FIRST® LEGO® League Challenge SUBMERGED℠ Building Instructions

Build 8: An Unexpected Encounter

This build is 126 pieces, and 56 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 16-17. Additional pieces are in the unlabeled bag. 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 8 (10 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 1-15. This includes three light gray 15L liftarms from the unlabeled bag.
Group 2 contains the pieces for steps 16-22. This includes one light gray 15L liftarm from the unlabeled bag.
Group 3 contains the pieces for steps 23-27. This includes one white 15L liftarm from the unlabeled bag.
Group 4 contains the pieces for steps 28-34. This includes three light gray 15L liftarms from the unlabeled bag.
Group 5 contains the pieces for steps 35-40.
Group 6 contains the pieces for steps 41-47. This includes one white 15L liftarm from the unlabeled bag.
Group 7 contains the pieces for steps 48-56.

Building Instructions:

Main build.

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

1.1. We'll start by building the base of a crane. Find a dark gray 3x11 panel. This piece has three pin holes on each short end, seven pin holes on each long side, and four pin holes on the top and bottom. 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 top.

1.2. Push two black 2L pins from group A, from the right into the front and back holes on the right side of the previous piece.

2.1. Push a blue 3L pin from group B, with the stop ring at the back, into the rightmost hole on the front side of the 3x11 panel. Push it all the way in so it extends 2L to the front. Repeat this symmetrically on the back side.

2.3. Push a black 2L pin from group A, from the front into the hole to the left of the front piece from the previous step. Repeat this symmetrically on the back side.

3. Push the left two holes of a dark gray 3L liftarm, horizontally with the holes facing forward, onto the two pins on the front of the panel. Push it all the way back so the blue 3L pin extends 1L past the liftarm to the front. Repeat this symmetrically on the back side.

4. Push four black 2L pins from group A, from the top into the four top facing holes on the 3x11 panel.

5. Push two black 2L pins from group A, from the front into the left two holes on the front side of the 3x11 panel. Repeat this symmetrically on the back side.

6. Push a dark gray 3L liftarm, vertically with the holes facing left and right, from the right onto the two pins on the right side of the 3x11 panel.

7. Push a dark gray 11L liftarm, horizontally with the holes facing up, down onto the front two pins on top of the 3x11 panel. Center it horizontally on the pins so there is one free hole at the left of the liftarm and one at the right. Repeat this on the back two pins on top of the 3x11 panel.

8.1. Place a dark gray 3x5 L-shaped liftarm in front of you, with the short leg horizontally at the bottom and the long leg standing up at the left.

8.2. Push two black 2L pins from group A, from the back one into the top and one into the third from the top holes on the previous piece.

8.3. Push the right two holes on the short leg of the L-shaped liftarm, from the front, onto the left two pins on the front side of the 3x11 panel. The long leg of the L-shaped liftarm should be upright at the front left.

9. Keeping the flat side down, rotate the base assembly 180 degrees so the upright part of the L-shaped liftarm is at the back right. Push a light gray 15L liftarm, standing upright with the holes facing forward, from the front onto the two pins on the front of the L-shaped liftarm. This will be the tower of the crane.

10.1. Push a blue 3L pin from group B, with the stop ring at the back, from the front into the second hole from the bottom on the previous piece. Push it all the way in so it extends 2L to the front.

10.2. Find a dark gray 1L liftarm. This looks like a hollow cylinder. Push this, from the front onto the previous piece. Push it all the way back.

10.3. Keeping the flat side down, rotate the base assembly 180 degrees to the original orientation, with the upright 15L liftarm on the left side.

11.1. Place a dark gray 3x3 T-shaped liftarm in front of you, with the wide, flat part vertically on the left and the stem of the T on the right.

11.2. Push two black 2L pins from group A, from the top into the front and back holes on the left column of the previous piece.

11.3. Push a black 2L pin from group A, from the bottom into the rightmost hole of the previous piece.

11.4. Rotate the T-shaped liftarm 90 degrees away from you so the two pins point to the back, and one to the front. The wide, flat side of the T should be on the left. Push the two back pins, from the front into the fourth and sixth holes from the top on the 15L liftarm on the left side of the base.

12.1. Now we'll make a diagonal support for the upright 15L liftarm. Locate the front facing pin on the T-shaped liftarm, and another on the bottom right of the base. Push a light gray 15L liftarm onto these pins. The bottom hole should go onto the bottom pin, and the second hole from the top should go on the pin on the T-shaped liftarm.

12.2. Now we'll add a bit of sea life for color! Push a pink 1x1 flower plate, with the stud facing away from you, into the fifth hole from the bottom on the previous piece.

13.1. Push a dark gray 1L pin with a hollow stud on one side, with the hollow stud at the front, into the second hole from the top of the crane tower. This is the 15L liftarm that is straight up and down, not diagonal.

13.2. Find a reddish brown plant flower stem with a bar and six stems. This has a short bar on one side and six long stems. Push the short bar down through the hollow stud of the previous piece so the stems face the front.

14.1. Place a light gray 15L liftarm in front of you, horizontally with the holes facing forward.

14.2. Push two blue 3L pins from group B, with the stop rings at the front, from the front into the rightmost and fifth holes from the right on the previous piece. Push these all the way back so they extend 1L to the front and rear.

14.3. Rotate this assembly so it is standing upright with the pins at the bottom facing forward and back. Push it, from the back, into the straight-up and down 15L liftarm on the crane tower. The upper pin should go into the top hole on the liftarm on the crane.

15.1. Place a dark gray 3x5 L-shaped liftarm in front of you, with the long leg horizontally at the bottom and the short leg standing upright on the left.

15.2. Push two blue 3L pins from group B, with the stop rings at the front, from the back into the top left and corner hole of the previous piece. Push them in all the way so they extend 2L to the back.

15.3. Find a light gray 3L pin with a stop all the way at one end. This looks like a normal pin, but one end has a wide end, kind of like a nail. This is the stop ring. Push this pin, with the stop ring at the front, from the front into the rightmost hole of the L-shaped liftarm. Only push it in 1L so it extends 2L to the front and does not extend at all to the rear. This pin does not have friction ridges so it should spin easily.

15.4. Push the two pins on the back of this assembly, from the front into lowest possible holes on the tallest 15L liftarm on the crane tower. The long leg of the L-shaped liftarm should extend to the right. The light gray 3L pin from the previous step is loose in its hole, just make sure it doesn't fall out!

Open group 2.

16.1. Now we will start making a push plate assembly. Once the build is done, you can push this plate to see something unexpected! Set the tower base aside for now. We'll start by building the arm the push plate is attached to. Place a dark gray 11L liftarm in front of you, horizontally with the holes facing up.

16.2. Push four black 2L pins from group A, from the top into the third and fourth holes from both the left and right sides of the previous piece.

17.1. Push a black 2L pin from group A, from the top into the leftmost hole of the 11L liftarm.

17.2. Push a blue 3L pin from group B, with the stop ring at the bottom, from the top into the rightmost hole of the 11L liftarm. Push it all the way down so it extends 2L above the liftarm.

18.1. Push two dark gray 1L liftarms, from the top onto the left two pins on the 11L liftarm.

18.2. Push a dark gray 5L liftarm, horizontally with the holes facing up, from the top onto the next two pins to the right. There should be two free pins to the right of this piece.

18.3. Push the short leg of a yellow 3x5L liftarm, with the short leg horizontally at the front and the long leg vertically at the right, down onto the remaining two pins. Push it all the way down so the pin in the corner extends 1L above the liftarm. The long leg should extend to the rear.

19.1. Now we'll make the plate. Place a yellow 9L liftarm in front of you, horizontally with the holes facing up.

19.2. Push four blue 3L pins from group B, with the stop rings at the bottom, from the top into the second and third holes from both the left and right sides of the previous piece. Push them all the way down so they extend 2L above the liftarm.

19.3. Push two yellow 3L liftarms, horizontally with the holes facing up, down onto each pair of pins so the outer sides of the 3L liftarms are even with the sides of the 9L liftarm.

19.4. Push two blue 3L pins, with the stop rings at the bottom, from the top into the outer holes on each of the previous pieces. Push them all the way down so they extend 2L above the liftarm.

19.5. Push a yellow 3L liftarm, horizontally with the holes facing up, down onto the left set of three pins. Push it all the way down so the leftmost pin extends 1L above the liftarm.

19.6. Keeping the push plate horizontal, rotate the push plate arm so the 11L liftarm is vertical and the long leg of the L-shaped liftarm points to the right. Attach the arm to the plate by pushing the right three holes of the L-shaped liftarm onto the right three pins on the plate. Push it all the way down so the outer pin extends 1L above the L-shaped liftarm.

20. Push a yellow 9L liftarm, horizontally with the holes facing up, from the top onto the three pins on top of the push plate assembly.

21. Set the crane base in front of you, with the crane tower on the right side. The diagonal support should be on the left side. Find the two horizontal 11L liftarms on the top of the tower base. There is a 1L gap between these two. Rotate the push plate assembly so the plate is vertically at the right and the arm is horizontally at the left with the holes facing up. Slide the arm into the gap between the two 11L liftarms. The push-plate should be able to slide left and right easily.

22.1. Now we'll build more of the crane. Set the base assembly aside for now. Place a light gray 15 L liftarm in front of you, horizontally with the holes facing forward.

22.2. Push two blue 3L pins from group B, with the stop rings at the front, from the back into the rightmost and third from the right holes on the previous piece. Repeat this symmetrically on the left side. Push these pins all the way so they extend 2L to the rear of the liftarm.

Open group 3.

23.1. Push a dark gray 3L liftarm, horizontally with the holes facing forward, from the back onto the left pair of pins from the previous step. Push it all the way forward so the pins extend 1L to the rear. The left side of this piece should be even with the left side of the liftarm in front of it.

23.2. Push a white 15L liftarm, horizontally with the holes facing forward onto the right pair of pins on the back of the first 15L liftarm. The leftmost hole should go on the leftmost pin.

24.1. Push a yellow 2L pin, from the back into the rightmost hole of the previous piece. This pin does not have friction ridges so it should spin easily.

24.2. 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 fourth hole to the right of the left liftarm. There should be three open holes between this piece and the left 15L liftarm.

25.1. Place a white 2x2 round plate in front of you. Place another on the first.

25.2. Push a tan 2L axle/pin combo, with the axle on top, from the bottom into the center axle hole of the previous two pieces.

25.3. Rotate this assembly so the studs face away from you. Push the pin, from the back, into the sixth hole from the right on the right 15L liftarm.

26.1. Place a white 1x1 round plate, with the stud facing you, onto the front facing hollow stud on the right 15L liftarm.

26.2. Find a white 2x2 inverted dish. This looks like a shallow bowl or a plate with a single stud on top and a single anti-stud on the bottom. Place this piece, with the stud facing you, on the previous piece.

27.1. Place the crane base in front of you with the push plate on the right. Find the 3L pin on the back side of the L-shaped liftarm near the top of the crane tower. This pin extends 2L to the rear. We'll use this pin for the next step. Rotate the assembly with the two 15L liftarms so it is standing upright with the 3L liftarm at the front on the bottom. There should be five pins on the front side of this assembly. Align the hole above the lower 15L liftarm with the 3L pin we identified earlier. Push the 3L pin all the way forward so it connects this assembly to the base.

27.2. Now, find the two 1L liftarms on the left side of the push plate arm. Set the 3L liftarm at the bottom of this assembly between these two pieces. Now, if you move the push plate this assembly should move back and forth. You should not be able to pull the push plate all the way out to the right.

Open group 4.

28. Push a dark gray 3x5 L-shaped liftarm, with the long leg horizontally at the bottom and the short leg upright on the right, onto the front of the combined assembly. Push the short leg onto the two top pins on the fixed portion of the crane tower, and the leftmost hole of the long leg onto the pin we pushed through the swinging assembly.

29. Push a light gray 15L liftarm, upright and slightly diagonal with the holes facing forward, onto the four pins on the front of the swinging assembly. These pins are in two pairs on the left set of upright liftarms. The 15L liftarm mirrors the liftarm on the backside of this assembly.

30.1. Push a light gray 15L liftarm, standing upright with the holes facing forward, onto the three pins on the front of the upright portion of the crane tower. This should be below the L-shaped liftarm connecting the crane tower to the swinging assembly.

30.2. Push two black 2L pins from group A, from the front into the bottom and third from the bottom holes on the previous piece.

31. Push a dark gray 3x5 L-shaped liftarm, with the short leg horizontally at the bottom and the long leg standing upright on the right, from the front onto the two pins from the previous step, as well as the right pair of pins on the front of the crane base. This piece connects the tower crane to the base and mirrors another L-shaped liftarm on the backside.

32.1. 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 second hole above the previous piece. Push a second, in the same orientation, into the second hole from the top on the front 15L liftarm on the swinging assembly.

32.2. Push the short bar of an orange plant flower stem with a bar and six stems, with the short bar at the back, from the front through the hollow stud of the first piece from the previous step.

32.3. Find a brown flower stem with a bar holder, bar and three stems. This has a short bar attached to a hollow thick cylinder. There are three thin bars sticking out of the hollow cylinder at different angles. The hollow cylinder is a bar holder. Push this piece, with the short bar at the back, through the hollow stud of the second 1L pin with a hollow stud from step 32.1.

33.1. Place a dark gray 3x3 T-shaped liftarm in front of you, with the wide, flat part vertically on the right and the stem of the T on the left.

33.2. Push two black 2L pins from group A, from the top into the front and back holes on the right column of the previous piece.

33.3. Push a black 2L pin from group A, from the bottom into the leftmost hole of the previous piece.

33.4. Rotate the T-shaped liftarm 90 degrees away from you so the two pins point to the back, and one to the front. The wide, flat side of the T should be on the right. Push the two back pins, from the front into the fourth and sixth holes from the top on the 15L liftarm on the right side of the base.

34. Now we'll make a diagonal support for the upright 15L liftarm on this side of the crane tower. It mirrors the one on the back side.. Locate the front facing pin on the T-shaped liftarm, and another on the bottom left of the base. Push a light gray 15L liftarm onto these pins. The bottom hole should go onto the bottom pin, and the second hole from the top should go on the pin on the T-shaped liftarm.

Open group 5.

35.1. Now we will make the overhanging portion of the crane. Set the crane base aside for now. Find a white 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 at the front, and the 3L part is vertically at the left and pointing to the back.

35.2. Push a dark gray 1L liftarm with a hollow stud on one side, with the hollow stud on top, from the top into the sixth stud from the right on the previous piece. The hole to the left of this piece should be a corner hole.

36.1. Place a white 2x2 round plate in front of you. Place another on the first.

36.2. Push a tan 2L axle/pin combo, with the axle on top, from the bottom into the center axle hole of the previous two pieces.

36.3. Rotate this assembly so the studs face up. Push the pin, from the top, into the second hole from the back on the 3L part of the bent liftarm.

37.1. Place a white 1x1 round plate, with the stud facing up, onto the top facing hollow stud on the bent liftarm.

37.2. Place a white 2x2 inverted dish, with the stud facing up, on the previous piece.

38.1. Now rotate this assembly 180 degrees away from you so the dish and circular plates are on the bottom and the 7L liftarm is on the right at the back. Push three black 2L pins from group A, from the top, one into each corner hole and one into the fifth hole from the right.

38.2. Push a blue 2L axle/pin combo from group C, with the axle side at the bottom, from the top into the front hole on the 3L part of the bent liftarm.

39. Place the crane base in front of you with the push plate on the right. Rotate the bent liftarm 90 degrees towards you so the 7L liftarm part is at the top on the right and the 3L liftarm is at the left on the bottom. Push the two pins on the 3L liftarm, from the back, into the holes on the upright portion of the crane tower. This is the non-swinging part of the tower, which is at the right. The upper of the two pins should go into the top hole of the crane tower.

40.1. Place a black 8L axle horizontally in front of you.

40.2. Find a white 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 forward, from the left onto the axle of the previous piece.

40.2. Find a white axle and pin connector with one axle. This piece looks like a 1L axle connected to a perpendicular cylinder with a pin hole in the middle of it. Push this piece, with the axle at the right and the pin hole facing forward, from the left into the previous piece.

40.3. Keeping the axle at the right, push this assembly from the front onto the two pins on the front side of the crane overhang.

Open group 6.

41.1. Now we'll make a linkage that connects the crane tower to the swinging assembly. Set the rest of the crane aside for now. Place a white 15L liftarm in front of you, horizontally with the holes facing forward.

41.2. Find a light gray 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 front and the hole facing left and right, from the back onto the rightmost hole of the previous piece.

42. Push a dark gray 1L pin with a hollow stud on one side, with the stud at the front, from the front into the seventh hole from the left on the 15L liftarm.

43.1. Place a white 2x2 round plate in front of you. Place another on the first.

43.2. Push a tan 2L axle/pin combo, with the axle on top, from the bottom into the center axle hole of the previous two pieces.

43.3. Rotate this assembly so the studs face you. Push the pin, from the front, into the second hole from the left on the 15L liftarm.

44.1. Place a white 1x1 round plate, with the stud facing you, onto the front facing hollow stud on the 15L liftarm.

44.2. Place a white 2x2 inverted dish, with the stud facing you, on the previous piece.

45. Place the crane base in front of you with the push plate on the right. Keep the 15L liftarm horizontal, with the 2x2 round plate at the left. Slide the light gray 1L pin with a perpendicular pin hole, from the right, over the axle on the top of the crane. Connect the left hole of the 15L liftarm to the front facing pin on top of the swinging assembly. When you push and pull on the push plate, the 15L liftarm should move left and right on the axle.

46. Find the two stacks of 2x2 round plates on the front side of the crane. Place two white 6x6 inverted dishes, with the studs facing you, onto these plates. Place the lower one first.

47. Keeping the base flat on the table, rotate the entire assembly 180 degrees so the axle points to the left. Place a white 6x6 inverted dish, with the studs facing you, onto the stack of 2x2 round plates on this side of the assembly.

Open group 7.

48. Now we'll build something unexpected…a squid! Set the crane assembly aside for now. Place a red 2x2 round plate in front of you. Place another on the first.

49.1. Place a red 1x1 plate with a stud hanging down from one side, with the side stud on the left, on the front left stud of the previous piece. Repeat this symmetrically on the right side.

49.2. Find two red 1x2 slopes with a cut out. These look like a 1x1 plate with a 1x1 slope tile on one side. Place one, with the slope at the left, on the back left stud of the 2x2 round plates so it overhangs by one stud to the left. Repeat this symmetrically on the right side.
50. Place a red 2x2 round plate on top of the assembly.

51.1. Place a red 2x2 dome on the previous piece.

51.2. Make the squid's eyes by placing two light blue 1x1 round tiles, one on each of the two side studs.

52. Rotate the squid 90 degrees away from you so the dome is at the back and the two slopes are at the bottom. Push a red 4L axle, vertically, from the front into the center anti-stud on the front two 2x2 round plates. This is an axle hole. Push it all the way forward until it stops.

53.1. Find a red round axle connector with two pin holes and three axle holes. This looks like a cylinder about 3L in diameter, It has three axle holes and two pin holes. Place this piece in front of you, laying flat with the axle holes in a vertical column.

53.2. Push two red 1L pins with hollow studs on one side, with the hollow studs on top, from the top into the two pin holes on the previous piece.

53.3. Rotate the round axle connector 90 degrees towards you so the two pins face to the front. Push the center axle hole of this assembly, from the back, onto the axle hole of the previous piece. Push it all the way forward. The studs of the two pins should face the front to the left and right of the axle.

54. Find a red axle and pin connector #1. This piece has a 1L axle connector on one side, and a perpendicular pin hole on the other. Push the axle connector of this piece, with the axle connector at the back and the pin hole facing up, from the front onto the axle.

55. Find four red elephant trunks. This is a long wavy cylinder which has a short bar on one side and a hollow stud on the other end. Push the short bars of these pieces, with the short bars at the back, into the two hollow studs and two axle holes on the round axle connector. These are the squid's tentacles! Rotate them so they all point away from the body of the squid.

56. Now place the crane assembly in front of you, with the push plate at the left. Rotate the squid so the head points down and the hole on the pin connector between the tentacles faces left and right. Slide this hole, from the left, over the axle. Now, when you push the push plate to the right, see what happens to the squid!

Congratulations! Now this build is complete!

Thank you so much for building this set!

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