

Star Wars and BB-8



Recommended for middle school +, or elementary students with prior BlocksCAD/coding experience.

Students: Visit www.blockscad3d.com to start building! Create an account if you want to save your work.

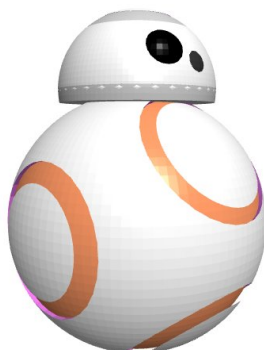
Teachers: Check out the [2023 Teacher Guide](#).

One of the most loveable characters of the recent Star Wars movies is the droid BB-8 despite its very simple construction and lack of facial features. What component shapes can you see making up BB-8's body and head?

One of the most overlooked shapes in BlocksCAD is the [torus](#), but this shape is perfect for the orange rings that appear on the side of BB-8. Try building BB-8's body first, using rotation and translation to position each torus on the surface of a white sphere. The head of BB-8 is a semi-sphere, which you can make using the [difference block](#) by overlapping and then subtracting a wide cylinder or cube from a sphere.

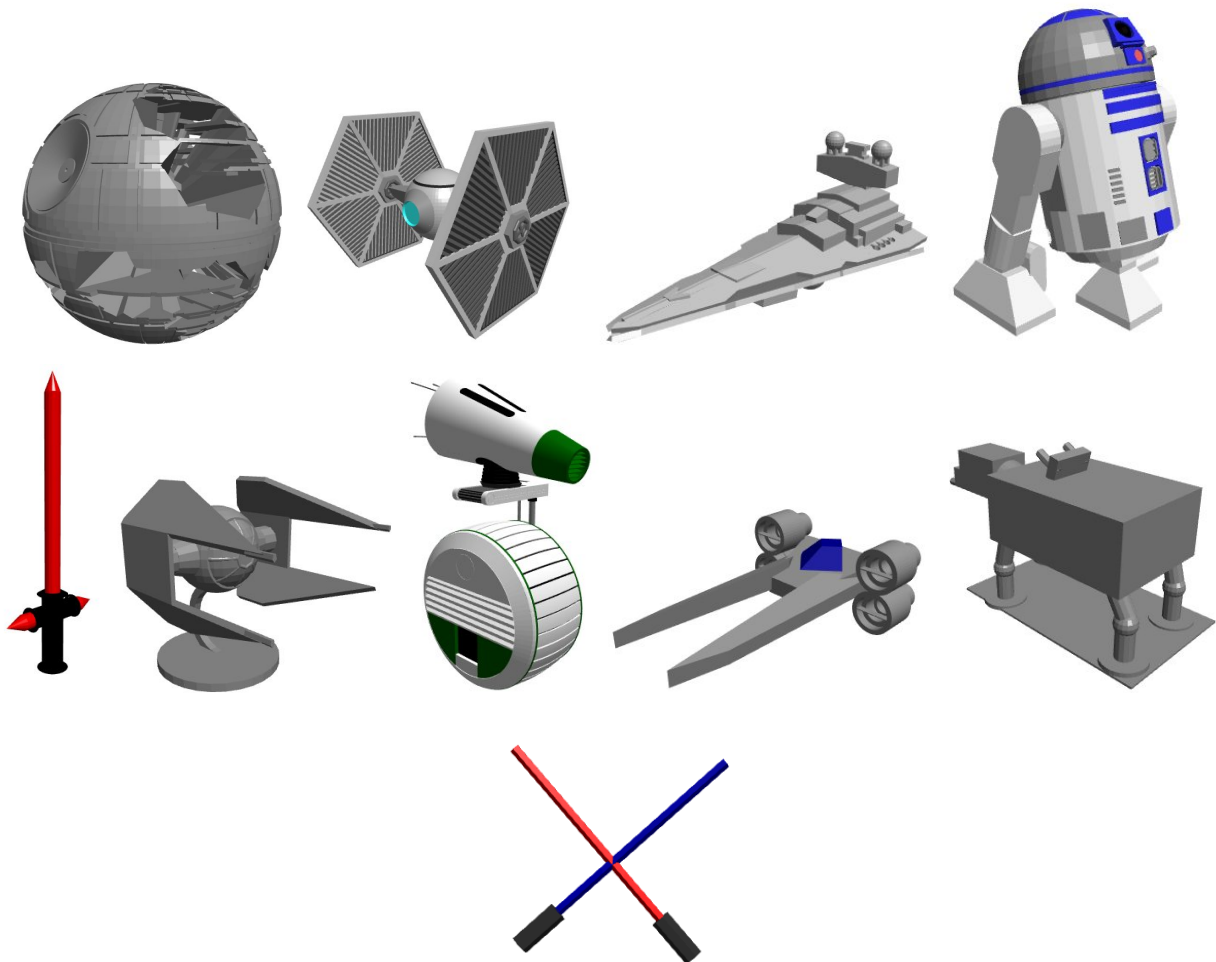
For projects like this with lots of code, make sure to use [labeling and collapsing](#) to keep your code organized! You may also want to organize and [enable/disable](#) certain sections of code while working on different components of your design.

Once you have a BB-8 made, can you add more detail or experiment with higher resolution renderings using the sides block to give the curved surfaces of your spheres and toruses more sides?



Challenge Project: Characters and Ships

Many of the most impressive projects in the BlocksCAD Gallery are inspired by Star Wars. There are some highly realistic spacecraft, characters, and more. Can you replicate your favorite Star Wars object or imagine your own that you'd like to see included in a future movie or show?



MAY THE FORCE BE WITH YOU