

MAKERS IN SPACE

STEPHEN GILBERT (/USERS/STEPHEN-GILBERT)

In this unit of study, students get to choose from a range of activities that will help guide them through an inquiry on Space. Focused heavily on space travel, this unit ask students to think about questions like:

- 'how would life be different on Mars?'
- 'what would it take to survive on a Mars given its harsh atmosphere?'
- 'what kinds of materials would a space suit need to be made of to live on Mars?'
- 'what could a shelter on Mars look like?'
- 'what could a community on Mars look like?'

While the tasks in this unit are focused heavily on 3D printing and robotics, each activity could easily be adjusted to accomodate a much more limited range of material. Some suggestions are included in the accompanying intro video.

OVERVIEW OF MY PROGRAM

STEM DLL PROMO2



RESOURCES

Here are some online resources that can be used with students to teach themselves how to code an EV3 robot and create a basic 3D model that can be printed and used in one of activities featured in the unit.

View only copy of the unit

To see the unit click here (<https://docs.google.com/presentation/d/1RPJOk4HJAIUwxGjskiMzBG7zUVAtDyi3Jq99oVx5Bvc/edit?usp=sharing>)

To make a copy of the unit click here
(<https://docs.google.com/presentation/d/1RPJOk4HJAIUwxGjskiMzBG7zUVAtDyi3Jq99oVx5Bvc/copy?usp=sharing>)

EV3 resource

<http://ev3lessons.com/> (<http://ev3lessons.com/>)

Creating a 3D printed Ratchet in 123D Design

123D Design Tutorial: Working ratchet



SAMPLES OF STUDENT WORK

Lego robotics Mars Rover attachment 4



Lego robotics Mars Rover attachment 3



Lego robotics Mars rover attachments 2



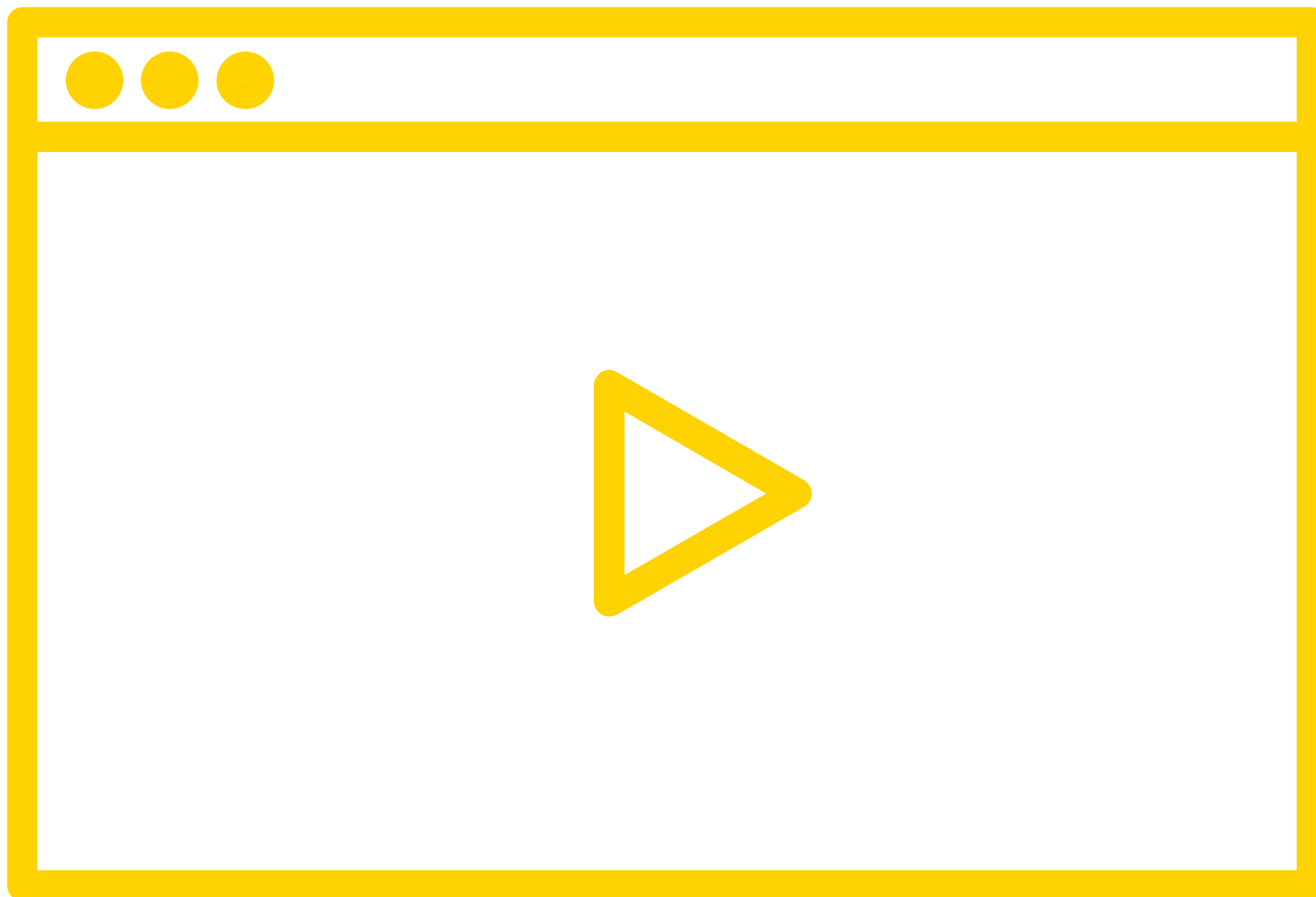
Lego robotics Mars rover problem solving





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WATCH THE VIDEO

06:19 min


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RESOURCES

-  EV3 Lessons (<http://ev3lessons.com/>)
-  123D Design (download) (<http://www.123dapp.com/design>)
-  Thingiverse (<https://www.thingiverse.com/>)

 Video ([//www.youtube.com/embed/IToQqA3HZtl?width=800&height=450&iframe=true](https://www.youtube.com/embed/IToQqA3HZtl?width=800&height=450&iframe=true))

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
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