











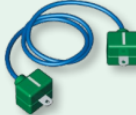
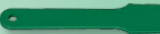



Component	Description	Illustration
<b>Battery case</b> Item No. 704484 <i>Never directly connect these terminals to each other. The batteries and wires can heat up and explode, not to mention that the batteries will be quickly used up.</i>	This power pack supplies the electricity for the experiments. Before starting the experiments, you will have to install two 1.5-volt AA batteries (also known as penlight or LR6 batteries) inside it, as indicated in the battery compartment. You can then obtain electric current from the box's two terminals.	
<b>Red Light</b> Item No. 706415	Later on, electricity will light up this bulb. That will show you that electrical current is flowing.	
<b>Green Light</b> Item No. 706417	This is just like the red light, except it's a different color.	
<b>Yellow Light</b> Item No. 706416	Again, this is just like the red light, except it's a different color.	
<b>Motor</b> Item No. 706414	When electrical current flows through it, the motor and its yellow propeller will turn quite quickly.	
<b>Two-way switch</b> Item No. 705055 Quantity: 2	Depending on the setting of the switch, one or the other of two contact plugs will be electrically connected.	
<b>Push button</b> Item No. 705054	If you push the button, you create an electrical connection between the terminals. But the connection is only maintained as long as you keep pressing it.	

Component	Description	Illustration
<b>Connectors with 4 terminals (X-shaped)</b> Item No. 705050 Quantity: 12	For connecting components. The metal prongs of other components such as the push button are inserted into the side slits. In the instructions, they are called " <b>X-connectors</b> " for short.	
<b>Straight connectors with 2 terminals (I-shaped)</b> Item No. 705051 Quantity: 4	For connecting components electrically. The two plugs are electrically connected to each other. In the instructions, they are referred to as " <b>I-connectors</b> " for short.	
<b>Angled connectors with 2 terminals (L-shaped)</b> Item No. 705052 Quantity: 2	For the electrical connection of components, but in a way that guides the current at an angle. Looks like an "L," hence referred to as an " <b>L-connector</b> " for short in the instructions.	
<b>Connector with 3 terminals (T-shaped)</b> Item No. 705053	For electrical connections. The three prongs are electrically connected to each other as indicated by the white lines. In the instructions, they are referred to as " <b>T-connectors</b> " for short, because their shape is similar to a "T."	

Component	Description	Illustration
<b>Red connecting wire with plugs</b> Item No. 706428	For connecting the electronic components. At the ends, there are contacts that fit into the green X connectors. Referred to as " <b>red connecting wire</b> " in the instructions.	
<b>Blue connecting wire with plugs</b> Item No. 706429	Like the red connecting wire with plugs, but in a different color. In the instructions, it is referred to as " <b>blue connecting wire.</b> "	
<b>Separator</b> Item No. 706078	An easy way of separating assembled connectors, lights, switches, etc. Simply slide it between the components and pry them apart.	
<b>Red alligator wire</b> Item No. 704486  <i>Never insert the wire into a wall outlet, or connect it in any way to the household current. Electrical current from a wall outlet is deadly!</i>	For connecting the electronic components. At the ends, it has alligator clips (so called because they resemble the jaws of an alligator). If you squeeze the clips, they will open up and you can clamp them onto small metal connection prongs such as those on the battery case, the lights, or the motor. Called " <b>red alligator wire</b> " in the instructions.	

**Blue alligator wire**  
Item No. 704487

Like the red alligator wire, but in a different color so you can tell them apart more easily. Called "**blue alligator wire**" in the instructions.



**Small parts in pouch**  
Item No. 772180

Various metal parts for the experiments, such as screws, nuts, washers, and colored disks with a thin iron ring that you can use for the magnet games.



**Bar magnet**  
Item No. 706423  
Quantity: 2

A powerful magnet. The different colors (blue, red) mark the two poles of the magnet. The north pole is red, the south pole is blue.



**Base**  
Item No. 706419

Belongs to the three-part **magnet hanger** consisting of a base, an arm, and a cord with rings.



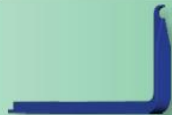
**Ring magnet**  
Item No. 706412  
Quantity: 2

With this magnet as well, the red (north) and blue (south) colors designate the two magnetic poles.



**Arm**  
Item No. 706420

The L-shaped arm is part of the three-piece **magnet hanger**. It is inserted into the horseshoe-shaped base. The cord with rings hangs on its hook.



**Electromagnet**  
Item No. 706422

Unlike the bar magnets and ring magnets, this only becomes magnetic when electric current flows through it.



**Cord with rings**  
Item No. 706421

Two rings tied together with string, belonging to the **magnet hanger**. The smaller ring is suspended from the hook on the arm. The two bar magnets are secured to the larger ring.



**Box of iron powder**  
Item No. 704449

Finely powdered iron in a sealed container. This is used for making magnetic forces visible.

