# Solution sheet Experiment 2 – Make a motor turn

## Evaluating the experimental task

1. The motor is turning!
2. The motor has a lot of turning power. However, you can still brake it with two fingers.
3. When the switch is switched over, the current direction changes. Because we are using a “direct current motor”, this also changes the direction of rotation. We can easily make the motor turn in both directions.
4. The black axle on the outlet of the plug-in gearbox turns much more strongly than the “naked” motor worm gear. This is due to the toothed gears: A small toothed gear always transmits the rotation to a larger toothed gear. This is called “gear reduction”: The rotation is now slower, but more powerful.
5. Just like with the LED in experiment 1, it does not matter where or how the current direction is changed. Switching the switch or exchanging the plugs on the battery holder or on the motor will cause the same effect: The motor will change its direction of rotation.
6. The flag allows you to easily see how fast it is turning. The worm gear on the motor turns so quickly that you cannot follow it with your eye.