MECHANISMS – Rod and Crank

ED1 Base

1x Base ED1 09x02x0.5

3x BeamSTRESS_ERHRHDE_BU02x01x01
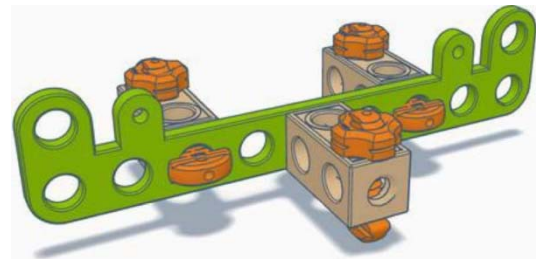

3x ScrewFL-RHRHD_BU01.50   3x ScrewFL-RHRHD_BU00.25   3x NutRH_BU01.00x00.50

Rod and Crank - Step 1/5

1x BeamSTRESS_BU09x01x01

4x BeamSTRESS_ERHRHDE_BU05x01x01

2x ScrewFL-RHRHD_BU03.25   2x NutRH_BU01.00x00.50   4x ScrewFL-RHRHD_BU00.25

Rod and Crank - Step 2/5
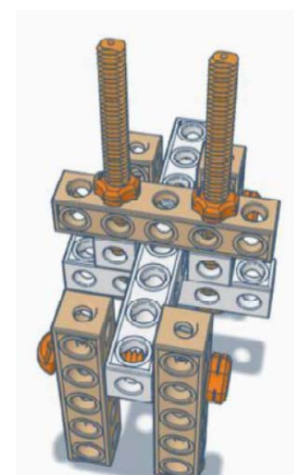

1x BeamSTRESS_BU05x01x01   2x BeamSTRESS_BU01x01x01

1x BeamSTRESS_ERHRHDE_BU05x01x01

2x ScrewFL-RHRHD_BU08.00   2x NutRH_BU01.00x00.50

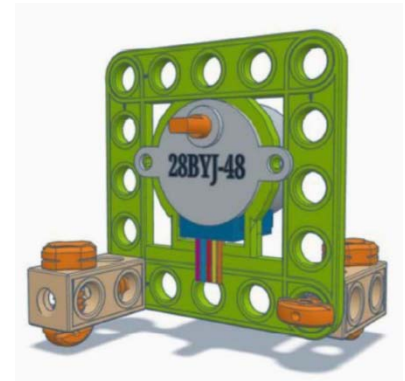# MECHANISMS – Rod and Crank

Rod and Crank - Step 3/5

1x Base Motor 05x05x05   1x Motor Pas a Pas   2x Cargols M3x6

2x ScrewFL-RHRHD_BU01.50   2x NutRH_BU01.00x00.50

2x ScrewFL-RHRHD_BU00.25   2x BeamSTRESS_ERHRHDE_BU02x01x01

Rod and Crank - Step 4/5

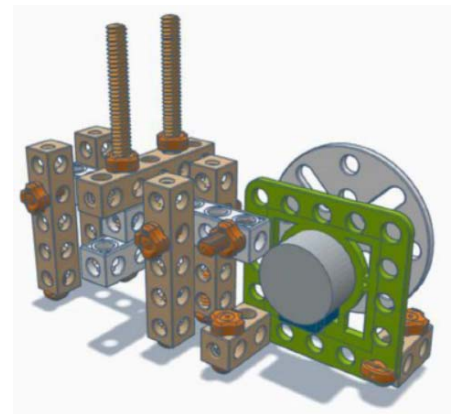1x WasherFXD_BU05.00x00.25   1x Adaptador motor 01x01x01

2x ScrewFL-RHRHD_BU00.25   1x NutRH_BU01.00x00.50

Rod and Crank - Step 5/5

1x Brace_STR_STD_ERR_BU08x01x00.25

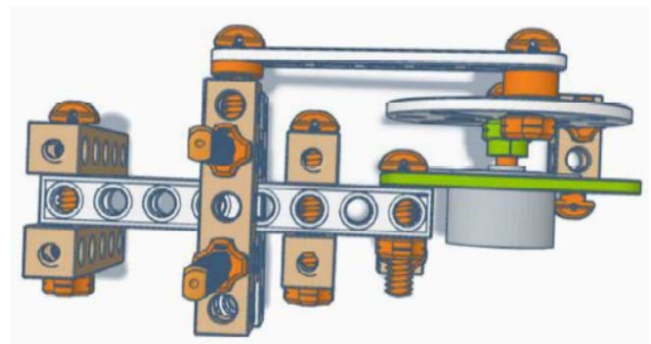2x ScrewFL-RHRHD_ BU01.50   1x NutRH_BU01.00x00.50

1x Spacer_FRE_BU00.50x01.00   1x Spacer_FRE_BU00.25x01.00

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MECHANISMS – Rod and Crank

Once we have the parts printed and assembled, let's see how it can be automated.

The Citilab offers an educational board ED1 that can be used to control the stepper motor of the mechanism and can be programmed with the Microblocks environment
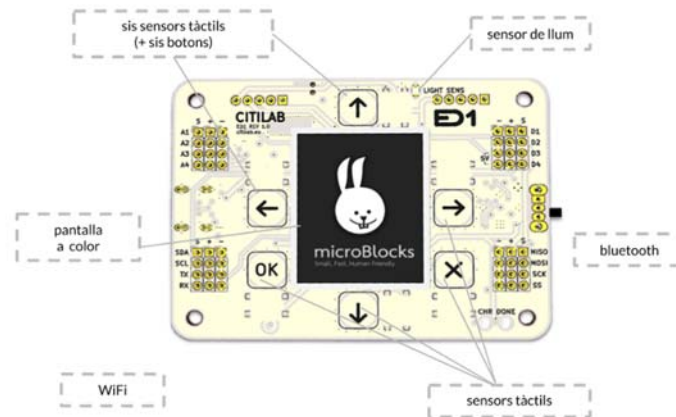
The ED1 microcontroller board has been designed by Citilab with the goal of facilitating educational projects in robotics, creative electronics, home automation and even the Internet of Things, thanks to the connectivity options it incorporates. ED1 has been awarded the CE certification.

The ED1 board is based on a 32-bit ESP32 processor. It includes 6 touch buttons, a light sensor, a 3-axis acceleration sensor, an infrared receiver and a temperature sensor. It has a 1.44″ colour display and 128×128 colour pixels. It includes two connections for 28BYJ-48 type stepper motors. It is possible to connect external sensors and actuators with 4 digital inputs / outputs, 4 analogue inputs and SPI and I2C connectors. The board uses a rechargeable battery type 16340 or RC123A and incorporates a charge manager with full battery indication. A USB-C connector is used for programming, powering and recharging the board.

The ED1 board is programmed using MicroBlocks, a visual programming language for blocks similar to Scratch, which works within the board and allows both interactive and autonomous projects to be worked on transparently.

https://market.citilab.eu/es/producte/placa-ed1/

It can also be done with any other Arduino board

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