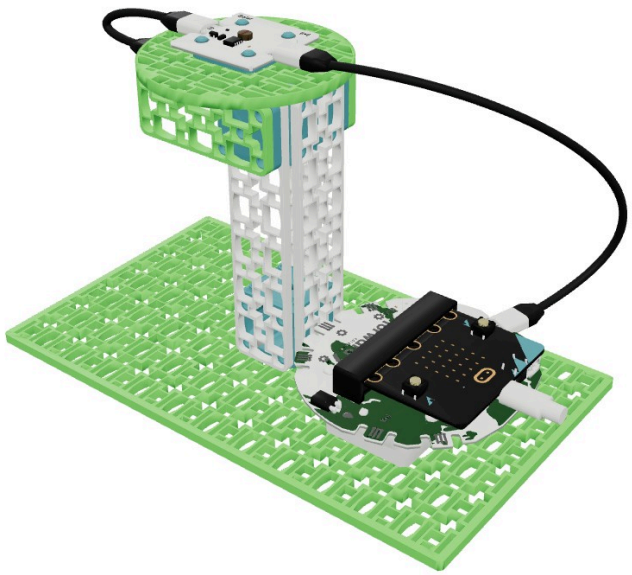
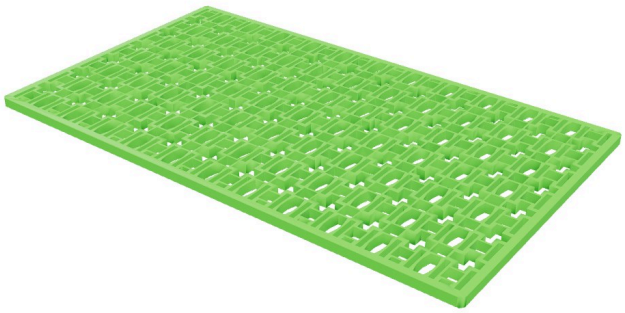
Turtle Safe Beach Light

18 steps · 18 parts



You will need

- 1 × Base Plate
- 2 × Cube Connector
- 2 × Back-to-Back Connector
- 2 × Small Frame
- 3 × Medium Frame
- 1 × Circle
- 1 × LED Light
- 1 × Solar Sensor
- 1 × Long Cable Connector
- 1 × micro:bit
- 1 × Short Cable Connector
- 1 × Micro USB Cable

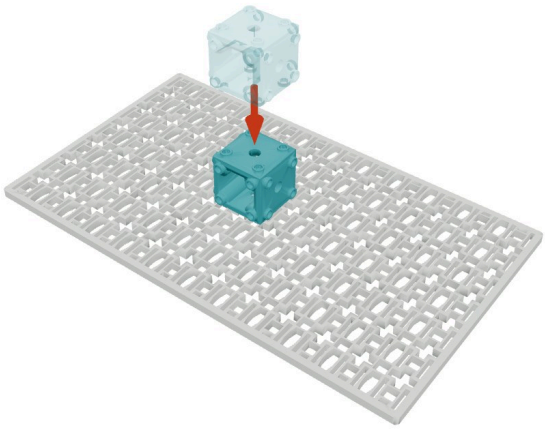


1

Place the Base Plate flat on the workspace.



1 × Base Plate

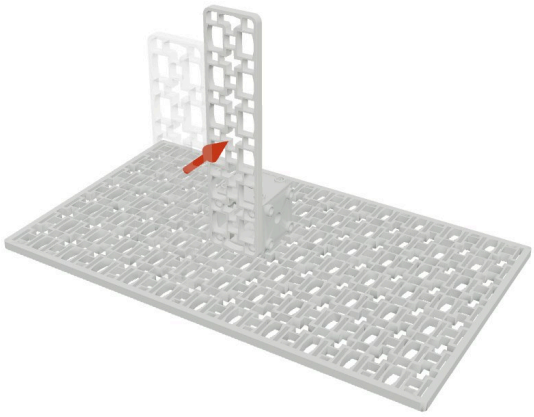


2

Press a Cube Connector onto the Base Plate, near the middle.



1 × Cube Connector

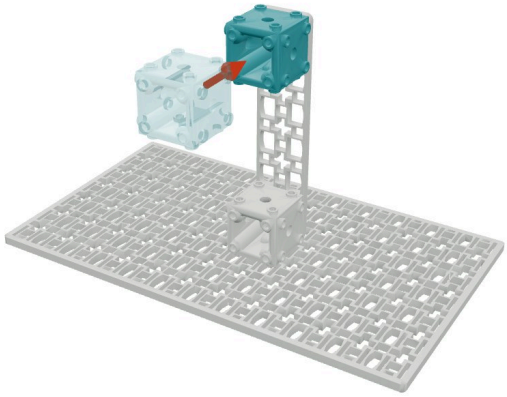


3

Stand a Medium Frame up and attach it to one side of the Cube Connector.



1 × Medium Frame

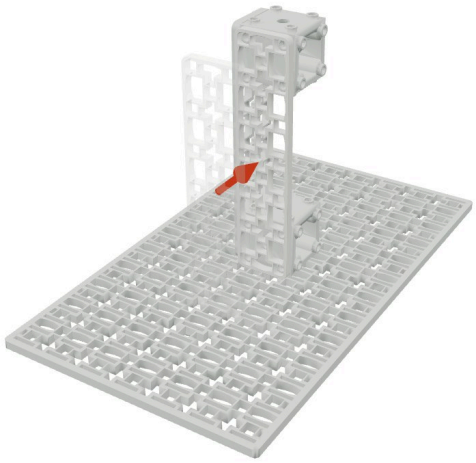


4

Add a second Cube Connector to the top end of the Medium Frame, on the same side as the first Cube Connector.



1 × Cube Connector

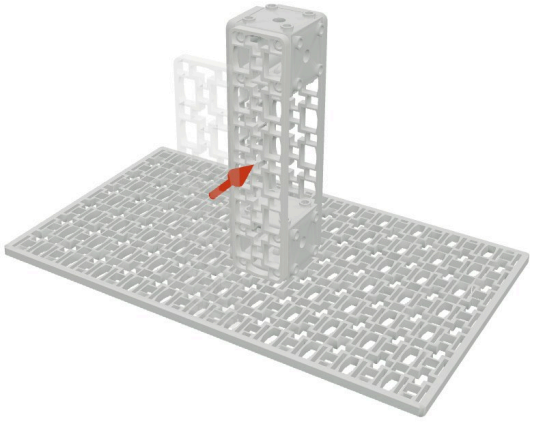


5

Attach a Medium Frame to a second side of both Cube Connectors.



1 × Medium Frame

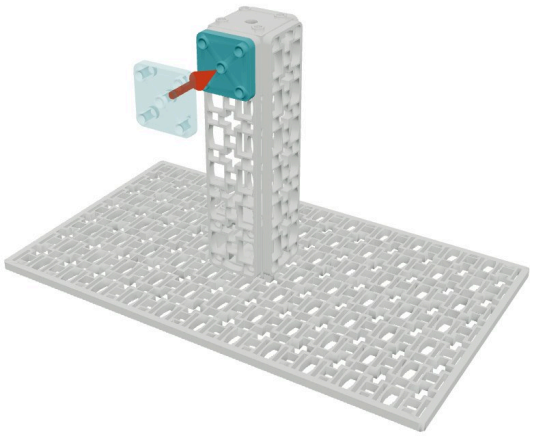


6

Attach a Medium Frame to the third side of both Cube Connectors, leaving the fourth side open. The open side will face the middle of the Circle.

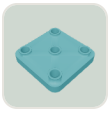


1 × Medium Frame

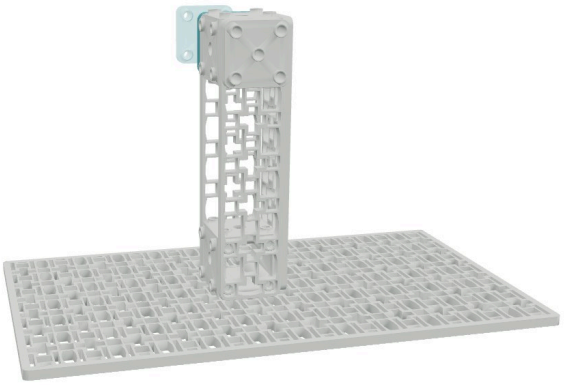


7

Attach a Back-to-Back Connector to the top of the outside of a side Medium Frame, mirroring the Cube Connector inside.



1 × Back-to-Back Connector

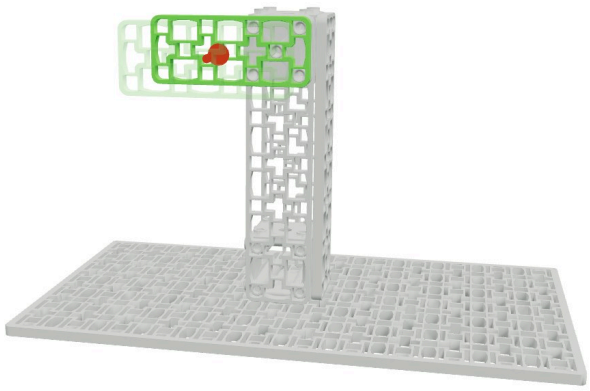


8

Attach another Back-to-Back Connector to the outside of the opposite Medium Frame, mirroring the Cube Connector inside.



1 × Back-to-Back Connector

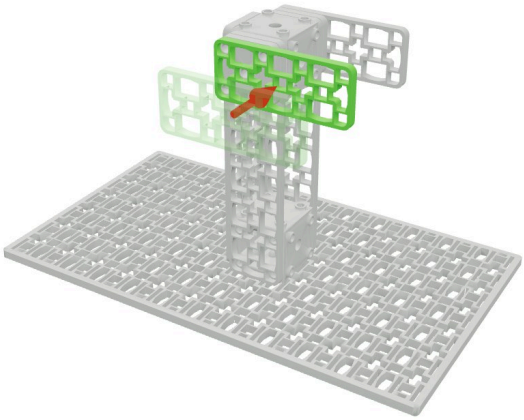


9

Attach a Small Frame on the outside of the Back-to-Back Connector.



1 × Small Frame



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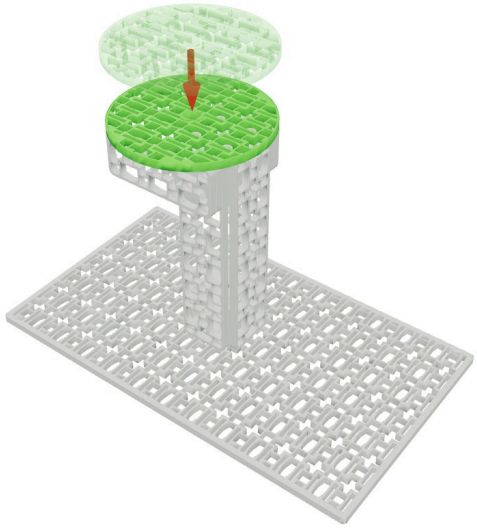
Attach another Small Frame on the other side, outside of the Back-to-Back Connector.



1 × Small Frame

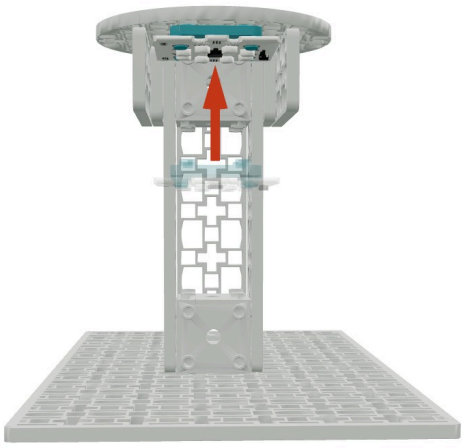


11

Press the Circle onto the top of the tower. The Cube Connector sits off-centre under the Circle, with the open side of the tower facing the middle of the Circle.



1 × Circle

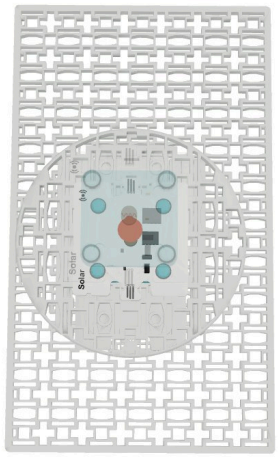


12

Attach the LED Light to the underside of the Circle, between the two Small Frames.



1 × LED Light

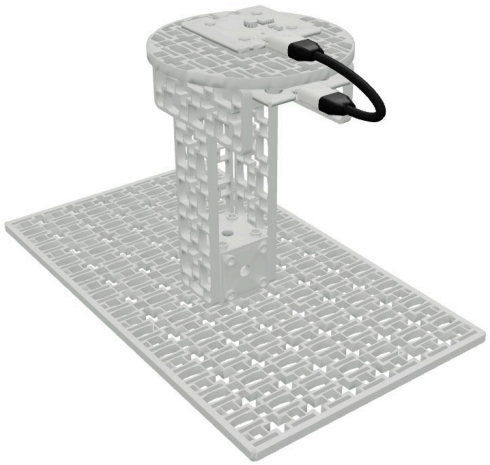


13

Attach the Solar Sensor on top of the Circle, facing the sky.



1 × Solar Sensor



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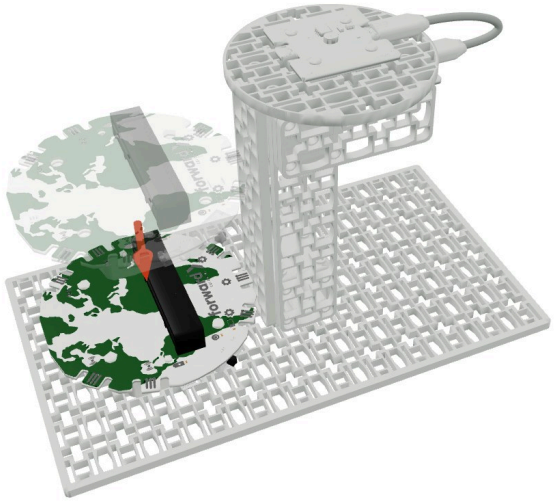
🔌 Use a Short Cable to connect the LED Light and Solar Sensor.



1 × Short Cable Connector

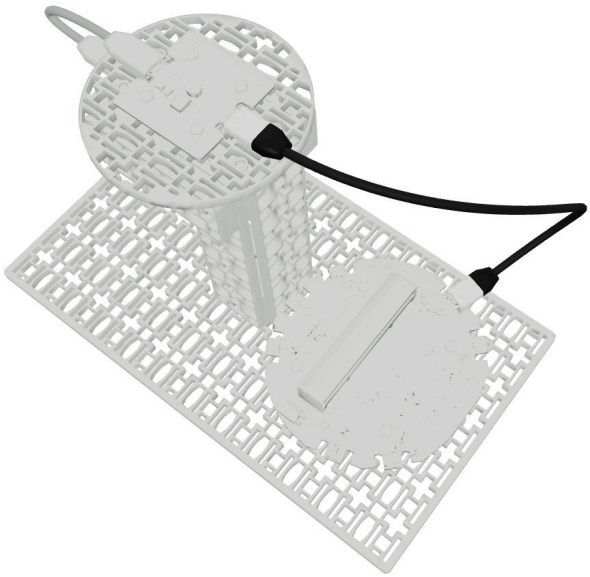


15

Attach the Breakout Board to the Base Plate behind the Light assembly.



1 × Breakout Board (empty)



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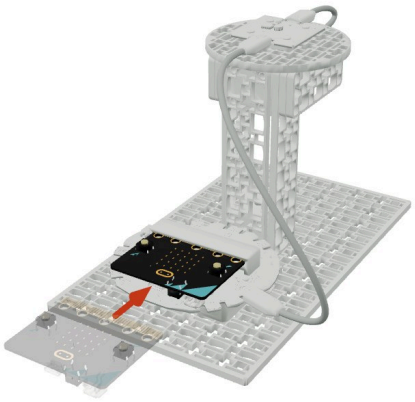
🔌 Use a Long Cable to connect the Solar Sensor to a Sensor port on the Breakout Board.



1 × Long Cable Connector



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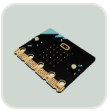
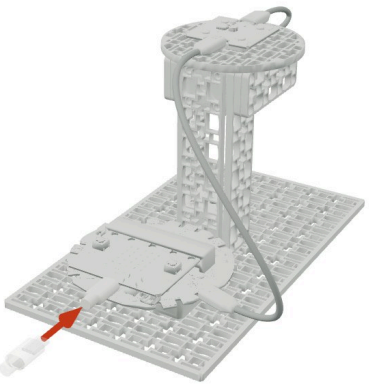
Insert a micro:bit into the edge connector on the Breakout Board.



1 × micro:bit



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Insert the Micro USB Cable into the micro:bit, and the other end into your computer.



1 × Micro USB Cable