LEGO Ice Skater Snow Globe

I combined electronics with LEGO and craft supplies to bring this ice skater mini fig's world to life.

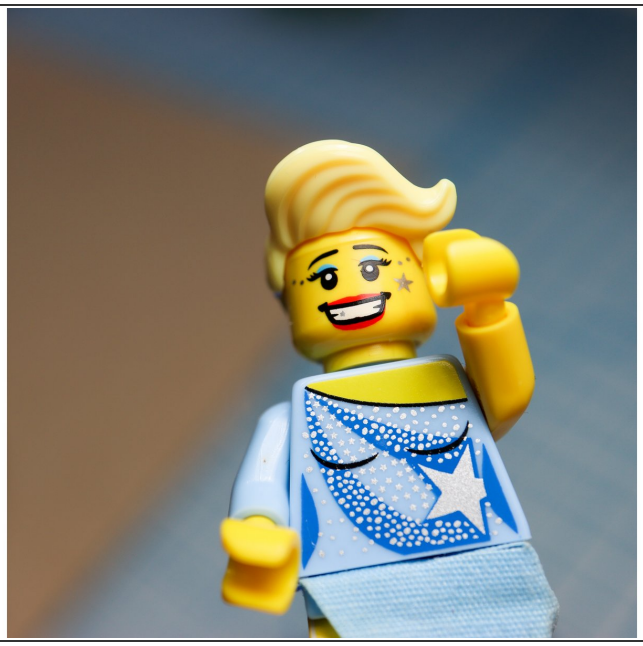
Written By: Natasha Dzurny



PARTS:

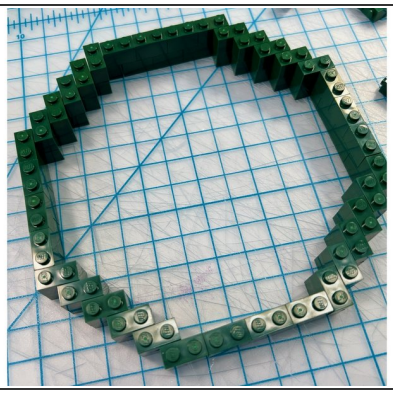
- micro:bit (1)
- Crazy Circuits Bit Board (1)
- Brick Compatible 360 Degree Servo (1)
- Maker Tape (1)
- Crazy Circuits Jumbo Pushbutton Chip (1)
- Addressable RGB LED Strip (1)

Step 1 — Dream Up A World!

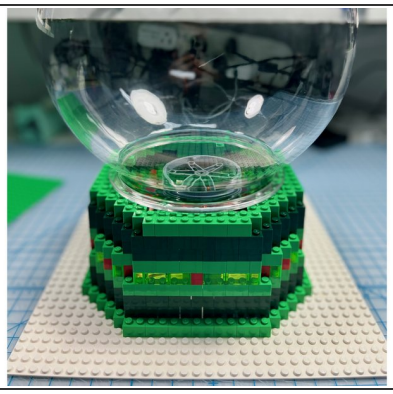


- In this project, I challenged myself to create an interactive world for a minifig character. I fell in love with the ice skater and imagined her skating inside a snow globe!

Step 2 — Build a LEGO Base

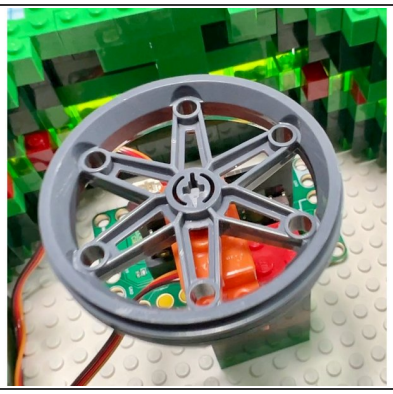
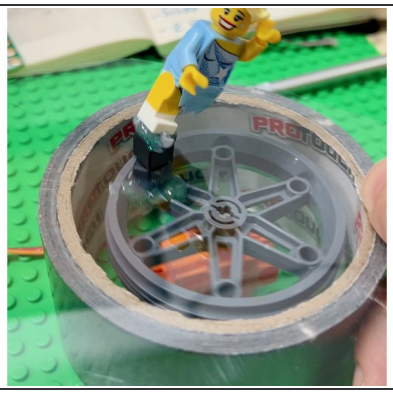
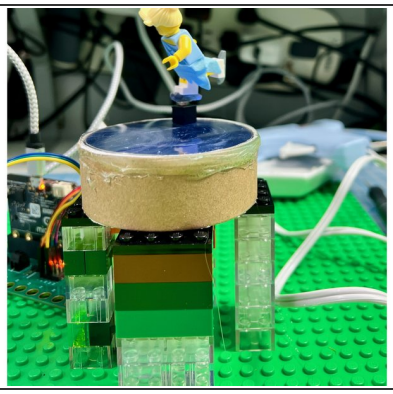






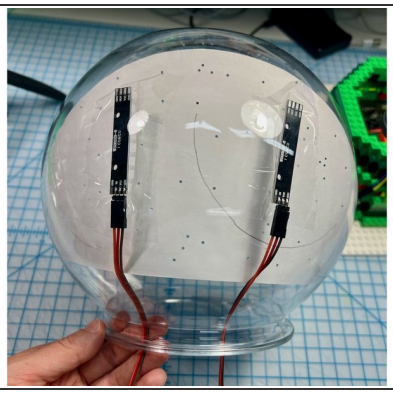
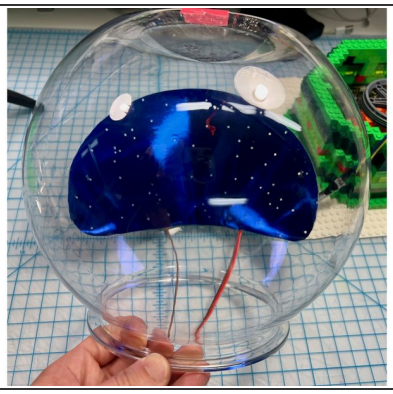
- I built a LEGO base tall enough for the Bit Board to fit inside. I also made sure that the fish tank sat properly on top.

Step 3 — Make the Motor Mechanism

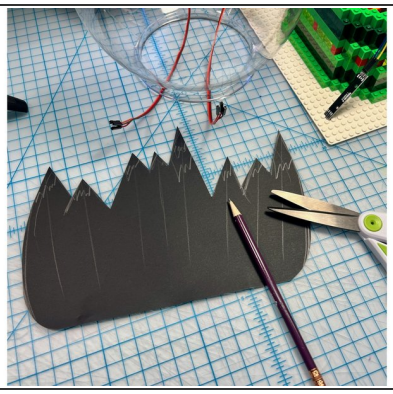
- I used a continuous rotation servo and a wheel hub to make a place for the magnet to travel on.
- I glued magnets to the wheel and the skater's foot and tested it using a roll of tape as a platform.
- I used the center from a spool of ribbon to create an "ice lake" platform from blue shiny cardstock and a piece of clear acetate on top to look like ice.

Step 4 — Add the NeoPixels

- I taped NeoPixel sticks to the back and covered them with a layer of shiny blue cardstock that I punched holes out of to give the appearance of many light-up stars.

Step 5 — Make Mountains and Trees





- I made mountains from black paper painted with glitter Mod Podge.
- I added a layer of clear acetate painted with dots of silver to look like snow.
- I made a treeline with cardstock and green acetate.

Step 6 — Make a Cardboard Gingerbread House

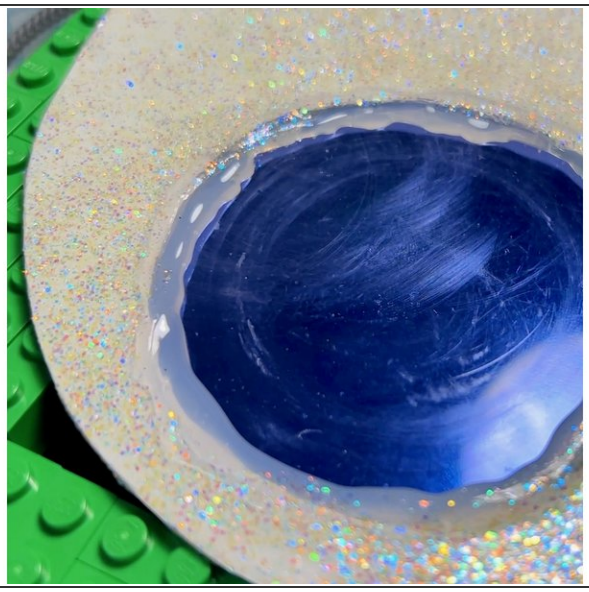




- I made a tiny gingerbread house out of cardboard, with the chimney sized to fit the NeoPixels stick.

Step 7 — Put it all Together





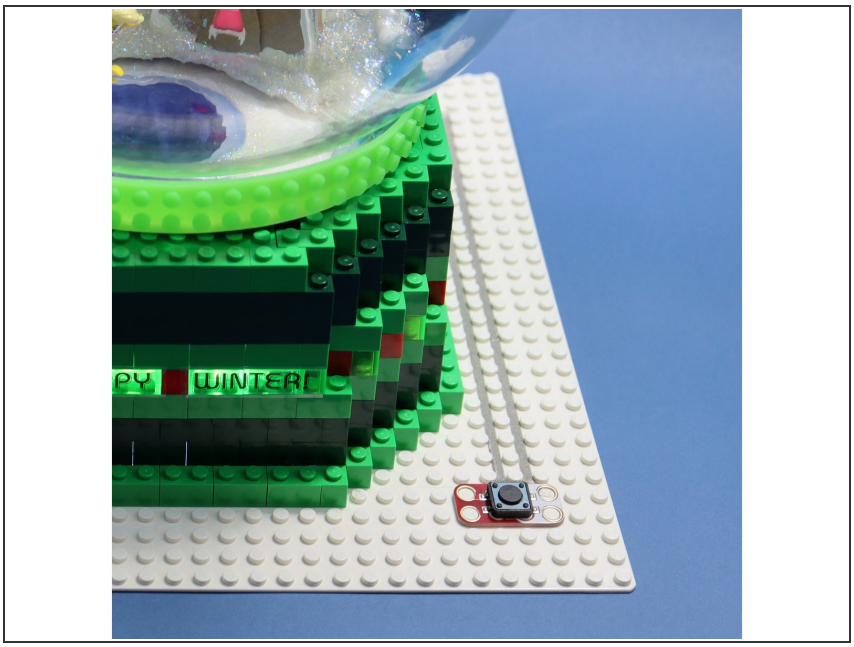
- I glued everything in place with hot glue and covered everything with glitter Mod Podge to look like glittery snow.
- I made an "ice line" over the blue lake with hot glue.

Step 8 — Add a Sign



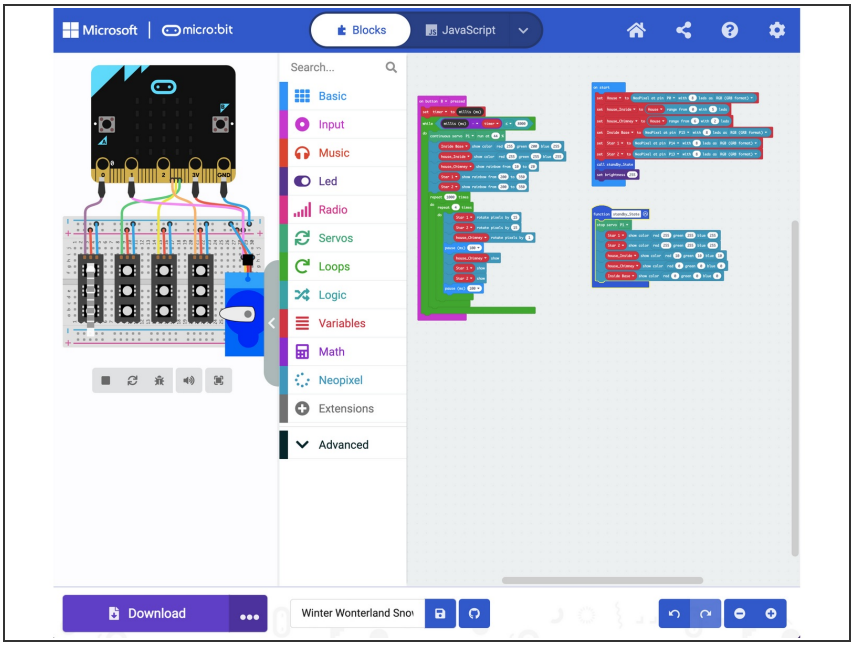
- I used my label maker to make transparent words that I placed over the clear LEGO. There is a NeoPixels stick behind the letters to illuminate them.

Step 9 — Add a Button



- I added a button so that the whole world could become animated when you press it.

Step 10 — Upload the Code



⚠ If you've never used a micro:bit before you'll want to check out this guide: Bit Board V1 Setup and Use

- I wrote some code that would trigger the motor and lights when the button was pressed.
- Here is the code for the **Winter Wonterland Snowglobe**: https://makecode.microbit.org/_0xP82v1uF...

Step 11 — Have a Happy Winter!







- Now when you press the button the scene comes to life!
- HAPPY WINTER! We hope this inspires you to make an interactive world for your favorite minifig.