

Getting Started with Blender

In this guide, you will explore the Blender workspace, learn some of the basics, and then be asked to use the skills you've practiced to build a 3D castle out of basic shapes.

Opening a New File

1. Open Blender.
2. A default cube appears in the scene.
3. To start a new project, go to **File > New > General**.

Adding Shape Objects

1. Press **Shift + A** to open the **Add** menu.
2. Select **Mesh** and choose a shape (e.g., Cube, Sphere, Cylinder).

Moving Objects Around the 3D Space

For Mouse Users

- **Rotate View:** Middle Mouse Button (MMB)
- **Pan View:** Shift + MMB
- **Zoom:** Scroll Wheel

For Trackpad Users

- **Rotate View:** Two-finger swipe
- **Pan View:** Shift + Two-finger swipe
- **Zoom:** Pinch gesture

1. Select an object.
2. Press **G** to move it freely.
3. Press **X**, **Y**, or **Z** after **G** to move along a specific axis.
4. Confirm the movement with **Left Click**.

Scaling Objects

1. Select the object by clicking on it.
2. Press **S** and move the mouse to scale.
3. Press **X**, **Y**, or **Z** after **S** to scale along a specific axis.
4. Confirm with **Left Click**.

Rotating Objects

1. Select the object.

2. Press **R** and move the mouse to rotate.
3. Press **X**, **Y**, or **Z** after **R** to rotate along a specific axis.
4. Confirm with **Left Click**.

Joining Multiple Objects

1. Select multiple objects using **Shift + Left Click**.
2. Press **Ctrl + J** (Windows/Linux) or **Cmd + J** (Mac) to join them into one object.

Rounding Objects (Subdivision Surface Modifier)

1. Select an object.
2. Go to **Modifiers** (wrench icon on the right panel).
3. Click **Add Modifier > Subdivision Surface**.
4. Increase the **Levels** to make it rounder.
5. Apply it with **Ctrl + A** (Windows/Linux) or **Cmd + A** (Mac).

Switching Between Object Mode & Edit Mode

1. Press **Tab** to switch between **Object Mode** and **Edit Mode**.
2. You can also use the top-left dropdown to change modes.

Editing Vertices, Edges, and Faces

1. In **Edit Mode**, press **1** for **Vertex Select**, **2** for **Edge Select**, or **3** for **Face Select**.
Alternatively, click the icons at the top of the screen to switch selection modes.
2. Left-click to select and move them with **G**.
3. Delete with **X**.
4. In **Edit Mode**, press **1** for **Vertex Select**, **2** for **Edge Select**, or **3** for **Face Select**.
5. Left-click to select and move them with **G**.
6. Delete with **X**.

Moving the Camera

1. Use the **Middle Mouse Button (MMB)** to rotate the view.
2. Hold **Shift + MMB** to pan.
3. Use the **Scroll Wheel** to zoom in and out.
4. Press **Numpad 0** to switch to camera view.
5. Press **G** while in camera view to move the camera, and **R** to rotate it.

Copying and Pasting Objects

1. Select an object.
2. Press **Shift + D** to duplicate and move it.
3. Press **Ctrl + C** (Windows/Linux) or **Cmd + C** (Mac) to copy.
4. Press **Ctrl + V** (Windows/Linux) or **Cmd + V** (Mac) to paste.

Undo & Redo

- **Undo:** Press **Ctrl + Z** (Windows/Linux) or **Cmd + Z** (Mac).
- **Redo:** Press **Ctrl + Shift + Z** (Windows/Linux) or **Cmd + Shift + Z** (Mac).

Practice Step: Build a Simple Scene

1. Add basic shapes such as cubes, cylinders, and cones.
2. Use **G** to move them around, **S** to scale them, and **R** to rotate.
3. Try making a simple structure like a castle with cube walls, cylinder towers, and cone peaks.

Exporting Your Castle to Unreal Engine

1. Once you have built your simple castle, you can take the next step by exporting it to Unreal Engine.
2. Refer to the guide titled **Exporting 3D Objects from Blender to Unreal Engine**, available at the game club website under **Resources > Guides**.

Saving Your Project

1. Go to **File > Save As**.
2. Choose a location and name.
3. Save as a **.blend** file.