60431 Space Explorer Rover and Alien Life

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Navigating new worlds is child's play with this LEGO® City Space Explorer Rover and Alien Life toy playset (60431) for ages 6+. The tough space exploration vehicle is equipped with 6 big tires and advanced suspension for cruising over rocky planet terrain. Kids can join the crew as they map the planet's surface and discover strange steam-jetting geysers and alien life. This fun set includes 2 space crew minifigures, and robot and alien figures.

LEGO City space toys make a great gift for any occasion, with realistic vehicles, detailed structures and inspiring characters that merge fantasy and reality for imaginative play without limits. Kids can add this space exploration playset to others (sold separately) in the LEGO City space range for more epic adventures.

Toy space rover – Take kids' creativity to new horizons with this LEGO® City Space Explorer Rover and Alien Life build-and-play set for ages 6 and up.

What's in the box? – This space exploration toy building set includes everything kids need to create a space rover, geyser setting, 2 space crew minifigures and robot and alien action figures.

Futuristic space car for imaginative play – The space rover model features a detailed 2-man cockpit and has 6 wheels with large tires and advanced suspension for traversing alien planets.

Dimensions – The space rover in this 311-piece set measures over 4 in. (10 cm) high, 8.5 in. (22 cm) long and 5 in. (13 cm) wide.

The front of the box shows a space rover traversing rocky terrain! In the back there is a space explorer taking pictures of aliens and a geyser!

The back of the box shows the rover parked on the rocky terrain, it can be parked anywhere because of its suspension! In the front, the space explorers are using a robot to take pictures of the aliens!

The top of the box shows a real size image of a green alien.

The build is 311 pieces in total and is for ages 6+.

Bag 1 includes the pieces for the aliens, a space explorer, robot, and geysers.

Bag 2 includes the pieces for the space explorer and rover.

Bags 3 and 4 include the pieces for the rover.

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: with the longest side going from front to back
- Horizontally: with the longest side going from left to right.
- Upright: pointing up towards the ceiling.
- 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.

- That one/ppp: previously placed piece.
- Plate: piece with studs.
- Tile: smooth piece without studs (unless otherwise specified)

- A jumper plate is a 1x2 plate with a single stud on top, or a 1x3 plate with only two studs on top.

- "Anti-stud" is a term for the portion of a LEGO piece which accepts studs, like the bottom of a plate or brick.

- 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 piece
- Centered-horizontally: even amount of space left and right of 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).

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.

Technic brick - a brick which contains one or more holes which accept technic pins.

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.

For builders with low vision, or a sighted building partner may want to follow along with the printed visual instructions that come with each kit, or PDF versions are always online at LEGO.com for each set: (<u>https://www.lego.com/en-us/service/buildinginstructions/60431</u>) 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 friend or family member do this in advance following the instructions below. You will see that the pieces should be sorted according to the building steps in the kit. Doing this in advance makes locating the pieces for each step 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 sorted into one or 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.

This LEGO set comes with 4 bags labeled 1 to 4, 1 set of instructions, and some loose pieces. Sort the pieces into groups or piles as described below. Note that where there are multiple colors of the same brick in a step, the colors will be split into 2 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.

Bag 1 - Aliens, Space Explorer, Robot, and Geysers Group 1 - 2 lime green bars with 8 tips, 2 lime green 1x1 round plates, and 2 lime green heads printed with 3 eyes from Pages 4-5. Group 2 - Rest of Pages 4-5. Group 3 - Steps 1-4. Group 4 - Step 5. Group 5 - Step 6. Group 6 - Steps 1-13.

Bag 2 - Space Explorer and Rover

Group 7 - Page 2. Group 8 - Steps 1-12. Group 9- Steps 13-25. Bag 3 - Rover Group 10 - Steps 26-35.

Group 10 - Steps 20-33. Group 11 - Steps 36-40. Group 12 - Steps 41-46. Group 13 - Steps 47-61.

Bag 4 - Rover Group 14 - Steps 62-64 and 1 white 2x4 plate from Step 65. Group 15 - Rest of Step 65, Steps 66-71, and 1 transparent 1x1 round tile from Step 72. Group 16 - Rest of Step 72 and Steps 73-77.

Let's get to building!

Building Instructions (Bag 1, Book 1):

Group 1 - Aliens

Sub-build 1. Let's make 2 identical parts! Place a lime green plant with 8 tips in front of you so the 8 points face down. Now place a lime green 1x1 round plate on top. Then place a lime green head printed with 3 eyes on top so the eyes face the front. Now you should have 2 identical parts! These are the aliens! Now put them away while we make a space explorer!

Group 2 - Space Explorer

Sub-build 2.1. Locate 1 white and dark blue pair of legs printed with sandblue tipped shoes and a black and gold belt, 1 white and green torso printed with dark blue and gold armor, and an orange globe logo, 1 green neck piece with 2x2 side studs, and 1 yellow head printed with eyes, lashes, and pink lips. Assemble your minifigure then put her in front of you.

Sub-build 2.2. Let's make a part! Attach a transparent visor to a green helmet then place it on top of your minifigure's head. Make sure the helmet opening is in the front before attaching the visor. Place the helmet on the head so the visor is in the front.

Sub-build 2.3. Orient your minifigure so the side studs face the front. Now vertically place a black 1x2 plate with a stud and a clip upright on the left column of side studs so the clip is on top. Then vertically place a black 1x2 tile printed with black hexagons on an orange background upright to the right of the ppp.

Sub-build 2.4. Let's make a part! Horizontally place a white camera in front of you so the stud faces up and the bar faces the left. Now place a short white 1x1 brick on top of the ppp. Then place a transparent 1x1 round tile on top. This is a camera! Now attach it to your minifigure's hand, then put her away while we make the robot.

Group 3 - Robot

1. Horizontally place a black 1x2 brick with side studs on 2 sides in front of you so the side studs face the front and back.

2. Place a white 1x1 plate with a side stud hanging down on the left column so the side stud faces the left. Then repeat symmetrically to the right.

3. Horizontally place a light blue 1x2 tile on top.

4. Place a transparent light blue 1x1 round tile upright on the right-facing side stud.

Group 4 - Robot

5.1. Let's make 2 identical parts! Horizontally place a dark grey 1x2 plate with 2 angled studs in front of you so the angled studs are in the front. Now horizontally place a white 1x2 ingot tile on top so it is centered horizontally. Then place a black 1x1 round tile on the leftmost and rightmost studs.

5.2. Now you should have 2 identical parts! Horizontally place 1 upright on the front-facing side studs so it is centered horizontally and the 1x1 round tiles are on the bottom. Then repeat symmetrically to the back.

Group 5 - Robot

6. Place a magenta 1x1 round brick upright on the left-facing side stud. Then place a white 1x1 round tile printed with a battery upright on the ppp. Now put your robot away while we make the terrain!

Group 6 - Terrain

1. Place a dark tan 10x10 hexagonal plate in front of you.

2. Place a light brown 2x2 slope brick on the 2 rightmost columns so it is centered vertically and it slopes to the right. Then place a light blue 2x2 tile with a stud to the left of the ppp.

3. Horizontally place a yellow 1x2 brick on the 3rd and 4th columns from the right so it sits in front of the ppp. Then repeat symmetrically to the back.

4. Place a dark tan 2x2 corner brick with a cutoff corner on the 2nd and 3rd columns from the right so it sits in front of the 2x2 slope brick and the cutoff corner faces the front right. Then repeat symmetrically to the back.

5. Vertically place a yellow 1x2 brick on the 5th column from the right so it is centered vertically. Now place the left column of a dark tan 2x2 corner brick with a cutoff corner in front of the ppp so the cutoff corner faces the front left. Then repeat symmetrically to the back.

6. Place 2 dark tan 2x2 corner bricks with a cutoff corner, 1 in front of the other, on the 2nd and 3rd columns from the right so they are centered vertically and the cutoff corners face the front right and back right.

7. Rotate your build 90 degrees counterclockwise. The 2x2 slope brick should face the back. Now place a light brown 1x1 slope tile on the back row of the 2nd column from the right so it slopes to the right. Then

vertically place the back row of a dark tan 1x2 slope tile to the left of the ppp so it slopes to the right. Now repeat both parts symmetrically to the left.

8. Place 2 dark tan 2x2 corner bricks with a cutoff corner, 1 to the right of the other, on the 4th and 5th rows from the back so they are centered horizontally and the cutoff corners face the front left and front right.

9. Place 2 dark tan 2x2 corner bricks with a cutoff corner, 1 to the right of the other, in front of the 2 ppp so they are centered horizontally and the cutoff corners face the back left and back right.

10. Place a light brown 1x1 slope tile on the 3rd stud from the front of the 3rd column from the left so it slopes to the left. Now place another 1 on the 5th row from the front and 5th column from the left so it slopes to the front.

11. Place a light blue 2x2 tile with a stud on the 3rd and 4th rows from the front so it is centered horizontally.

12. Place 2 dark tan 2x2 corner bricks with a cutoff corner, 1 to the right of the other, in front of the ppp so they are centered horizontally and the cutoff corners face the front left and front right.

13. Place a light brown 1x1 slope tile on the 2nd column from the right of the front row so it slopes to the front. Then place another 1 on the 2nd stud from the front of the 3rd column from the right so it slopes to the right. Now place a magenta 1x1 crystal on the 3rd stud from the front of the 2nd column from the right. Now put your aliens that you made in group 1 on top of the 2x2 tiles with a stud that are centered horizontally on the 3rd and 4th rows from the front and 3rd and 4th rows from the back. Now put your build away while we make the next part!

Building Instructions (Bag 2, Book 2):

Group 7 - Space Explorer

Sub-build 2.1. Locate 1 white pair of legs printed with a dark blue and gold belt, and sand blue tipped shoes, 1 white and light blue torso printed with sand blue and gold armor, 1 light blue jetpack, and 1 yellow head printed with eyes, lips, and a beard. Assemble your minifigure then place him in front of you.

Sub-build 2.2. Let's make a part! Attach a transparent face shield to a light blue helmet, then attach it to your minifigure. Make sure the helmet opening is in the front before attaching the visor. Place the helmet on the head so the visor is in the front. Now put him away while we make the rover!

Group 8 - Rover

1. Horizontally place a black 6x8 plate with inverted sloped sides in front of you so it slopes to the front and back.

2. Horizontally place a light grey 2x3 plate on the 3 leftmost columns so it is centered vertically.

3.1. Let's make a part! Horizontally place a light grey 2x6 plate in front of you. Then vertically place a sand blue 1x2 ingot tile on the leftmost column. Then vertically place a black 1x2 short panel with a middle wall to the right of the ppp so the middle wall faces the right.

3.2. Horizontally place your part on the 5 rightmost columns so it is centered vertically, overhangs 1 column to the right, and the ingot tile is on the left.

4. Insert the pin of a dark grey 2x2 brick with 2 pins into the right-facing pin that is on the front row so the other pin faces the right. Then repeat symmetrically to the back.

5. Horizontally attach a white 6x8x4 cargo door to the right-facing pins so the higher side faces the right.

6. Horizontally place a light grey 2x3 plate on the 3rd, 4th, and 5th columns of studs from the right so it is centered vertically. Then place a light grey 1x1 plate with a clip behind the rightmost column of the ppp so the clip faces the right. Then repeat symmetrically to the front.

7. Vertically place a sand blue 1x4 plate on the 3rd column of studs from the right so it is centered vertically. Then horizontally place a black 2x4 plate to the left of the ppp so it is centered vertically.

8. Place a light grey 2x2 half dome brick on the 3rd and 4th columns from the right so it is centered vertically. Now horizontally place the 2 rightmost columns of a light grey 2x3 plate in front of the ppp. Then repeat symmetrically to the back.

9. Insert a black 2L pin into each of the left-facing pinholes.

10. Vertically place a black 1x2 panel with a middle wall on the leftmost column so it is centered vertically and the middle wall faces the right. Now place a dark grey 1x1 round tile with a top-facing bar in front and behind the ppp.

11. Vertically attach a dark grey 1x6 brick with 5 pinholes to the 2 left-facing pins so it is centered vertically. Now insert a black 2l pin into the 3rd left facing pinhole from the front.

12. Horizontally place a black 1x10 plate on the front left corner or 10 leftmost columns of the front row. Then repeat symmetrically to the back.

Group 9 - Rover

13. Horizontally place a dark orange 1x2 plate on the front row on the 6th and 7th columns from the left. Then horizontally place a black 1x2 plate with 2x2 side studs hanging down to the right of the ppp so the side studs face the front. Now horizontally place a gold 1x2 jumper plate to the right of the ppp. Then horizontally place a black 1x2 plate with 2x2 side studs hanging down to the right of the ppp so the side studs face the front. Now repeat everything symmetrically to the back.

14. Horizontally place a black 2x3 pentagonal tile upright on the 2 leftmost columns of front-facing side studs so the angled side overhangs 1 column to the left. Then repeat symmetrically to the right. Now repeat both parts symmetrically to the back.

15.1. Let's make a part! Place a black 4x4 brick with a 2x2 gap and pinholes in front of you so the sides with 3 pin holes face the front and back. Insert a black 2L pin into the leftmost front-facing pinhole. Then repeat symmetrically to the right. Now repeat both parts symmetrically to the back.

15.2. Attach a sand blue 1L pin connector to the right front-facing pin. Then repeat symmetrically to the back.

15.3. Vertically attach your part to the left-facing pin of the main build so the pin connectors are on the right and face the front and back.

16. Vertically place a black 2x4 plate on the 2 leftmost columns. Then horizontally place a light grey 2x3 plate to the right of the ppp so it is centered vertically.

17. Horizontally attach the rightmost pinhole of a dark grey 1x6 brick with 5 pin holes to the leftmost frontfacing pin. Then repeat symmetrically to the back.

18. Place a black 2x2 plate with a mudguard on the front 2 rows on the 7th and 8th columns from the left so the mudguard overhangs to the front. It should sit on 1 row of studs! Then repeat symmetrically to the back.

19. Horizontally place 2 black 1x2 plates with a stud and a clip, 1 in front of the other, on the 8th and 9th columns from the left so they are centered vertically and the clips are on the right. Now horizontally place a light grey 1x2 sloped curved tile in front and behind the 2 ppps so they slope to the right.

20. Vertically place a sand blue 1x4 plate on the 7th column from the left so it is centered vertically. Then place 2 white 2x2 plates with a cutoff corner, 1 in front of the other, to the left of the ppp so they are centered vertically and the cutoff corners face the front left and back left.

21. Horizontally place a dark orange 1x8 plate on the front row to the right of the 5 leftmost columns. Then repeat symmetrically to the back.

22. Insert a brown 5L axle with a stop into the leftmost back facing pinhole of the front 1x6 brick with holes. Then repeat symmetrically to the back. You might have to lift up the 1x6 brick with pinholes to be able to insert the axles!

23. Horizontally place a white 1x2 plate with 2 side studs hanging down on the front left corner so the side studs face the back. Then horizontally place a black 1x2 rounded plate to the right of the ppp. Then repeat both parts symmetrically to the back.

24.1. Let's make 2 identical parts! Horizontally place an orange 1x2 plate in front of you. Then place a gold 1x1 round plate on the right column. Now horizontally place a white 1x4 sloped curved tile on top so it slopes and overhangs 2 columns to the left.

24.2. Now you should have 2 identical parts! Horizontally place 1 on the front left corner so it slopes to the left. Then repeat symmetrically to the back.

25. Horizontally place a sand blue 1x2 ingot tile upright on the front-facing side studs that are on the back left corner of the build. Then repeat symmetrically to the front.

Building Instructions (Bag 3, Book 2):

Group 10 - Rover

26. Vertically place a light grey 1x4x2 panel on the 6th column of studs from the right so it is centered vertically and the wall faces the right. It should sit in between 1x2 jumper plates! Now vertically place a transparent aqua 1x2 plate on top of the ppp so it is centered vertically.

27. Horizontally place a white 1x6 brick on the front row to the left of the rightmost 6x6 part of the cargo hole so the 4th column from the right is in front of the ppp. Then horizontally place 2 light grey 1x4 bricks with 4 side studs on the long side, 1 to the left of the other, to the left of the ppp so the side studs face the front. Now repeat everything symmetrically to the back.

28. Vertically place a transparent aqua 1x2 panel with a bar on the 2 top-facing clips that are on the 8th column from the left so it is centered vertically and the panel faces up.

29. Place a white 4x4 round brick with 4 pinholes to the left of the ppp so it is centered vertically. Now horizontally place a black 1x2 brick with an axle hole in front of the 2 middle columns of the ppp. Then repeat symmetrically to the back.

30. Vertically insert the pins of a black 3L pin connector with 2 pins into the 2 left-facing pin holes so it is centered vertically. Now insert a light grey 1L pin with a stud into the left-facing pin hole of the ppp so the stud faces the left. Now place a transparent 1x1 round tile upright on the left-facing side stud of the ppp.

31. Vertically place 2 white 2x2 plates with a cutoff corner, 1 in front of the other, to the right of the ppp so they are centered vertically and the cutoff corners face the front left and back left. Now vertically place a light grey 1x2 tile with a rounded side to the right of the ppp so it is centered vertically and the rounded side faces the right. The cut off corner of the front plate faces the front left and the cut off corner of the back plate faces the back left.

32. Place 2 light grey 1x2 curved tiles, 1 in front of the other, to the right of the ppp so they are centered vertically and they align with the curve of the 4x4 round brick.

33. Place a white 1x1 quarter round tile on the front row on the 2nd column of studs from the left of the build so the curve faces the front left. Then horizontally place a white 1x8 plate to the right of the ppp. Now repeat both parts symmetrically to the back.

34. Insert a white 3L axle pin into the front-facing axle hole of the 1x2 brick that is to the left of the 8 front-facing side studs so the pin faces the front. Then repeat symmetrically to the back.

35.1. Let's make 2 identical parts! Horizontally place a black 1x3 plate in front of you. Then horizontally place a white 1x10 sloped curved brick with a 1x2 plate part on top so the plate part overhangs 1 column to the left. Now place a black 1x1 plate with a side stud sticking up underneath the leftmost column so the side stud faces the left. Then horizontally place a white 1x2 tile on top.

35.2. Now you should have 2 identical parts! Horizontally place 1 part upright on the 8 front-facing side studs so it overhangs 1 column to the left and the side stud faces the left. Then repeat symmetrically to the back.

Group 11 - Rover

36. Horizontally place a black 3x6 trapezoidal plate on the front row to the left of the rightmost 6x6 cargo door so the shorter side overhangs 2 rows to the front. Now place a gold 1x1 round plate to the left of the back row of the ppp. Then repeat both parts symmetrically to the back.

37. Place a white 1x1 corner panel on the back row of the 3rd column of studs from the right so the corner of the panel faces the back left. Then repeat symmetrically to the front.

38. Vertically place a sand blue 1x2 slope brick on the front 2 rows to the left of the ppp so it slopes to the front. Then repeat symmetrically to the back.

39. Horizontally place a sand blue 1x2 ingot tile on the 2nd row from the back, to the left of the ppp. Then place a light grey 2x2 corner plate in front of the ppp so it looks like the braille letter f. There should be no overhang. Now repeat both parts symmetrically to the front.

40. Vertically place a dark orange 1x4 tile on the left column of the previous 2x2 corner plates so it is centered vertically on the build. Now horizontally place the left column of a dark orange 1x2 plate with a bar on the long side in front of the ppp so the bar faces the front. Then repeat symmetrically to the back.

Group 12 - Rover

41. Horizontally place a black 1x2 ingot tile on the 3rd row from the back, on top of the ppp. Now vertically place the front row of a sand blue 1x2 slope brick to the left of the ppp so it slopes to the back. Then repeat symmetrically to the front.

42. Horizontally place a white 1x4 short panel on the front row to the left of the ppp so the wall faces the front. Then horizontally place a black 1x2 plate with a bar on the long side to the left of the ppp so the bar faces the front. Now repeat both parts symmetrically to the back.

43. Place a white 1x1 plate on top of the right column of each of the 2 ppp.

44. Horizontally place the rightmost column of a white 1x4 sloped curved tile on top of each of the 2 ppp so they slope to the left.

45. Flip your build upside down so it is horizontal and the cargo door faces the right. Now horizontally place the leftmost column of a light grey 2x6 plate with pinholes on the 8th column from the left so it is centered vertically. The leftmost column should sit to the right of the 2x2 gap of the 4x4 brick with a 2x2 gap.

46.1. Let's make a part! Horizontally place a black 2x8 plate with pinholes in front of you.

46.2. Vertically place a gold 1x2 jumper plate on the leftmost column. Then repeat symmetrically to the right. Now horizontally place a light grey 2x6 plate with pinholes in between them. Now place a transparent red 2x2 inverted round tile with a rounded bottom underneath your part so it is centered horizontally.

46.3. Make sure your main build is still upside down. Then vertically place your part on the 5th and 6th columns of anti-studs from the right so it is centered vertically. It should overhang 1 row to the front and back and sit in between the upright front-facing and back-facing 2x3 pentagonal tiles.

Group 13 - Rover

47. Let's make a part! Horizontally place a light grey 2x6 plate with pinholes in front of you.

48. Vertically place a black 2x4 plate with higher sides on the 2 leftmost columns so it is centered vertically.

49. Place a dark grey 2x2 brick with 2 pins on the 2 leftmost columns so it is centered vertically and the pins face left and right.

50. Vertically attach a black 9L lift arm to the left-facing pin so it is centered vertically.

51.1. Let's make 2 identical parts! Horizontally place a light grey 2L axle connector in front of you. Then insert a tan 2L pin axle into the right-facing axle hole so the pin faces the right. Now insert a yellow 5L axle into the left-facing axle hole.

51.2. Now you should have 2 identical parts! Insert the axle of 1 part into the front right-facing pinhole of the 9L liftarm so the axle faces the left and the pin faces the right. Then repeat symmetrically to the back.

52. Attach a tan gear to the front left-facing axle so it goes all the way in and the side with teeth faces the right. Then repeat symmetrically to the back.

53. Vertically attach a black 9L lift arm to the 3 right-facing pins so it is centered vertically.

54. Vertically place a black 2x4 plate with higher ends on the 2 rightmost columns so it is centered vertically.

55.1. Let's make a part! Place a dark grey 2x2 brick with 2 pins in front of you so the pins face left and right. Now vertically attach a black 9L liftarm to the left-facing pin so it is centered vertically.

55.2. Place the 2x2 brick part of your part on the 2 rightmost columns so it is centered vertically and the liftarm is on the left.

56.1. Let's make 2 identical parts! Horizontally place a light grey 2L axle connector in front of you. Then insert a tan 2L pin axle into the left-facing axle hole so the pin faces the left. Now insert a yellow 5L axle into the right-facing axle hole.

56.2. Now you should have 2 identical parts! Insert the pin of 1 part into the front right-facing pinhole of the rightmost 9L liftarm so the axle faces the right. Then repeat symmetrically to the back.

57. Vertically attach a black 9L liftarm to the 2 right-facing axles and right-facing pin.

58. Attach a tan gear to the front right-facing axle so it goes all the way in and the side with teeth faces the left. Then repeat symmetrically to the back.

59. Place a black 2x2 ridged short brick on the 2 rightmost columns of studs so it is centered vertically. Then repeat symmetrically to the left.

60. Bring back your main build so it is upside down and horizontal and the axles are on the left and face the front and back. Vertically place your part upside down on the 5th and 6th columns of anti studs from the right so it is centered vertically and the axles face the front and back. It should sit on the vertical 2x6 plate with pinholes.

61. Insert a brown 5L axle with a stop into the front top-facing anti-stud of the 2x6 plate of the ppp so the stop is on top. Then repeat symmetrically to the back.

Building Instructions (Bag 4, Book 2):

Group 14 - Rover

62.1. Place a black 4x6 plate with bars in front of you so the bars are on the right. Now vertically place a dark orange 1x2 plate with a bar on the long side on the leftmost column so it is centered vertically and the bar faces the left. Now vertically place a black 1x4 sloped curved tile on the leftmost column so it is centered vertically.

62.2. Vertically place a white 1x2 tile with an overhead bar to the right of the ppp so it is centered vertically and it slopes to the right. Now place a white 2x2 tile with an orange globe with an arrow around it to the right of the ppp so it is centered vertically.

62.3. Vertically place a black 1x4 sloped curved tile on the 2nd column from the right.

62.4. Orient your main build so it is horizontal, upside down and the cargo door faces the left. Horizontally attach the 2 rightmost bars of your part to the left-facing clips that are below the leftmost front-facing and back-facing axles so the studs are on top. This is the door for the back!

63.1. Flip your build over so it is horizontal, right-side up, and the ppp is on the left. Now let's make a part! Horizontally place a white 1x2 plate in front of you. Then place 2 transparent magenta 1x1 round bricks, 1 to the right of the other, on top. Now horizontally place a white 1x2 tile printed with a battery and bars on top.

63.2. Horizontally place your part on the 1x2 jumper plate that is above the 9L lift arm that is on the front left corner. This is underneath the trapezoid plate.

64.1. Let's make a part! Horizontally place a black 1x2 plate with a stud and a clip in front of you so the clip is on the left. Now attach a light grey bar with a bar holder to the clip so the bar hole faces up. Now place a light grey antenna with a rounded part on top of the bar hole so the antenna faces up.

64.2. Horizontally place your part on the front 2 rows of the 3x6 trapezoid plate that is above the previous part you placed! Now turn the antenna so it faces the top left.

You will have an extra white 2x4 plate. Save it for later!

Group 15 - Rover

65.1. Let's make a part! Vertically place a white 4x6 tri slope tile with a 2x2 gap in front of you so the gap faces the right. Now vertically place a sand blue 1x4 plate on the 2nd column from the right so it is centered vertically.

65.2. Vertically place a black 2x4 plate on the rightmost column so it is centered vertically and overhangs 1 column to the right.

65.3. Vertically place a white 2x4 plate from group 14 on the 2nd and 3rd columns from the right so it is centered vertically. Now vertically place a white 1x1 plate with a 1x1 slope tile on the front right corner so it slopes and overhangs to the front. Then repeat symmetrically to the back.

65.4. Vertically place a black 3x4 sloped curved brick on the 3 rightmost columns so it is centered vertically and slopes to the left. Now vertically place your part on the 5 leftmost columns on the main build so it is centered vertically and slopes to the left.

66. Let's make a part! Horizontally place a white 6x8 plate with sloped sides in front of you so it slopes to the front and back. Now vertically place a dark grey 1x2 slope tile on the rightmost column so it is centered vertically and slopes to the right.

67. Place a light grey 2x2 round plate on the 3rd and 4th columns from the right so it is centered vertically. Now horizontally place a set of dark orange 1x2 plates with 2 overhead bars to the left of the rightmost 1x2 slope tile so it is centered vertically and the bars are in the front and back. Now place a dark grey 1x2 slope tile to the left of the ppp so it is centered vertically and slopes to the left.

68. Horizontally place a black 2x4 plate on the 2nd, 3rd, 4th, and 5th columns from the right so it is centered vertically.

69. Vertically place a black 2x2 plate with a mudguard on the 3 rightmost columns so the mudguard is on the right. Then place another 1 to the left of the ppp so the mudguard is on the left.

70. Place a white 2x2 tile printed with an orange globe and blue arrow on the 3rd and 4th columns from the right so it is centered vertically.

71. Bring back your main build so it is horizontal, right side up, and the cargo door faces the right. Now horizontally place your part to the left of the 3x4 sloped curved brick that is on the right side so it is centered vertically and the bars are on the right.

You will have an extra transparent 1x1 round tile. Save it for later!

Group 16 - Rover

72.1. Let's make a part! Horizontally place a transparent black 6x10 windshield in front of you so it slopes to the left. Now vertically place a black 1x2 plate with 2 side studs sticking up on the back 2 rows on the 2nd column from the right so the side studs face the left. Now place a sand blue 2x2 sloped curved tile on the back 2 rows so it slopes to the right. Then place 2 transparent aqua 1x1 round tiles, upright on the 2 left-facing side studs.

72.2. Place a dark grey 2x2 round tile with a stud on the front 2 rows. Now place a black 1x1 round plate with a horizontal bar upright on the ppp and the stud faces the left. Now place a transparent 1x1 round tile on the ppp's left-facing stud.

72.3. Horizontally place the 2 leftmost columns of your part on the main build's 2 leftmost columns of studs so it is centered vertically and slopes to the left.

73. Attach a black and gold 6L pin connector with 2 pinholes and a spring to the leftmost front-facing axle and pin so the spring is on the right. Make sure the left end attaches to the front-facing axle. Then repeat symmetrically to the back.

74. Attach a tan gear to the leftmost front-facing axle so the side with teeth faces the back. Then repeat symmetrically to the back.

75. Let's make 6 identical parts! Place a light grey 2x2 round plate on top of a large black wheel. Now you should have 6 identical parts! Attach 1 to each of the front-facing axles so the 2x2 round plates face the back. Then repeat symmetrically to the back.

76.1. Let's make 6 identical parts! Place a large dark orange steering wheel in front of you so the stud faces up. Now place a dark grey 1x1 round tile with a top-facing bar on top so the bar faces up. Then place a white 3x3 disk with an axle hole on top of the ppp.

76.2. Place 1 part upright on each of the front-facing axles that are sticking out of the wheels so the disks face out. Then repeat symmetrically to the back.

77.1. Let's make a part! Horizontally place a white 1x2 plate in front of you. Now place 2 transparent 1x1 round bricks, 1 to the right of the other, on top. Then horizontally place a white 1x2 tile printed with a battery and bars on top.

77.2. Horizontally place your part on the 1x2 jumper plate that is behind the 2 wheels that are in the front right corner so it goes under the overhang of the trapezoid plate.

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