



Interface & Navigation

Viewport Navigation

Rotate View	Middle Mouse Button (MMB) + Drag
Pan View	Shift + MMB + Drag
Zoom View	Ctrl + MMB + Drag or Mouse Wheel
View Selected	Numpad .
Perspective/Orthographic View	Numpad 5
Front View	Numpad 1
Right View	Numpad 3
Top View	Numpad 7

Essential Panels

Properties Panel	Contains object data, modifiers, materials, textures, etc. (Shortcut: N)
Outliner	Displays scene hierarchy and object relationships. (Located top right by default)
Timeline	Used for animation playback and keyframe manipulation. (Located at the bottom)
Dope Sheet	Provides an overview of animation keyframes. (Can be accessed via the Timeline window type selector)
Graph Editor	Allows for fine-tuning animation curves. (Can be accessed via the Timeline window type selector)

Object Interaction

Select Object	Left Click
Move Object	G (Grab) then X, Y, or Z to constrain to an axis.
Rotate Object	R (Rotate) then X, Y, or Z to constrain to an axis.
Scale Object	S (Scale) then X, Y, or Z to constrain to an axis.
Duplicate Object	Shift + D
Delete Object	X or Delete Key

Keyframing Basics

Inserting Keyframes

Insert Single Keyframe	I (opens the Insert Keyframe Menu)
Location	I -> Location (Keyframes object's position)
Rotation	I -> Rotation (Keyframes object's orientation)
Scale	I -> Scale (Keyframes object's size)
LocRotScale	I -> LocRotScale (Keyframes all transform properties)
Available	I -> Available (Keyframes all animatable properties that have been changed)
All Transform	Keyframes all transform properties (Location, Rotation, Scale) and delta transform properties.

Keyframe Manipulation

Moving Keyframes	Select keyframes in the Timeline, Dope Sheet, or Graph Editor, then G to move them.
Scaling Keyframes	Select keyframes, S to scale them in time (relative to the 3D cursor by default)
Deleting Keyframes	Select keyframes, X or Delete to delete.
Copying and Pasting Keyframes	Ctrl+C to copy, Ctrl+V to paste.
Selecting All Keyframes	A in the Timeline, Dope Sheet, or Graph Editor.
Timeline Markers	M to add a marker to the timeline at current frame

Animation Playback

Play Animation	Spacebar
Stop Animation	Spacebar (again)
Go to Start Frame	Shift + Left Arrow
Go to End Frame	Shift + Right Arrow
Step Forward/Backward	Left/Right Arrow Keys
Loop Playback	Ensure the 'Loop' button is enabled in the Timeline.

Graph Editor & Dope Sheet

Graph Editor

Accessing the Graph Editor	Select 'Graph Editor' from the editor type dropdown menu (usually at the top left of a panel).
Manipulating Curves	Select a curve point, then G to move, S to scale (time or value), R to rotate.
Adding F-Curve Modifiers	N-panel -> Modifiers -> Add Modifier (e.g., Noise, Envelope, Cycles).
Baking F-Curves	Object -> Animation -> Bake Action (Convert modifiers to keyframes).
Handle Types	V - Set handle type (e.g., Automatic, Aligned, Vector, Free).
Zooming	Ctrl + MMB drag or Mouse Wheel.
Panning	Shift + MMB drag.

Dope Sheet

Accessing the Dope Sheet	Select 'Dope Sheet' from the editor type dropdown menu.
Action Editor	A Dope Sheet mode for managing Actions (animation data blocks). Access via the mode dropdown menu in Dope Sheet header
Selecting Keyframes	Left-click to select, Shift + Left-click to add to selection, A to select all.
Moving Keyframes (Dope Sheet)	Select keyframes, G to move them in time.
Deleting Keyframes (Dope Sheet)	Select keyframes, X or Delete to delete.
Summary Channel	Display of the object's keyframes.

Drivers

Adding a Driver	Right-click on a property -> Add Driver. Alternatively: Drivers Editor Window.
Driver Editor	Separate window to manage drivers.
Driver Types	Various types of drivers exist (scripted expressions, average value of properties).
Editing Drivers	Right-click on the property with the driver -> Edit Driver.
Removing Drivers	Right-click on the property -> Delete Driver.
Driver Namespaces	Drivers are local to the Blender file and their associated objects.

Animation Techniques

Using Constraints

Adding Constraints	Select object -> Properties Panel -> Constraint Tab -> Add Object Constraint.
Copy Location	Makes an object follow the location of another.
Copy Rotation	Makes an object copy the rotation of another.
Limit Distance	Restricts an object's distance from a target.
Track To	Points an object's axis towards a target.
Inverse Kinematics (IK)	Solves for the position of a chain of bones, often used for limbs. Add an 'IK Constraint' to a bone.

Using Modifiers

Adding Modifiers	Select object -> Properties Panel -> Modifier Tab -> Add Modifier.
Armature Modifier	Deforms a mesh based on the movements of an armature (rig).
Subdivision Surface	Increases mesh resolution for smoother surfaces.
Simple Deform	Bends, twists, or tapers a mesh.
Cast Modifier	Morph the object into a sphere, cylinder or cube shape.
Wave Modifier	Add procedural wave motion to a mesh.

Shape Keys

Adding Shape Keys	Select object -> Object Data Properties -> Shape Keys -> Add Basis Shape Key, then add additional shape keys (+ button).
Editing Shape Keys	Select a shape key, enter Edit Mode, and modify the mesh. The 'Value' slider controls the influence of the shape key.
Driving Shape Keys	Right-click on the 'Value' slider -> Add Driver.
Shape Key Animation	Hover the mouse over the 'Value' slider and press 'I' to insert a keyframe.
Shape Key Mixing	Combination of multiple shape keys
Vertex Groups	Restrict the influence of the Shape Keys to specific parts of the mesh by assigning them to a Vertex Group.