

ECO-BATTERY VEHICLES





ECO-BATTERY VEHICLES | Contents

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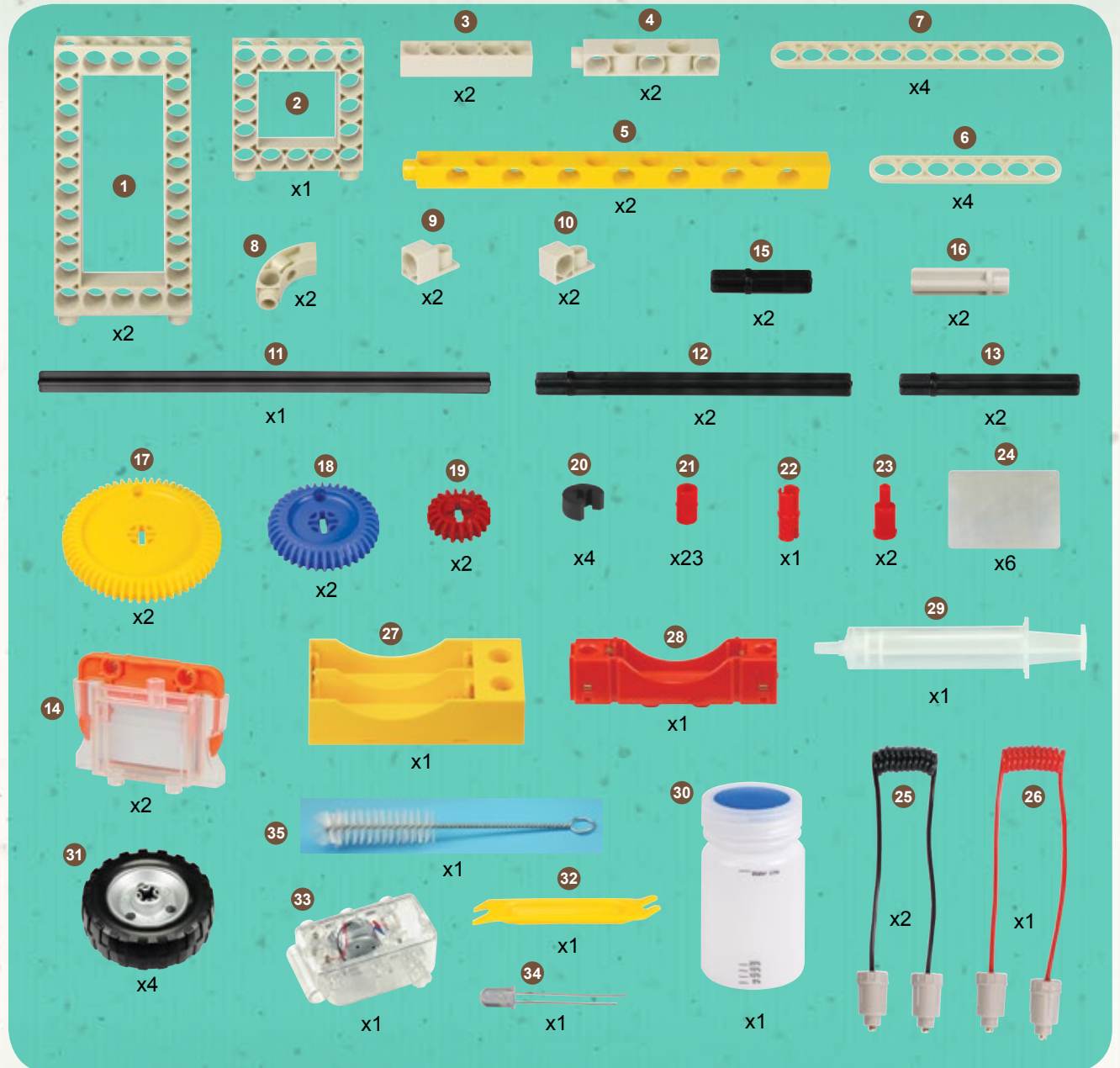
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ECO-BATTERY VEHICLES | The parts inside your kit

No.	Description	Quantity	Item No.
1	SHORT FRAME	2	703232
2	SQUARE FRAME	1	705016
3	5-HOLE ROD	2	704063
4	3-HOLE DUAL ROD	2	705012
5	7-HOLE DUAL ROD (LONG ROD)	2	707046
6	7-HOLE FLAT ROD	4	712341
7	11-HOLE FLAT ROD	4	712340
8	CURVED ELBOW ROD	2	705013
9	90 DEGREE CONVERTER - R	2	704064
10	90 DEGREE CONVERTER - L	2	705017
11	EXTRA-LONG SHAFT	1	703518
12	LONG SHAFT	2	703234
13	MEDIUM SHAFT	2	703238
14	METAL-AIR CELL	2	712334
15	SHORT SHAFT	2	703236
16	MOTOR SHAFT	2	702801
17	LARGE GEAR WHEEL	2	711100
18	MEDIUM GEAR WHEEL	2	710061
19	SMALL GEAR WHEEL	2	710062
20	AXLE LOCK	4	702813
21	ANCHOR PIN	23	702527
22	JOINT PIN	1	702524
23	SHAFT PIN	2	702526
24	MAGNESIUM METAL PLATE	6	712335
25	BLACK CONNECTING WIRE	2	702593
26	RED CONNECTING WIRE	1	702592
27	YELLOW BATTERY HOLDER	1	712339
28	RED BATTERY RECHARGER	1	710115
29	SYRINGE	1	712343
30	SALT WATER BOTTLE	1	712342
31	WHEEL	4	712336
32	ANCHOR PIN LEVER	1	702590
33	MOTOR	1	702800
34	LIGHT-EMITTING DIODE (LED)	1	704072
35	BRUSH	1	712344
	TOTAL	91	





THE CHEMICAL ELEMENTS

Here's an overview to help you understand what's happening inside your metal-air cell.

O = oxygen

H = hydrogen

H₂O = water

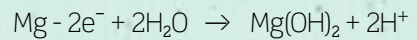
Mg = magnesium

Mg(OH)₂ = magnesium hydroxide

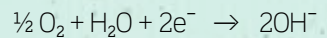
These are the reactions taking place in your metal-air cell.

Main reaction, which releases energy:

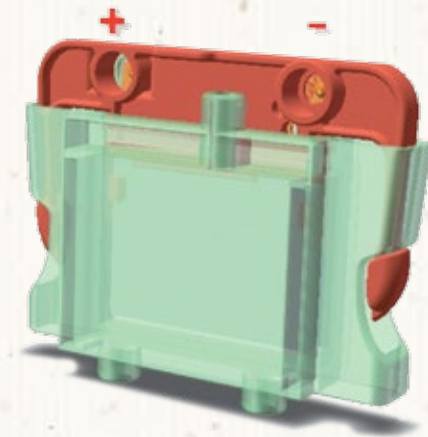
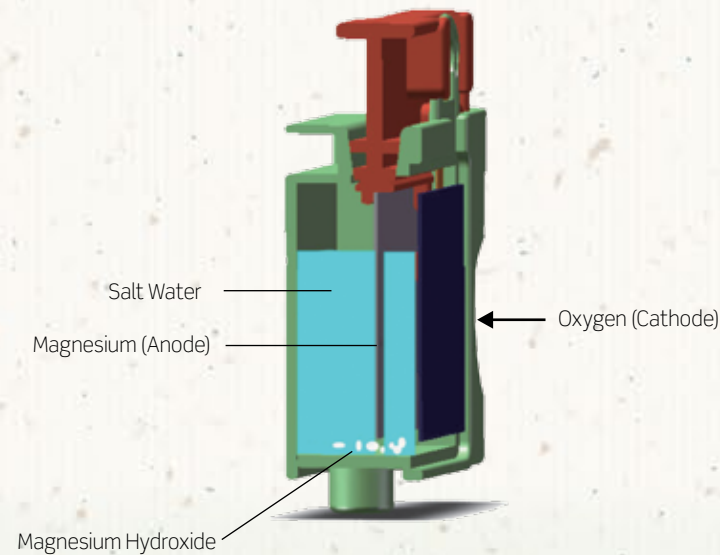
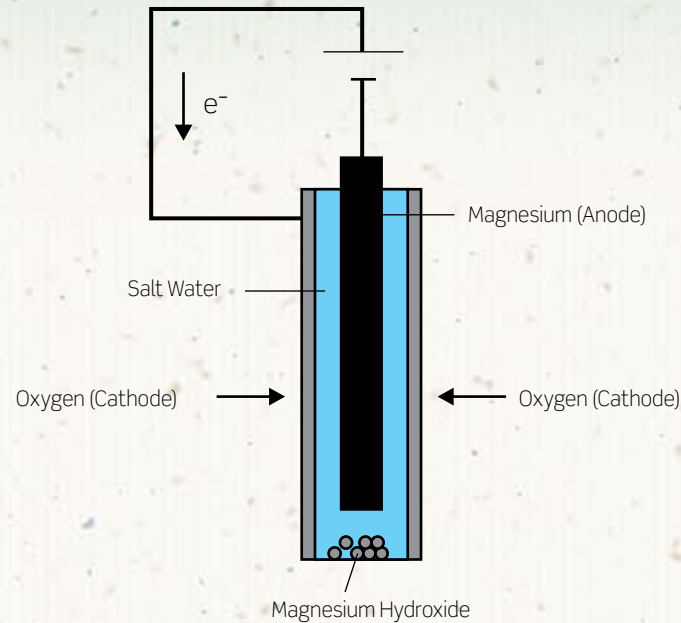
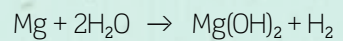
Reaction at the anode:



Reaction at the cathode:



Overall reaction:

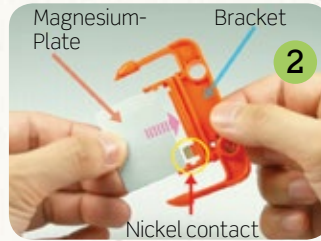




1. First, prepare some salt water. For water with 15% salt: Pour salt into the bottle up to the 15% mark, and then fill to the top line (the water line) with water. For water with other salt concentrations, simply fill to the corresponding mark on the bottle.



2. Slide the magnesium plate into the holder. Make sure that the plate touches the nickel contact.



3. Click the holder with the magnesium plate into the tank. Make sure the holder is fully inserted.



4. Done! Check one more time to be sure everything is properly assembled.



5. Attach the metal-air cell to your car. (You have to build one of the models following the instructions starting on page 17.)



6. Connect the connection wire to the metal-air cells.



7. Draw salt water into the syringe.

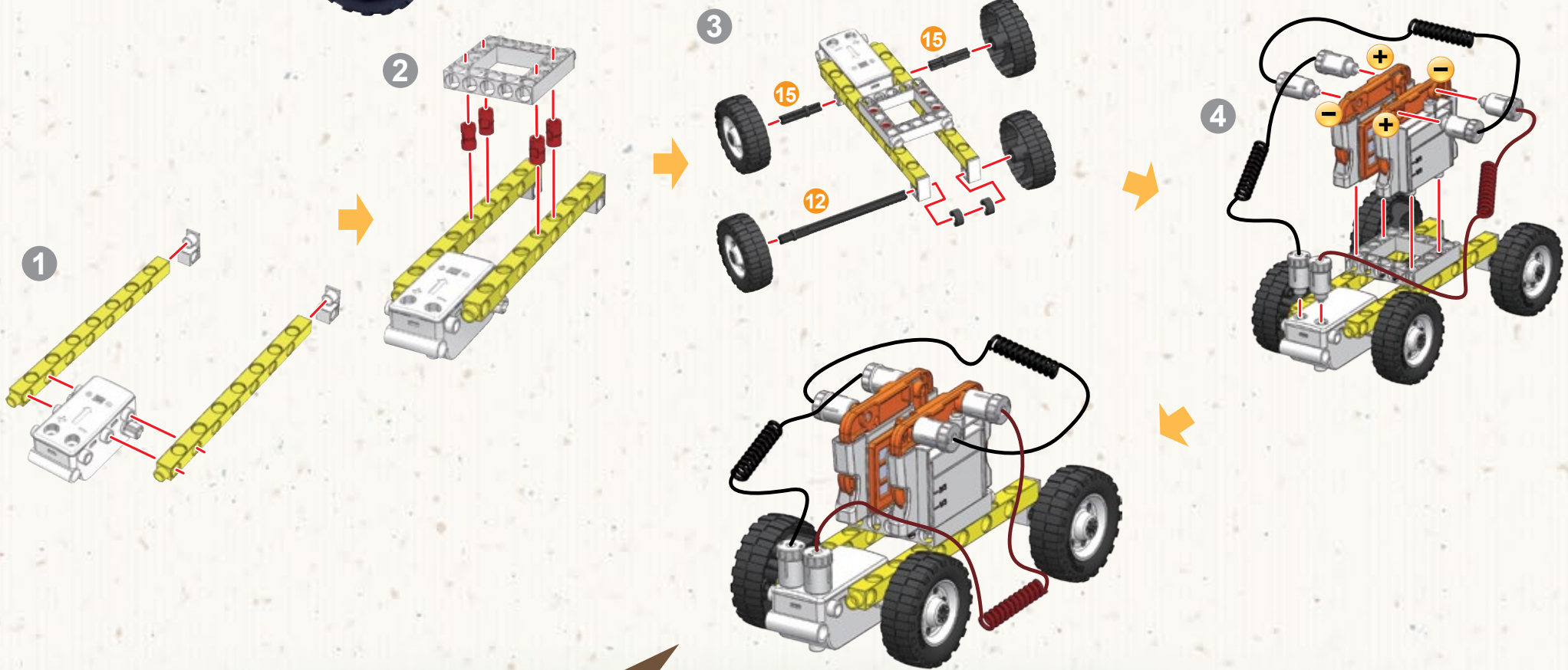
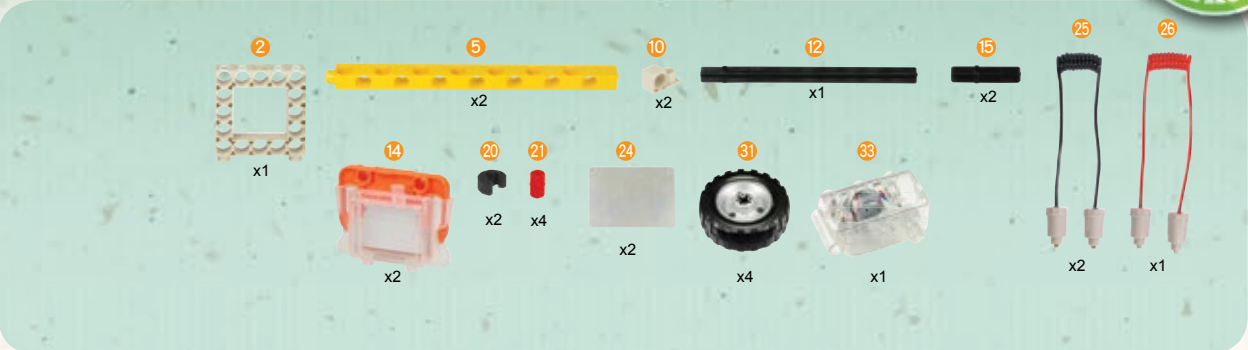


8. Inject the salt water into the tank (no higher than the top fill line), and your car takes off!

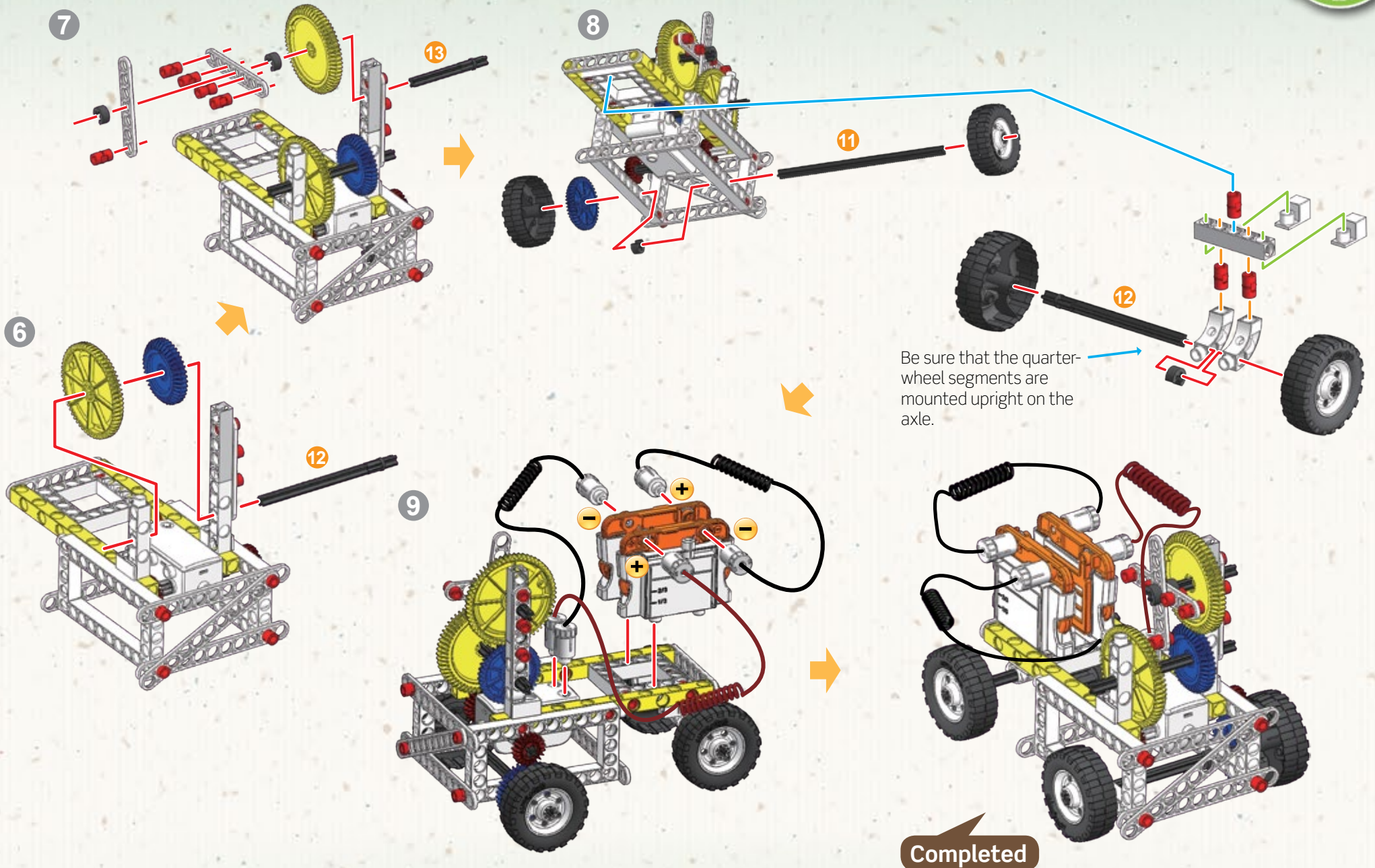




Taxi



Completed



MODEL 11 Helicopter | ECO-BATTERY VEHICLES



Helicopter

