

Lego Wedo Rocket

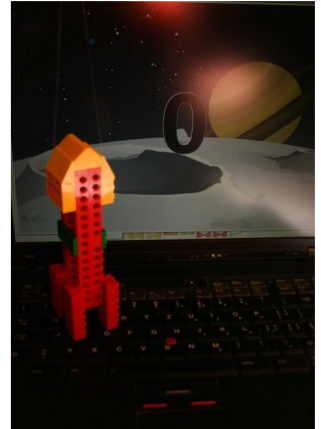
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A rocket built and programmed in Lego Wedo. After an initial countdown, the rocket accelerates and takes off into space. The program includes a background-image and a sound.

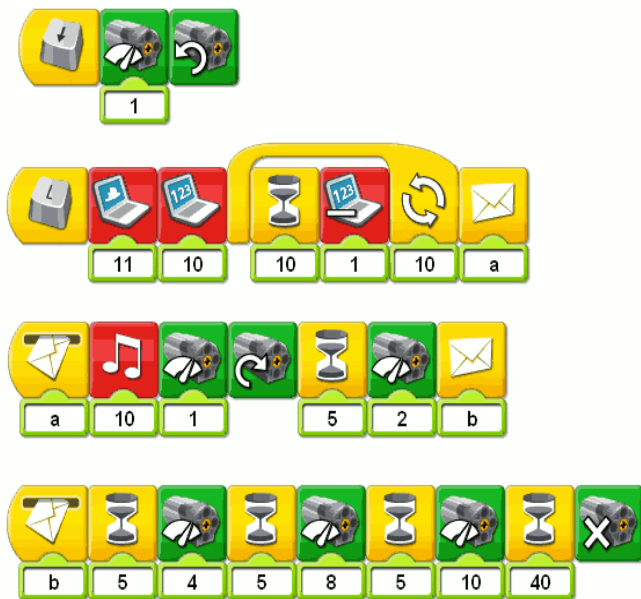
Description

A rocket is placed on a moon of Saturn and ready to lift up. Once the operator hits the liftoff button "L", the countdown starts. At zero, the rocket ignites and starts accelerating into space.

To do so, an almost invisible string is attached to the rocket. This string is rolled up by the motor that is placed on the table-top.



Program



The program is controlled using the keyboard of the computer with the following commands:

- **"L" Key:** Liftoff sequence start
- **Down Key:** The Rocket returns to the surface
- **Escape:** Stop all movement

The program on the first line allows to slowly put the rocket down on the surface. When the arrow key is pressed down, the motor speed is set to 1 and the axle starts turning counter-clockwise, thus unrolling the string attached to the rocket.

The second program is separated on three lines using the "mail" blocks to jump from the end of one line to the start of the next. The program executes when the letter "L" is pressed. First, the background screen is selected and the number "10" shown. Then a countdown loop starts that, 10 times, waits a bit and then counts one number down. At the end of the countdown, the ignition sound is played and the motor is started in clockwise direction to roll up the string and lifting the rocket into space. The speed is increased in several steps from "1" to "10". At the end, the motor is stopped.

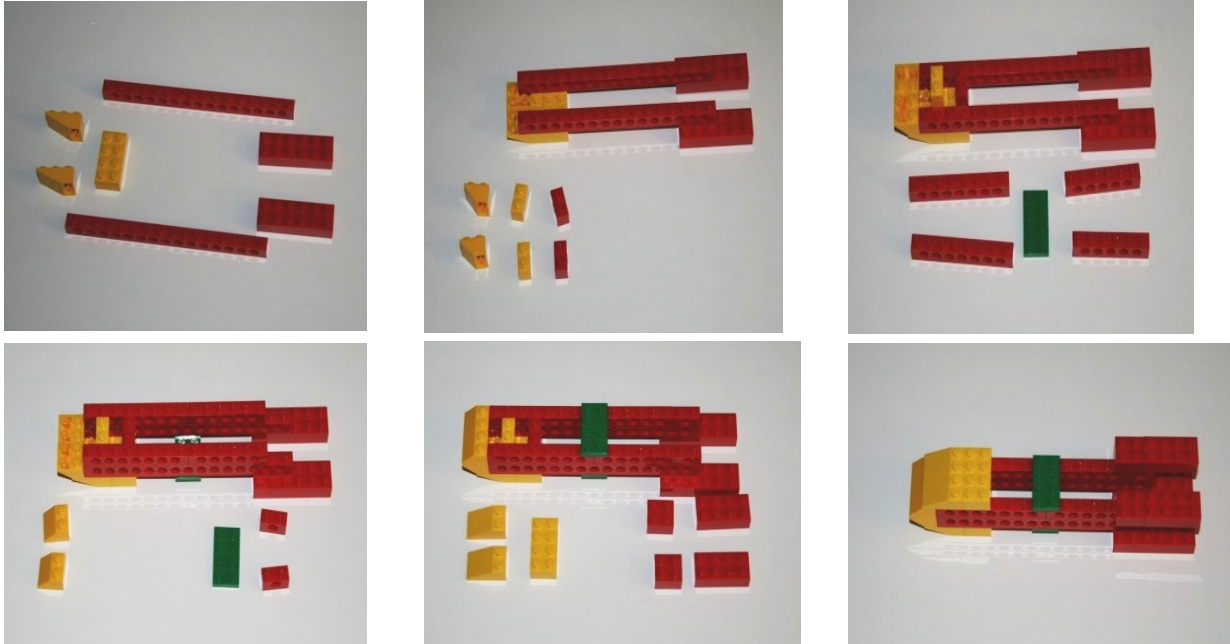
Building Guide

Needed Material



On the left you see the material that is needed to build the rocket. The only two items that can't be found in the Lego start-kit are the string as well as the clamp used to attach the motor to the table.

The Rocket



When finished building the rocket as displayed above, attach the string to it using the holes at the top.

Motor Station

The rocket will be pulled off ground by the motor station. Attach the other end of the string to the turning wheel, then clamp the motor station to the table and place the rocket on the floor below.

