Students will begin to learn how to use Tinkercad by completing a series of online tutorials with a partner. Students will show their partners that they completed a tutorial and the partner will initial their partner's grade sheet that they saw it was completed. In order to find the tutorials, go to Tinkercad.com / Log on / Learn / "Direct Starters." Here are the online tutorials that you will follow:

\#1. Place It - You will learn to move shapes onto the Workplane.

- Drag the Box shape onto the golden outline on the Workplane.

\#2. View It - You will learn to check out your design by changing your view of the model using the View Cube.

| -Use the View Cube (white) to rotate the red square. Rotate the red square so that every side <br> becomes visible. | $1 \mathrm{pt}$. |  |  |
| :--- | :--- | :--- | :--- |
| - | Use the scroll wheel on your mouse (or trackpad) to zoom in and zoom out. | $1 \mathrm{pt}$. |  |
| - Rotate your view by holding the right mouse button (Control) and then move the mouse |  |  |  |
| (With a touchpad, either ctrl+leftclick+drag, or rightclick+drag). | $1 \mathrm{pt}$. |  |  |

\#3. Move It - You will learn how to move a shape around the Workplane.

| $\cdot$ Drag each of the red box shapes to one of the golden outlines (hints). | $1 \mathrm{pt}$. |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |

\#4. Rotate It - You will learn how to rotate shapes on the work plane.

| $\cdot$ Rotate each red square 45 degrees so that it matches the angle of the golden outline (hint). | 1 pt. |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |


\#5. Size It Up - You will learn to make a change to the basic box shape by sizing it up.

| -Use the black squares on the bottom edge of one of the red squares to size the shape in a <br> single direction. Match its shape to one of the golden outlines (hint). | 1 pt. |  |
| :--- | :--- | :--- | :--- |
| -Use the white squares on the bottom edge of one of the red squares to size the shape in two <br> directions at once. Match its shape to one of the golden outlines. | 1 pt. |  |
| Your Choice: Use either the white or blakk squares on the bottom edge of the remaining red <br> square to resize the shape to match its shape to one of the golden outlines. | 1 pt. |  |
|  |  |  |

\#6. Group It - You will learn how to group multiple shapes to make one shape.

| Create a shape in which the red square has the orange cylinder sticking through it. | $1 \mathrm{pt}$. |  |
| :--- | :--- | :--- |
| Create a shape in which the red square has a transparent hole visible through it. | $1 \mathrm{pt}$. |  |



## \#7. Align It - You will learn how to align multiple shapes.

- Align the red squares on the Workplane to the nearest red square.

Hint: This is done by selecting any shape on the Workplane...then hold the shift key and select a second shape that you would like to align the first shape with. Select the Align tab on the tool bar above! A number of black circles will appear around the shapes - hover over them with your cursor and they will show you orange outlines options that the shapes will align to when you finally select one.

- Use the edit undo button at least once.

|  |  |  |
| :--- | :--- | :--- |
|  | 1 pt. |  |
| 1 pt. |  |  |

