, from the front into the fifth hole from the back on the right side of the 13L liftarm.

46.2. Place the top anti-stud of an olive green 4x3 plate leaves, with the studs facing the right and the arrow heads at the top, onto the previous piece.

47. Place the rest of the ship in front of you, with the back wall at the left and the squid's head at the right. Rotate the second handle so the 13L liftarm is horizontal with the axle connectors on the left facing forward. Push the 13L liftarm from the front so the right pin connects to the top front-facing hole on the 7x11 hollow frame, and the left pin connects to the top hole on the back wall of the ship. Find the 5L liftarm which is connected to the front wall of the ship. This is inside the ship. Rotate this up and connect its top hole to the middle pin on the back of the 13L liftarm.

48.1. Now we will build the attachment point for the mast. Set the ship aside for now. Find a black axle and pin connector #1. This piece has a 1L axle connector on one side, and a perpendicular pin hole on the other. Place this in front of you, with the axle connector at the back and the pin hole at the front facing left and right.

48.2. Find a black axle and pin connector with two axles. This piece looks like two 1L axles connected by a cylinder with a pin hole in the middle of it. It is 3L in length. Push one of the axles of this piece, with the pin hole facing left and right, from the back into the axle hole on the previous piece.

48.3. Find a light gray 3x3 perpendicular pin connector. This looks like two 3L liftarms which form a 90 degree angle. There are two pins each on the outer sides of the liftarms. Push this piece, with one pair of pins pointing left and one pointing to the front, from the right into holes of the previous two pieces.

48.4. Find the right-facing hole on the left column of the previous piece. Push a light gray 2L pin, from the right into this hole. This pin does not have friction ridges so it should spin easily. The assembly should now have an axle facing the back, two pins facing the front, and one pin facing right.

48.5. Place the rest of the ship in front of you, with the back wall at the left and the squid's head at the right. Find the 9L liftarm on top of the 7x11 hollow frame. Rotate the mast assembly so the two pins now face down, with the axle at the back. Push the two pins down into the fourth and sixth holes from the front on the 9L liftarm.

Open group 8.

49.1. Now we will build the mast itself. Set the rest of the ship aside for now. Find a light gray axle and pin connector with one axle. This piece looks like a 1L axle connected to a cylinder with a pin hole in the middle of it. Place this piece in front of you, with the axle at the left and the pin hole facing forwards.

49.2. Find a brown axle and pin connector #2. This piece has two 1L axle connectors on opposite sides, and a perpendicular pin hole between them. Push this piece, with the axle connectors at the left and right and the pin hole facing forwards, from the left onto the axle of the previous piece.

50.1. Push one axle of a black axle and pin connector with two axles, horizontally with the pin hole facing forward, from the left into the axle hole on the previous piece.

50.2. Push a light gray 2L pin, from the front into the pin hole of the previous piece. This pin does not have friction ridges so it should spin easily.

51.1. Push a brown axle and pin connector #2, with the axle connectors at the left and right and the pin hole facing forwards, from the left onto the axle at the left of the mast assembly.

51.2. Push a light gray 3L axle, horizontally, from the left into the previous piece.

52. Find a brown axle connector with two perpendicular bar holders. This looks like a 1L cylinder with an axle hole through it. There are two perpendicular hollow cylinders extending from either side of the axle hole which are bar holders. Push this piece, with the bar holders at the front and back, from the left onto the previous piece. Push it all the way to the right until it stops.

53.1. Push a brown axle and pin connector #2, with the axle connectors at the left and right and the pin hole facing forwards, from the left onto the axle at the left of the mast assembly.

53.2. Push a light gray 3L axle, horizontally, from the left into the previous piece.

54. Push a brown axle connector with two perpendicular bar holders, with the bar holders at the front and back, from the left onto the previous piece. Push it all the way to the right until it stops.

55.1. Now we'll make the spars on the mast. Push a brown 4L bar, vertically, from the front into the front bar holder of the previous piece. Repeat this symmetrically on the back side.

55.2. Push a brown 6L bar with a stop ring on one side, with the stop ring at the front, from the front into the front bar holder which is the second hole to the right of the bars we just placed.

56.1. Push a brown axle and pin connector #2, with the axle connectors at the left and right and the pin hole facing forwards, from the left onto the axle at the left of the mast assembly.

56.2. Push a black 2L axle, horizontally, from the left into the previous piece.

57. Push a brown 1x1 cone, with the anti-stud on the left, onto the previous piece. Cone bricks have an axle hole on the inside so this will connect, don't worry!

58.1. Push a brown 6L bar with a stop ring on one side, with the stop ring at the right, into the hollow stud of the previous piece.

58.2. Now we'll start putting on what remains of the sails! Clip a white 6x4 flag, laying flat with the clips on the left, onto the 6L bar which is facing forward. This piece is to the right of the two 4L bars.

58.3. Clip a white 2x2 trapezoidal flag, laying flat with the angled side at the front and the clips on the left, onto the front 4L bar. Clip another symmetrically on the back 4L bar.

59.1. No ship's mast would be complete without a crow's nest! Place a brown half barrel upside down in front of you.

59.2. Place a brown 1x1 round plate with a hollow stud, upside down in the center anti-stud of the previous piece.

59.3. Rotate the crow's nest so the 1x1 round plate is at the right. Push this assembly, from the left, onto the bar on the left side of the mast. Push the crow's nest all the way to the right until it touches the 1x1 conical brick.

60. Clip a white 2x2 trapezoidal flag, laying flat with the angled side at the left and the clips on the back, onto the 6L bar to the left of the crow's nest.

61. Now, set the rest of the ship in front of you, with the back wall on the left and the squid's head on the right. Locate the front-facing pin on the mast base. This is on the hollow frame above the squid's head. Keeping the mast horizontal with the crow's nest on the left, push the pin hole at the right of the mast back onto the pin we just located. The mast should not be rigidly connected and should flop around a bit.

62. Locate the front facing pin on the top of the back wall of the ship. Locate the front facing pin on the mast, to the right of the large sail. Attach a black 9L liftarm, horizontally with the holes facing the front, to these two pins. Attach it using the leftmost and rightmost holes of the liftarm. This can be tricky! It helps to attach the right side to the pin on the mast first, and then attach it to the wall of the ship. You can rotate the sails out of the way if needed. Now, when you lift the back of the ship, the mast should lift too!

63.1. Make a treasure chest by placing the base horizontally in front of you with the low wall at the back.

63.2. Find the lid to the treasure chest. This is shaped like a hollow half cylinder. It has a point that sticks out from inside the center on one side. This is the latch that holds it shut. Attach the lid, with the hollow side down and the latch at the front, to the rest of the treasure chest.

63.2. Lift the back of the shipwreck until it stays up on its own. Now, take the treasure chest, vertically, and place it under the squid's front legs.

Congratulations! Now this build is complete!

Thank you so much for building this set!

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