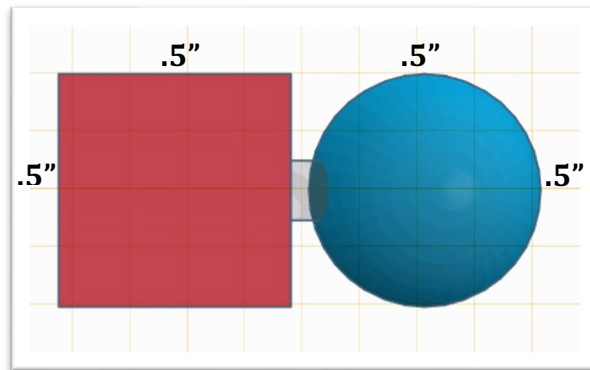


Peg, Cube and Sphere



Purpose: Students will get to use and develop their CAD skills by successfully attaching a Cube to a Sphere with a Peg. The peg sits in a hole that was formed in both shapes. This skill is the basis for the car that the students will soon create.

Specifications: *(In inches.)*

1. **Create a Cube:** H: .5" x W: .5 x L: .5".
2. **Create a Sphere:** H: .5" x W: .5 x L: .5".
3. **Create a Hole:** H: .2" x W: .2" x L: .9" that the peg slide into and connect the Sphere and the Cube. Look at the photo above -> there should be a small gap between the cube and sphere when the peg is inserted. *(Ask to hold the Model!)*
4. **Create a Peg:** H: .175" x W: .175" x L: .85" that can slide in one side of each of these geometric shapes, but not out the opposite side. The two shapes should not be able to touch when the peg is inside of them. *(Ask to hold the Model!)*

Helpful Hints:

- Convert the Grid from "Millimeters" to "Inches" (Change can be made by clicking on the "Edit Grid" button). Then set the "Snap Grid" to 1/64".
- Remember, you can only make edits to your shapes after:
 - Being in Direct View of the shape.
 - Set the Plane.
- Turn off the 3d feature.
- The hole is just a cylinder.
- The hole will only appear when it has been "Grouped" with the other shapes.
- Do not use the Touch Screen when lining up the shapes, use the Arrows on your keyboard!