SCULPT TOOLS MANUAL

plugin by BTM, modified with the help of AI.

Tools Overview

Icon	Tool	Purpose
	**Bulge**	Pushes the surface outward or inward.
	**Push**	Pushes points away from the cursor (or pulls them in).
	**Smooth**	Softens bumps and blends rough areas.
	**Smudge**	Drags the surface sideways, like smearing clay.
	**Grab**	Moves a whole area at once, like grabbing clay.
	**Planar Lock**	Keeps surfaces flat while sculpting.
	**Settings Dialog**	Controls brush size, strength, falloff, etc.

Essential Controls

- **Left Mouse Button** — Sculpt
- **SHIFT** — Reverse direction (Bulge & Push only)
- **Mouse Move** — Controls stroke direction and intensity
- **Settings Dialog** — All tools share the same parameters

Recommended Starting Settings

- **Radius:** 20–40
- **Hard Area:** 0–5
- **Strength:** 30–50%
- **Falloff:** *s curve*
- **Lag Line:** ON
- **Gravity:** 0%
- **Use Locks:** OFF (unless needed)

1. INTRODUCTION

Sculpt Tools lets you shape SketchUp models as if they were soft clay. You can push, pull, smooth, drag, and reshape surfaces in a natural way.

2. THE SETTINGS DIALOG

All sculpt tools use the same settings window. Here’s what each setting means:

Radius

How big the brush is.

- Small radius = small details
- Big radius = large, soft changes

Hard Area

The “strong center” of the brush.

- 0 = soft brush
- Higher values = firmer center

Strength

How powerful the brush is.

- Low strength = gentle
- High strength = strong push/pull

Gravity

Adds a little downward pull after sculpting.

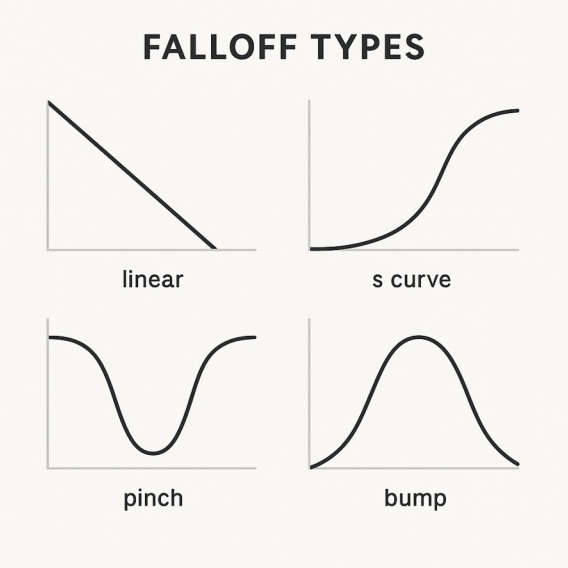
- 0 = no gravity
- Higher values = sagging or drooping effect

Smoothness (Falloff)

Controls how the brush fades out at the edges:

- **linear** = simple fade

- **s curve** = soft and natural
- **pinch** = sharp center
- **bump** = rounded, bulging feel



Lag Line

Makes strokes smoother.

- ON = smoother, cleaner strokes
- OFF = more direct and precise

Cursor

Choose what you want to see:

- Brush circle
- Inference point
- Both
- None

Use Locks

If ON, sculpting will respect any planar lock planes you created.

3. SHARED IDEAS (APPLIES TO ALL TOOLS)

Brush Size Matters

Big brush = big soft changes Small brush = small sharp changes

Strength Matters

Low strength = build up slowly High strength = fast, strong changes

Smooth Often

Smoothing keeps your model clean and natural.

Planar Lock Helps Keep Things Flat

Great for walls, floors, and symmetry.

4. TOOL GUIDE (SIMPLE EXPLANATIONS)

4.1 BULGE

What it does

Pushes the surface outward (inflate) or inward (deflate).

How to use it

- Click and drag to bulge the surface
- Hold **SHIFT** to invert the effect (deflate instead of inflate)

Good for

- Adding volume
- Making bumps
- Soft organic shapes

4.2 PUSH

What it does

Pushes points away from the cursor. Hold **SHIFT** to pull them toward the cursor.

How to use it

- Click and drag to push geometry away
- Hold **SHIFT** to reverse the direction and pull geometry toward the cursor

Good for

- Making dents
- Creating holes
- Pulling shapes inward

4.3 SMOOTH

What it does

Softens rough areas and blends surfaces.

Good for

- Cleaning up after other tools
- Making surfaces look natural
- Removing bumps

4.4 SMUDGE

What it does

Drags the surface sideways, following your stroke direction.

Good for

- Stretching shapes

- Creating flow
- Adjusting edges

4.5 GRAB

What it does

Lets you grab a whole area and move it.

How it works

1. Click to “grab” the area
2. Drag to preview the move
3. Release to apply

Good for

- Moving big shapes
- Adjusting proportions
- Shifting features

4.6 PLANAR LOCK

What it does

Creates a flat plane that sculpting cannot break.

How to use it

Click three points to define a plane. Sculpting will keep vertices on that plane.

Good for

- Keeping walls flat
- Maintaining symmetry
- Hard-surface modeling

6. BEST PRACTICES

- Use **Smooth** often
- Build shapes gradually
- Keep Strength moderate
- Use Lag Line for cleaner strokes
- Use Planar Lock for structure
- Work on meshes with enough geometry

7. TROUBLESHOOTING

Nothing is happening

- Brush radius too small
- Strength too low
- Geometry inside a group
- Lock planes active

Surface looks messy

- Use Smooth
- Lower Strength
- Increase Radius

Planar areas deform

- Turn on “Use Locks”
- Create a lock plane