Extrusion and Revolution

Create 3D objects

3D effects enable you to create three-dimensional (3D) objects from two-dimensional (2D) artwork. You can control the appearance of 3D objects with lighting, shading, rotation, and other properties. You can also map artwork onto each surface of a 3D object.

There are two ways to create a 3D object: by extruding or revolving. In addition, you can also rotate a 2D or 3D object in three dimensions. To apply or modify 3D effects for an existing 3D object, select the object and then double-click the effect in the Appearance panel.

Note:

3D objects may display anti-aliasing artifacts on screen, but these artifacts won't print or appear in artwork optimized for the web.

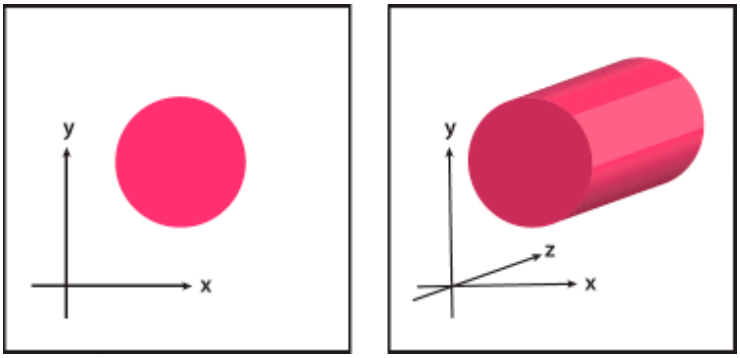
For a video about working with 3D objects in Illustrator, see Moving into the world of 3D.

Create a 3D object by extruding

Extruding extends a 2D object along the object's z axis to add depth to the object. For example, if you extrude a 2D ellipse, it becomes a cylinder.

Note:

The object's axis always lies perpendicular to the object's front surface and moves relative to the object if the object is rotated in the 3D Options dialog box.



1)Select the object.

2)Click Effect > 3D (Classic) > Extrude & Bevel (Classic).

3)Click More Options to view the complete list of options, or Fewer Options to hide the extra options.

4)Select Preview to preview the effect in the document window.

5)Specify options:

Position

Sets how the object is rotated and the perspective from which you view it. (See Set 3D rotation position options.)

Extrude & Bevel

Determines the object's depth and the extent of any bevel added to or cut from it. (See Extrude & Bevel options.)

Surface

Creates a wide variety of surfaces, from dull and unshaded matte surfaces to glossy and highlighted surfaces that look like plastic. (See Surface shading options.)

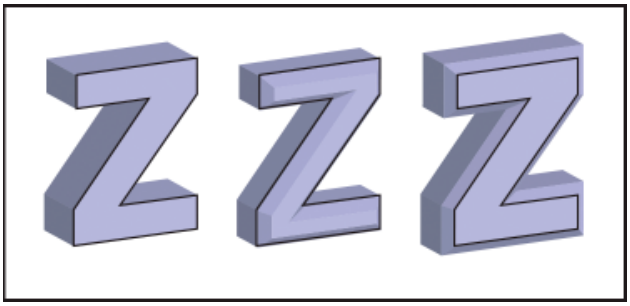
Lighting

Adds one or more lights, varies the light intensity, changes the object's shading color, and moves lights around the object, for dramatic effects. (See Lighting options.)

Map

Maps artwork onto the surfaces of a 3D object. (See Map artwork to a 3D object.)

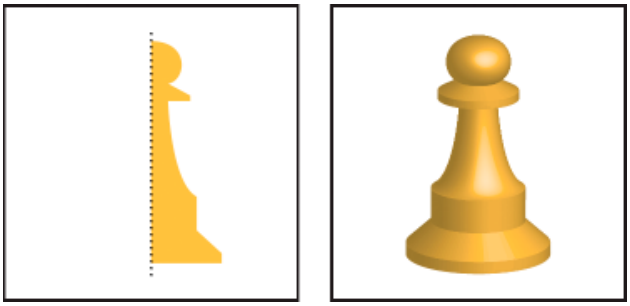
6)Click OK.



Extruded object without a beveled edge (left) compared to object with Bevel Extent In (middle) and with Bevel Extent Out (right)

Create a 3D object by revolving

Revolving sweeps a path or profile in a circular direction around the global y axis (revolve axis) to create a 3D object. Because the revolve axis is vertically fixed, the open or closed path that you revolve typically needs to depict half of the desired 3D object's profile in a vertical and front-facing position; you can then rotate the 3D object's position in the effect's dialog box.



1)Select the object.

Note:

Applying the 3D Revolve effect to one or more objects simultaneously revolves each object around its own axis. Each object resides in its own 3D space and can't intersect other 3D objects. Applying the Revolve effect to a targeted group or layer, on the other hand, revolves the objects around a single axis.

Note:

Revolving a filled path with no stroke is much faster than revolving a stroked path.

2)Click Effect > 3D (Classic) > Revolve (Classic).

3)Select Preview to preview the effect in the document window.

4)Click More Options to view the complete list of options, or Fewer Options to hide the extra options.

Position

Sets how the object is rotated and the perspective from which you view it. (See Set 3D rotation position options.)

Revolve

Determines how to sweep the path around the object to turn it into three dimensions. (See Revolve options.)

Surface

Creates a wide variety of surfaces, from dull and unshaded matte surfaces to glossy and highlighted surfaces that look like plastic. (See Surface shading options.)

Lighting

Adds one or more lights, varies the light intensity, changes the object's shading color, and moves lights around the object, for dramatic effects. (See Lighting options.)

Map

Maps artwork onto the surfaces of a 3D object. (See Map artwork to a 3D object.)

5)Click OK.