3D printing technology aims students understanding maths and recycling procedure

Curricula 2: Digital Sketching "User Interface & Tools"

Output 3 (O3) – 3D Printing and Maths

Overview (1/2)

In this lesson we take a deeper look at SketchUp's user interface. We learn about the way the interface is divided into useful sections, and what kind of information each section contains. Then we take a closer look some basic tools and their functionality. These tools include: Select, Eraser, Rectangle, Circle, Push/Pull, Move, Orbit and Pan.
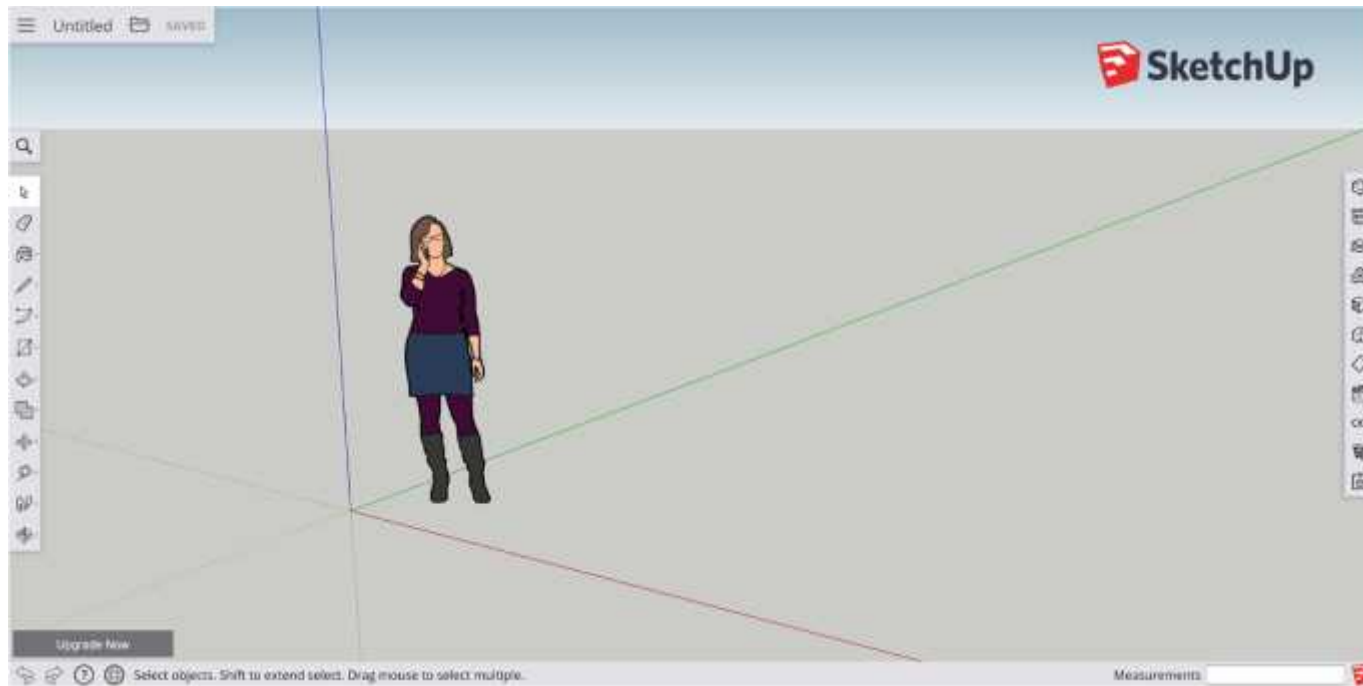
Overview (2/2)

- User Interface
- Navigation
- Basic Tools

User Interface (1/8)

The space where interactions between humans and machines occur

User Interface (2/8)

- xyz 3D dimensional coordinate system

- 3D space

- The human creatures are called "Scale figures" and are there to give you a sense of the size of what you are drawing in perspective of the human scale
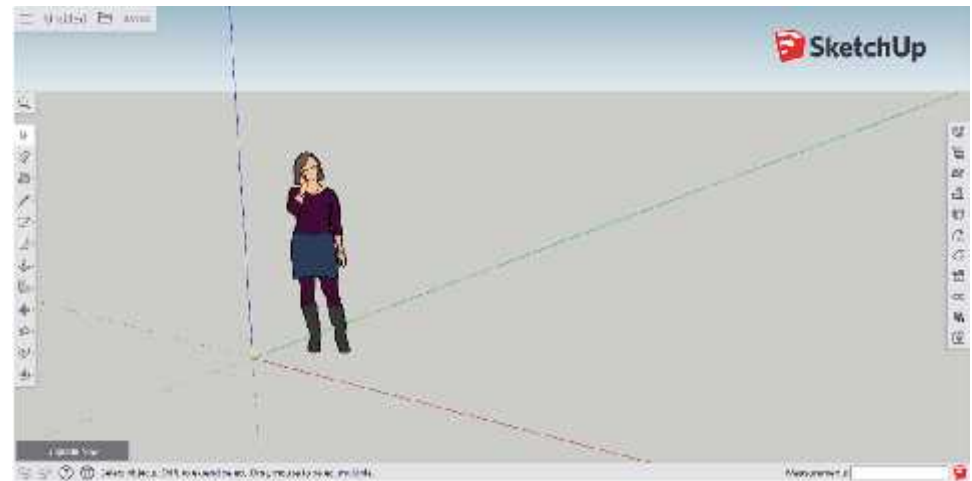
User Interface (3/8)

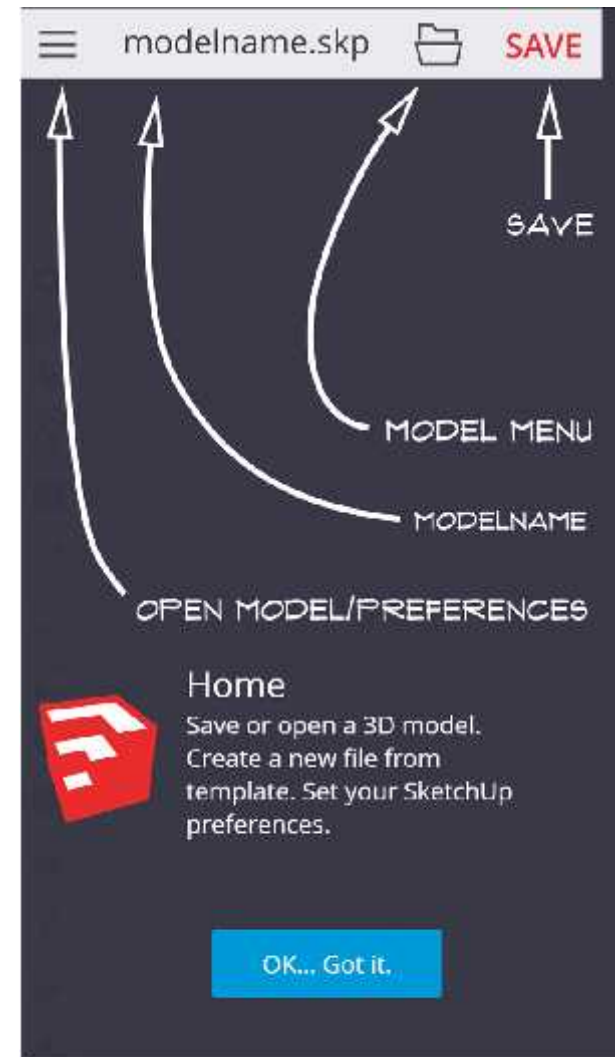The interface is divided into five (5) sections:

- Home

- Toolbars

- Panels

- Status Bar

- Measurements

User Interface (4/8)

Home:

• Access model preferences

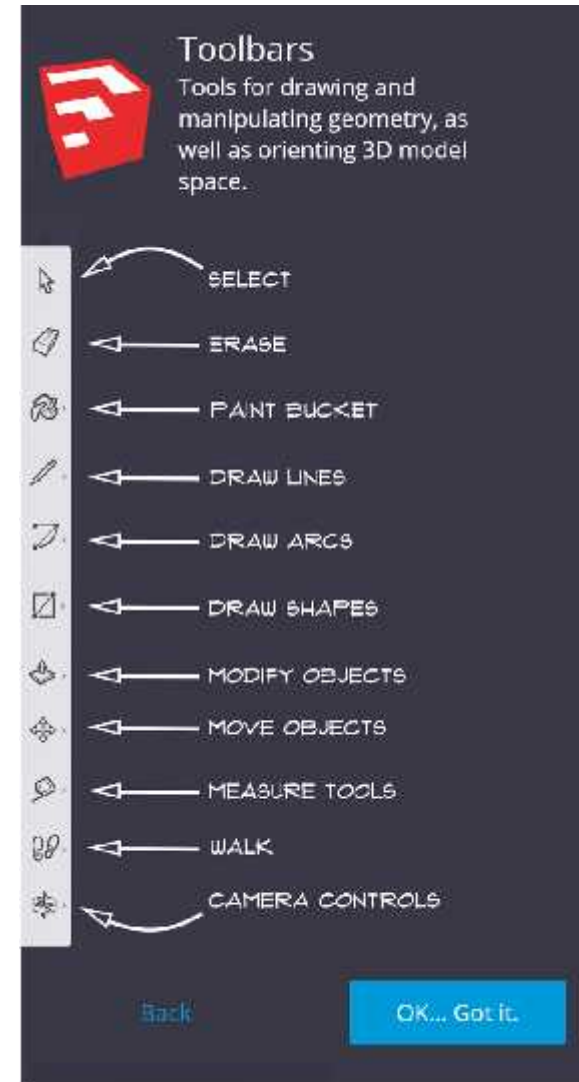• Save projects

• Name the model

• Save the model

User Interface (5/8)

Toolbars:

• Tools that you can use to draw things inside on SketchUp

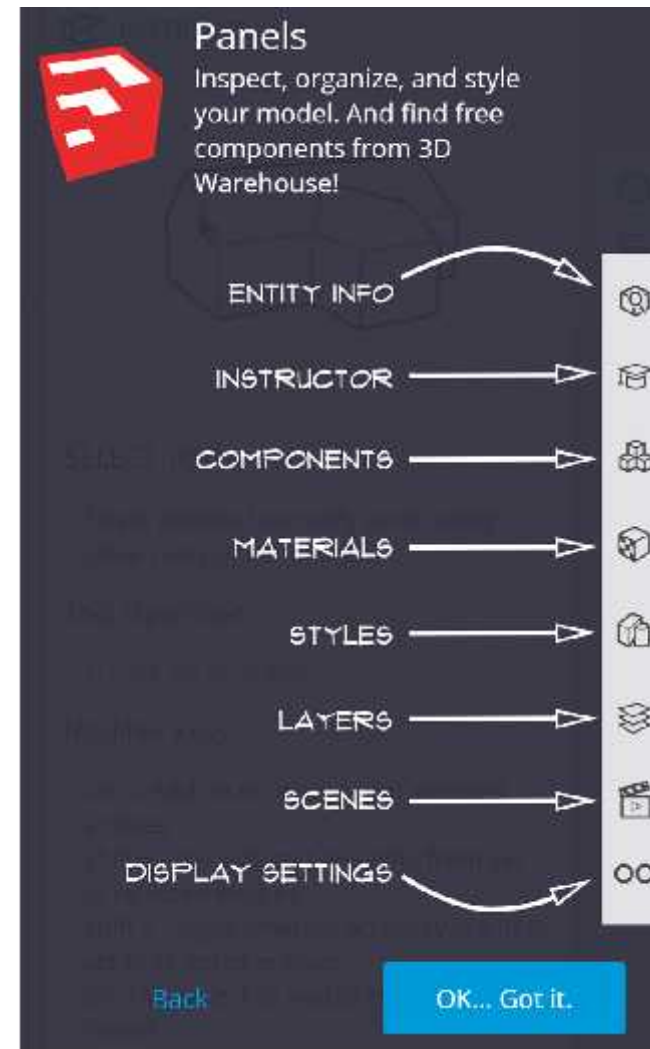• The arrow indicates that tools have multiple options
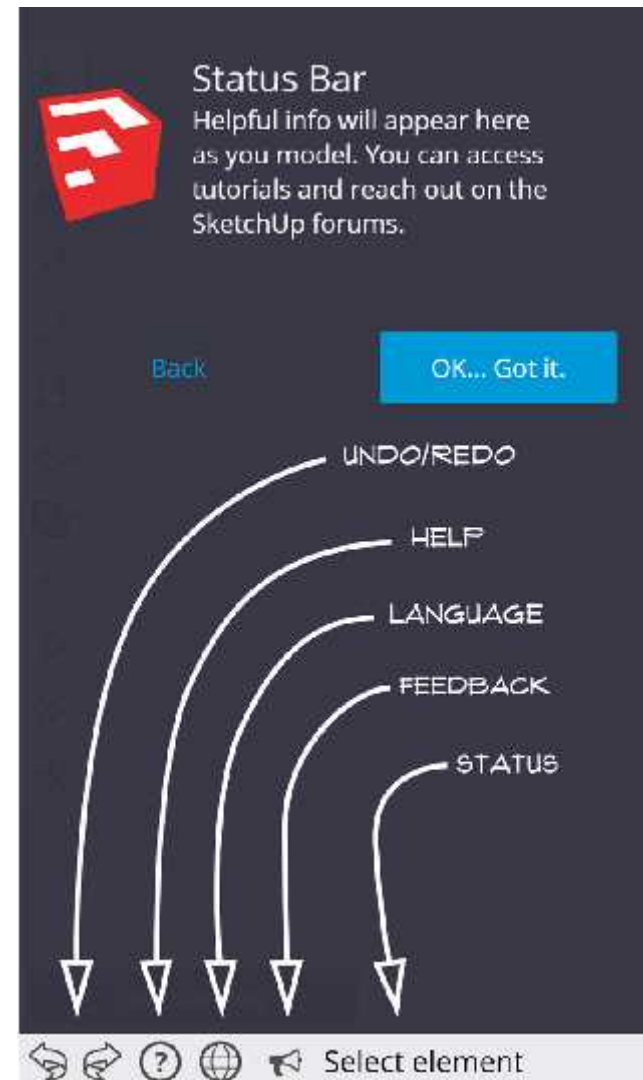
User Interface (6/8)

Panels:

- information about the selective object (components, materials, etc)

User Interface (7/8)

Status Bar:

- Access to help
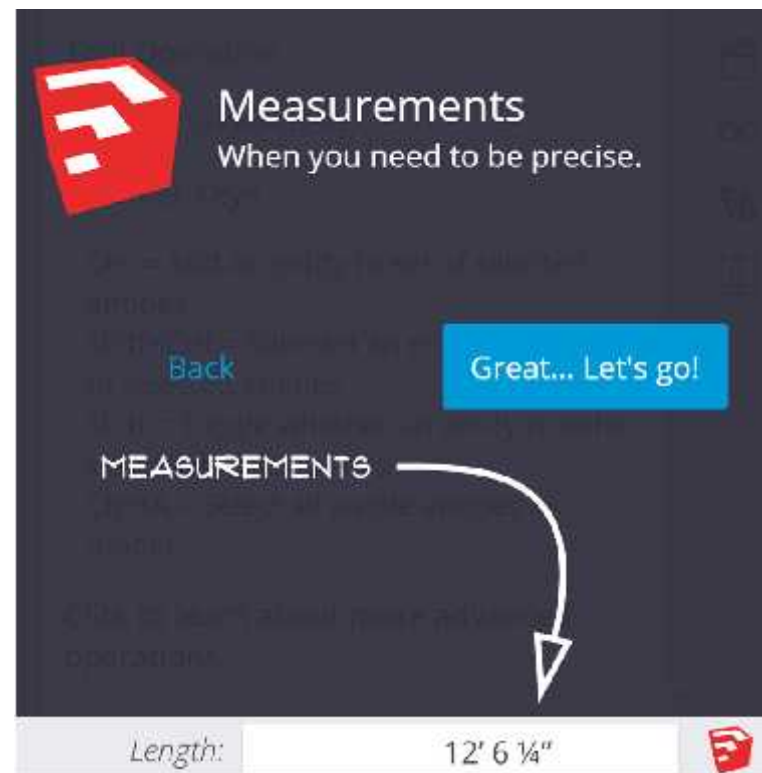- Information about the active tool

User Interface (8/8)

Measurements:

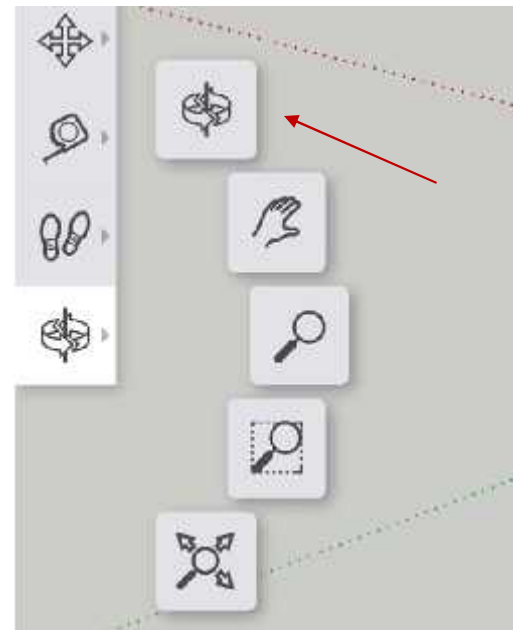- Information about dimensions associate with the active tools

Navigation (1/3)

Orbit:

• Rotate around the object/scene

TIP: you can orbit by click and hold you center mouse button (scroll wheel)
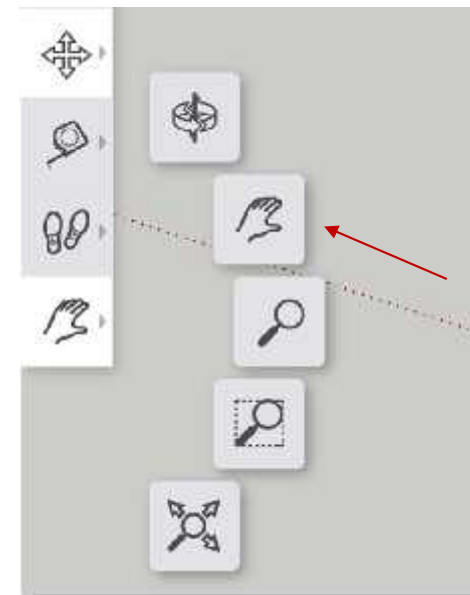
Navigation (2/3)

Pan:

• Drag the view left or right

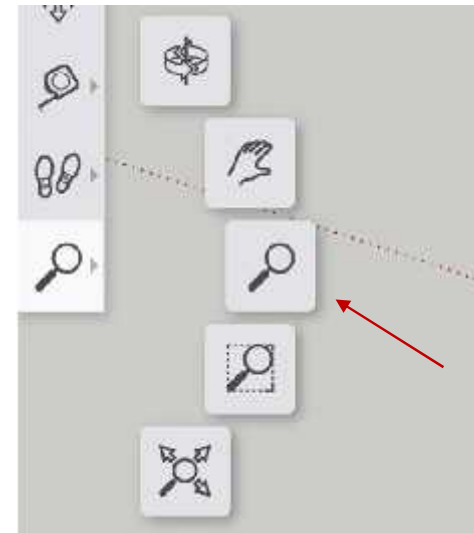TIP: you can pan by click and hold the shift key and the center mouse button

Navigation (3/3)

Zoom:

• Zoom in or out on the object

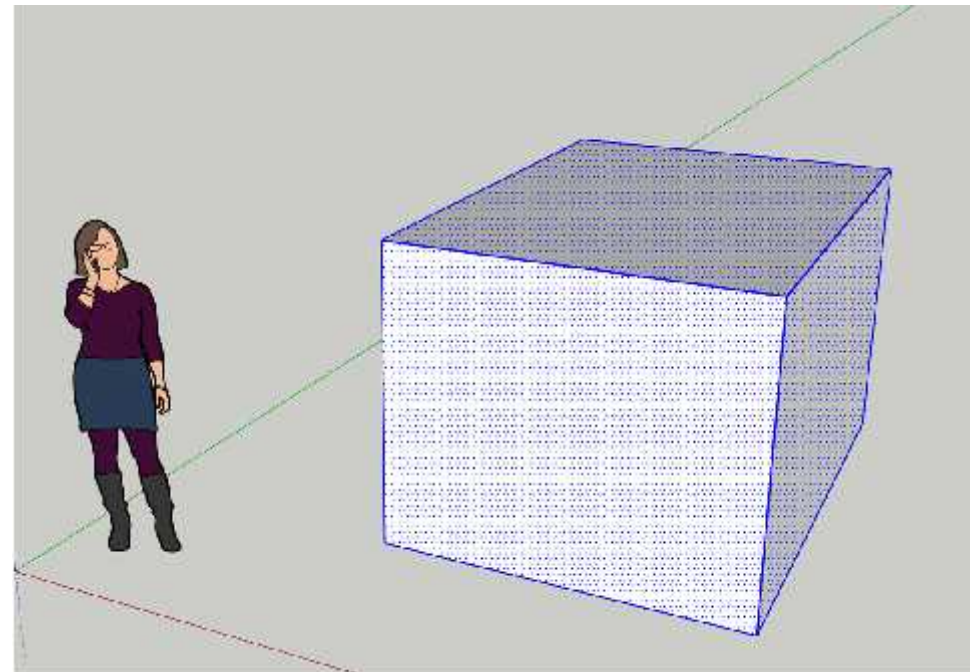TIP: scroll up and down the center mouse button

Basic Tools (1/5)

Select:

- Select objects that lying inside the 3D space
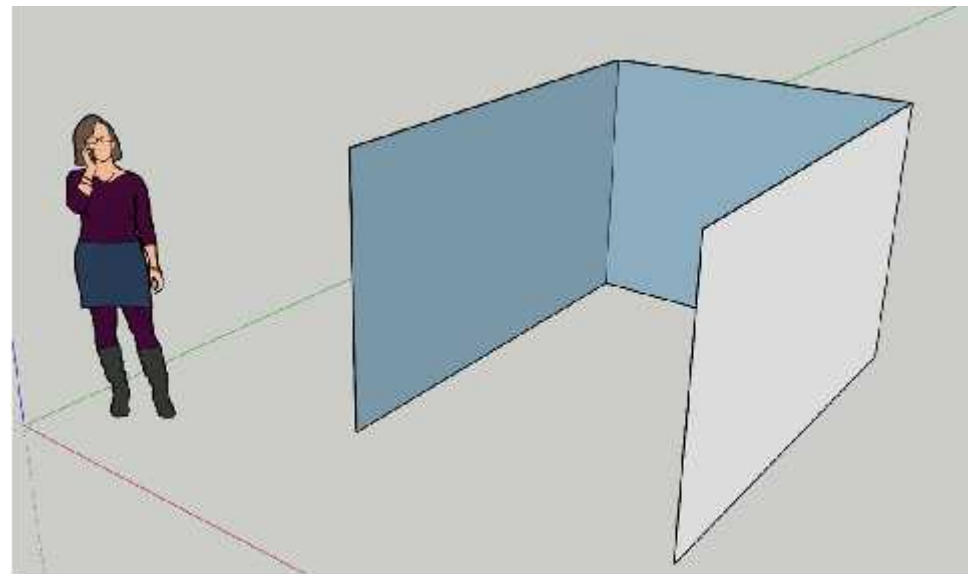
- For example the cube

Basic Tools (2/5)

Erase:

- Select objects you want to erase
- Then choose the erase tool and click over the object

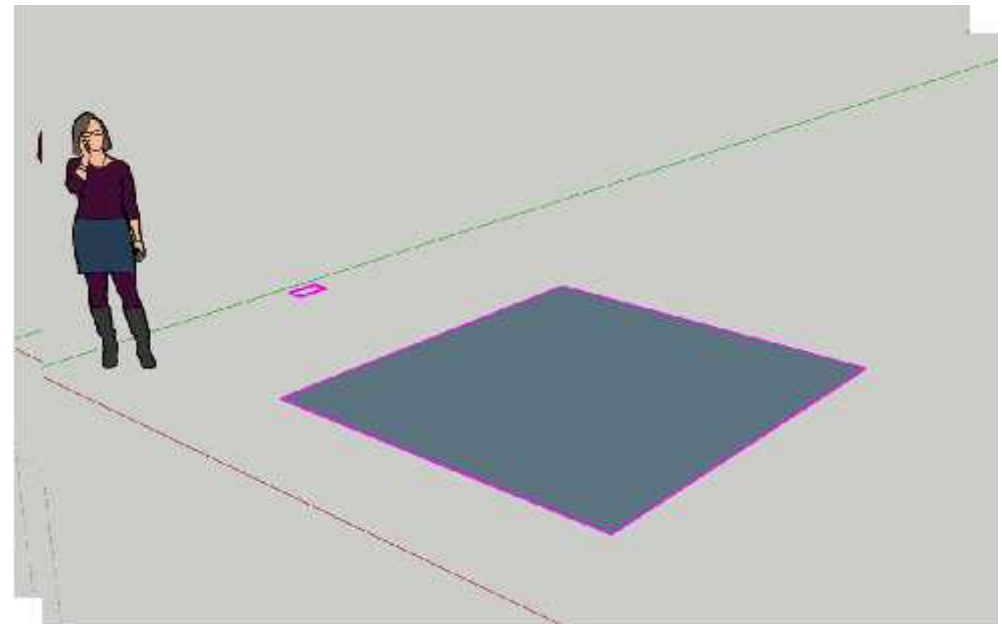For example the top and bottom face of the cube

Basic Tools (3/5)

Draw Shapes:

- From the toolbars select the rectangle tool

- Click once drag your mouse and then click again

TIP: SketchUp works with clicks don't keep pressed your button.

Basic Tools (4/5)

Draw Shapes:

- From the toolbars select the circle tool

- Click once drag your mouse and then click again

TIP: SketchUp works with clicks don't keep pressed your button.

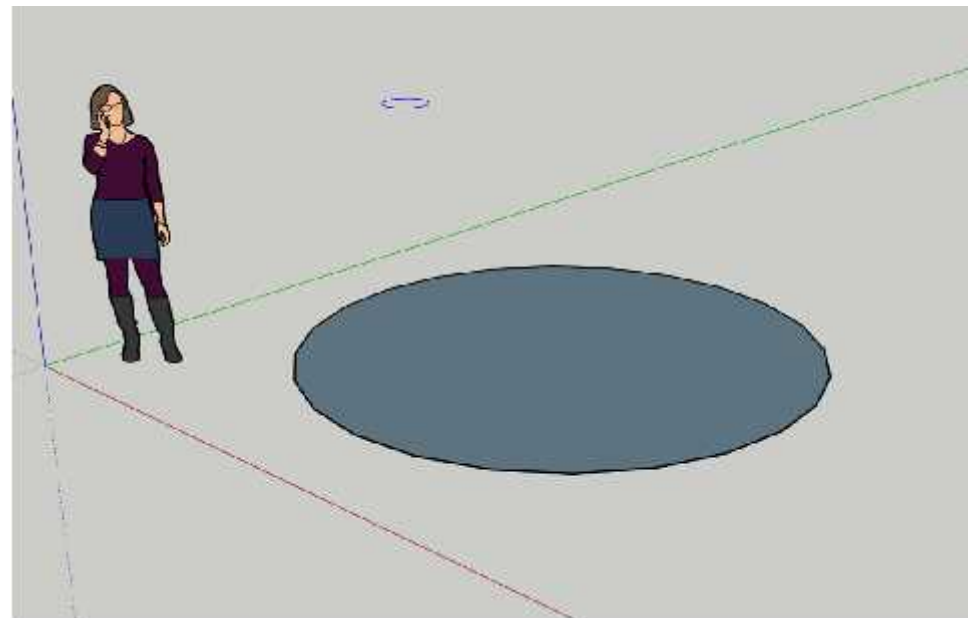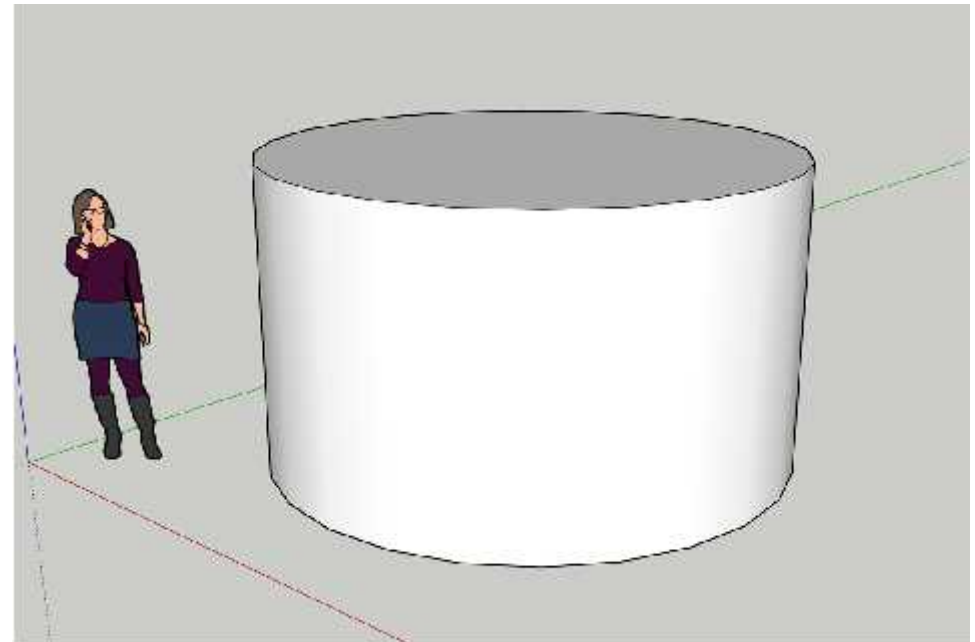# Basic Tools (5/5)

Modify objects:

- From the toolbars select the push/pull tool

- Click once drag your mouse and then click again

TIP: SketchUp works with clicks don't keep pressed your button.

Tutorials

Mini Lesson Tutorials:

- https://www.youtube.com/watch?v=I_bJPNnO3HQ&t=822s
- https://www.youtube.com/watch?v=sQSyofKyKIQ
- https://www.youtube.com/watch?v=fKOIObcAY2A
- https://www.youtube.com/watch?v=kF3K2Th0IR0
- https://www.youtube.com/watch?v=QJiJJ3enEb8

Intro to SketchUp:

- https://www.youtube.com/watch?v=RJtSeS5zcgI
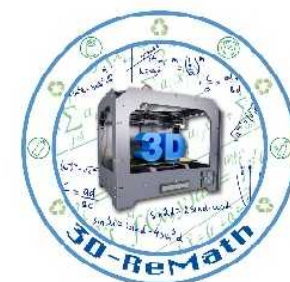
Thank you!!

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