



ARTIBOT

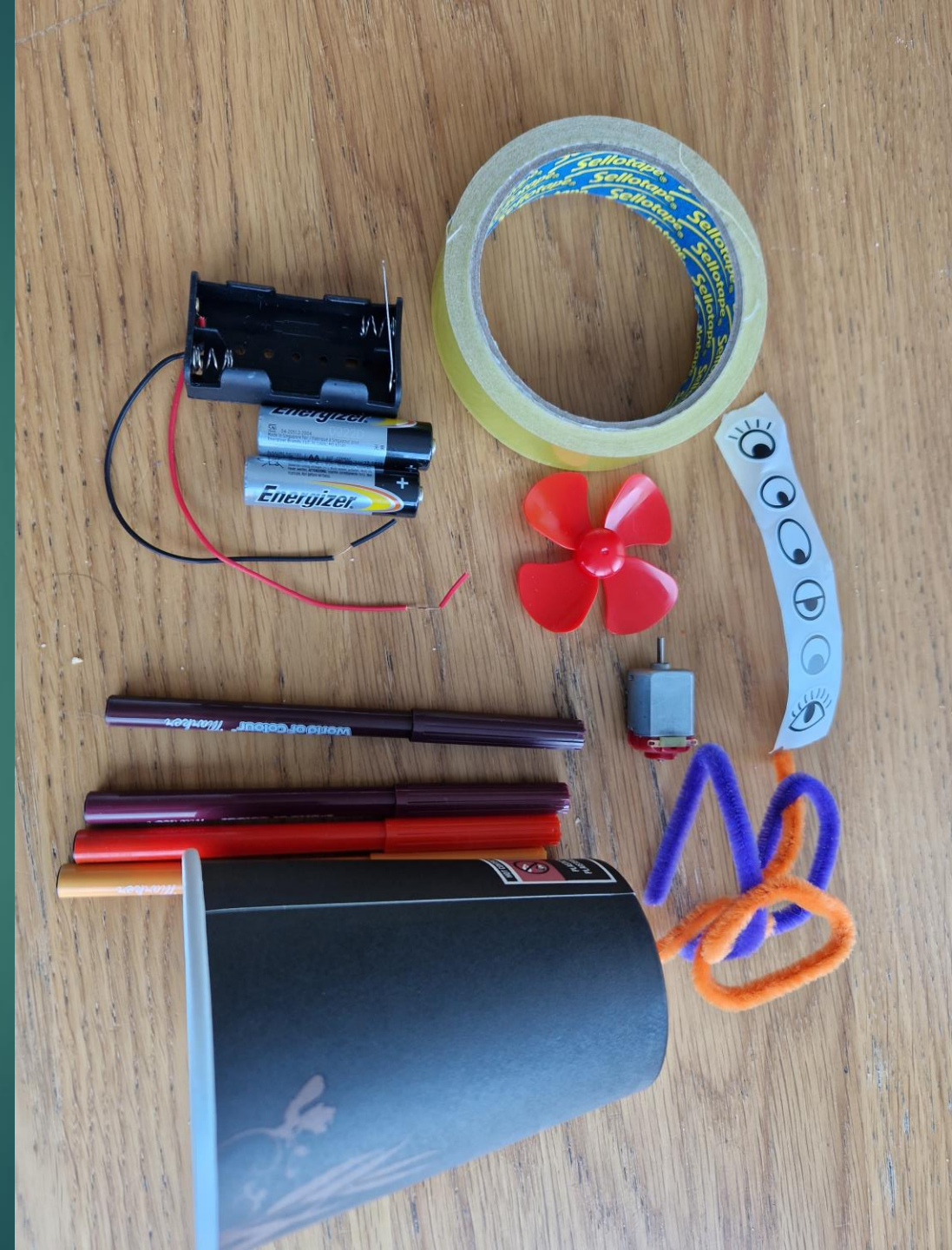
Scribble Robots & Basic Circuits



Artibot Parts list

1. Battery holder with on/off switch.
2. DC motor.
3. Propellor/Vibration maker
4. Paper cup.
5. 2x AA cells.
6. 4 x markers.
7. Double sided tape & Sellotape
8. Decorations!

Note: All parts can be found cheaply on Ali Express or ready made kits can be purchased, see resources slide .



How to build your artibot

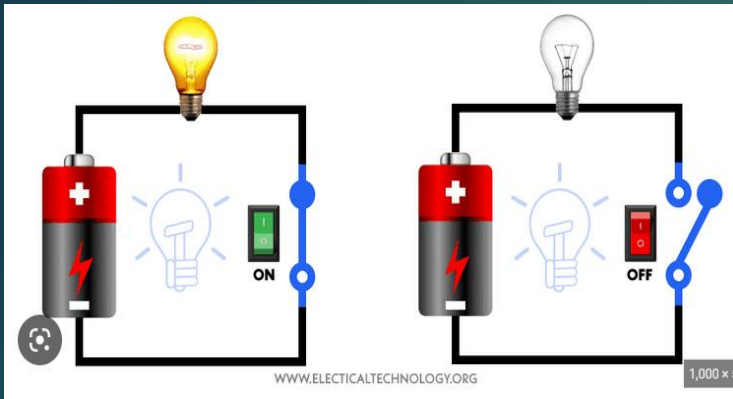
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1. Attach the battery with double sided tape to the cup
2. Add the motor with double sided tape
3. Attach wires between the battery and motor.
4. Fix a stick or other propeller to the end of the motor
5. Tape felt tip pens around the outside of the cup
6. Decorate and give it some personality
7. Lay out some old wallpaper front side down
8. Let your Artibots go!



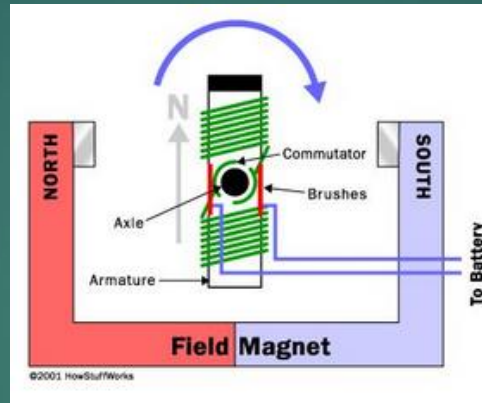
The Science behind your Artibot!

CIRCUIT



- ▶ A circuit is a closed loop that electricity can travel in.
- ▶ A source of electricity, such as a battery, provides the electrical energy.
- ▶ A switch turns the circuit on and off
- ▶ The “load” a bulb, a motor etc is what we want the circuit to do.

MOTOR



- ▶ With Magnets, we know North attracts South and South attracts North, North repels North and South repels south
- ▶ When we pass the power from a battery through a coil of wire wound around some Iron it becomes a magnet.
- ▶ Supporting this “electro magnet” between two permanent magnets causes the electromagnet to spin

VIBRATION, MOVEMENT & BALANCE



- ▶ Motors in general don't vibrate much
- ▶ To make a motor vibrate so the Artibot will move and draw we need to create a mechanical imbalance
- ▶ To do this we can attach a propellor with a blade or two missing, a cork or a stick
- ▶ Experiment to see what works best, too much vibration and the

Resources

Great value, just add batteries and short markers Kit:

<https://shop.cyntech.co.uk/products/bug-kit>

Short markers

https://www.amazon.co.uk/gp/product/B000EB55RS/ref=ppx_od_d_t_b_asin_title_s00?ie=UTF8&psc=1

Full Kit:

<https://www.amazon.com/Doodling-Scribble-STEM-Kids-10-Pack/dp/B092LF1YTM>

