Blender cheat sheet for beginners
Common shortcuts, actions and some fast annotations for novices

For Blender 4   1.5 - 13 mar 2024   by nachazo   github.com/nachazo/blender-cheat-sheet

transform

G	Move
R	Rotate
S	Scale

0, 1, 2, 3...   R R Free rotate

X, Y, Z → 0, 1, 2...

| E | Extrude |
| Supr | Delete | *Dissolve vertices, faces, edge loops...* |

Shift + X, Y, Z + ... **Exclude axis on action**

modeling

| Tab | **Edit mode ⇄ Object mode** |

Shift + S *Snap pie menu*   Z *Shading pie menu*

M	Merge
Ctrl + 🖱	Extrude to click	*new vertex or add*
Ctrl + R	Loop cut + 🖱
F	Create face	*or close vertex shape*
Shift / Alt + D	Duplicate / Duplicate linked
Ctrl + B	Bevel (+ Shift vertices)
Shift + W	Bend	V	Rip	*Also "Bisect"*
I	Inset faces	K	Knife
Ctrl + A	**Apply transformations**
O	Toggle proportional editing
Shift + Tab	Snap tool toogle

Ctrl + Shift + Tab ↻ *Increment, Vertex...*

selection

A	Select all	A A Deselect	Shift	**Accumulate selection**
L	Select linked
Ctrl + L	Select linked all	Ctrl + I	Invert selection
Ctrl + 🖱	Select shortest path	C	Circle select
Alt + 🖱	Select loop	Ctrl + +	Grow selection
Ctrl + Alt + 🖱	Select ring	Ctrl + -	Shrink selection

Vertex 1   **Edge** 2   **Face** 3

Ctrl + V   Ctrl + E   Ctrl + F

F3 **Search function**

viewport

/	Isolate object
+	Zoom in
-	Zoom out

Top 7 8 9 *Opposite*   *Perspective*

4 5 6   *Orthographic*

Front 1 2 3 **Right**

Camera view 0   Focus selected · Supr

U **UV Mapping menu**   *Smart UV project* **Unwrap** *Project from View (Bounds)*

| T | Toogle *toolbar* menu (left) |

Modifying "Transform" values, press Alt for apply to all selected

N	Toogle *sidebar* menu (right)
Shift + N	**Recalculate normals**
Alt + Z	Toggle X-Ray
Home	Show all objects
P	Separate selection
Ctrl + J	Join objects
Shift + A	**Add item menu**
Shift + 🖱	**Place cursor**
Shift + C	Reset cursor to origin
Shift + 🖱	Drag view postion
Shift + R	Repeat last action

textures

Texturing: *Apply Rotation & Scale → Smart UV Project → Scale UVs → Configure modifiers UVs*

Mix textures: Noise Texture → ColorRamp → Mix Shader → Material (Surface)

| Ctrl + G | Group texture nodes | Tab *Enter/exit group* |
| F | Connect nodes |

Free Add-on **Node wangler**   Shift + W
Ctrl + T *Add Texture Setup*
Ctrl + Shift + T *Add Principled Setup*

common actions

| Ctrl + Alt + O | **Set camera** | I | Add keyframe on frame |

🔲 *Vertex Groups*

Face → Tris to quads	Mesh → Clean up < *Merge by distance / Regenerate dissolve*
Edge → Subdivide	View → View lock → Lock: *Camera to View*
Mesh → Transform → Randomize	Mesh → Bisect

Free Add-on **Images as planes** : Add → Image → Images as Planes

Color (Albedo)
Texture: Color *Color Space: sRGB*
↓
To BSDF: *Base Color*

Normal Map
Texture: Color *Non-Color (Opt. Cubic)*
Normal Map: *Color* *Opt. Bump node a/o Height map*
To BSDF: *Normal*

Displacement *Or use modifier*
Texture: Color *Non-Color, Linear (Opt. Cubic)*
Displacement: *Height*
To Material: *Displ.* *Set: Displacement & Subdivision adaptative*

Ambient Occlusion
Texture: Color *sRGB*
Mix: Multiply
A: Base color   B: A.O.
To BSDF: *Base Color*

Specular, Metallic...
Texture: Color *Non-Color*
Optional Multiply: *Value*
To BSDF: *Spec/Meta...*

Roughness
Texture: Color *Non-Color*
Optional Multiply: *Value* *a/o Gamma / ColorRamp / NoiseText.*
To BSDF: *Roughness*

| Ctrl + Alt + Space | **Fullscreen** | Ctrl + Space | **Maximized** | Ctrl + Alt + Q | **Quad view** |

📹 **Animation:** Select objects, **Object** → Track: to Constraint
Then *Add Constraint* → Clamp To *(i.e. a curve object)*

modifiers

Displacement | Subdivision | Decimate | Array | Mirror | Curve | Remesh | Boolean | Shrinkwrap | Solidify

Tips & tricks

1 Remove duplicated vertices, faces or edges. Use **Merge Vertices → By Distance**
Solves many workflow problems with transforms, modifiers...

2 Apply scale (`Ctrl` + `A`) and other transforms (rotation/location) if needed.
Solves many workflow problems with transforms, modifiers...

3 Check Normals. Use **Mesh → Normals → "Recalculate Outside"** (or `Alt` + `N`) for fixing.
Verify it in checkbox: "Viewport Overlays" → Face orientation

4 Check Object origin. Correct it in **Object → Set Origin** (select geometry in **Edit Mode** if needed).
Solves many problems with scale, modifiers like Array, Mirror...

5 Better use quads (*4 edges*). Avoid ngons (*+4 edges*). Also avoid, if possible, tris (*3 edges*).

6 Check *Render* (and other options) icons marked on object/collections in the **Outliner** to your needs.

7 Check if "*Snap*" 🧲 or "*Proportional editing*" ⊙ are activated, causing bad behaviors.

8 In **Edit Mode**, check **Options → Transform → "Correct Faces Attributes"** if needed.
For correctly transform meshes with applied UV map & textures.

Node Wrangler

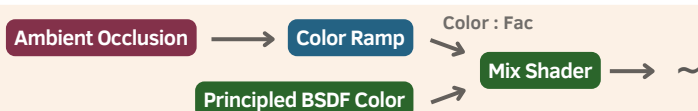`Ctrl` + 🖱 **Disconnect/cut nodes**

`Ctrl` + `O` **Create a** Mix **node**
Select one or more for auto-mixing

`Alt` + 🖱 **Auto-connect nodes**
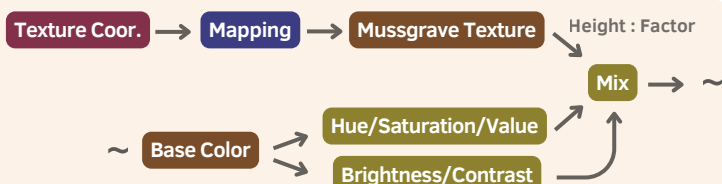`F` **Connect selected nodes**

More shading nodes

Hue/Saturation/Value & Brightness/Contrast : **Change texture properties, like color, contrast...**

Blackbody : **Node for light temperature color, for example in an Emission surface (*1500K to 12000K*).**

Ambient Occlusion : **Add shadow in the object folds.**
You can add "dirt" or remark this zones with this setup:

Ambient Occlusion ⟶ Color Ramp — Color : Fac ⟶ Mix Shader ⟶ ~
Principled BSDF Color ⟶

Add texture dirt with this setup:

Texture Coor. ⟶ Mapping ⟶ Mussgrave Texture — Height : Factor ⟶ Mix ⟶ ~
~ Base Color ⟶ Hue/Saturation/Value / Brightness/Contrast ⟶

Optimization tips

1 **File → Clean Up → Recursive Unused Data-Blocks**
Clean unused materials, textures, images... in the scene.

2 Right Click in Collection at Outliner: **Instance to Scene**
Make instances, optimizing the polygon count.

3 Use instances (`Alt` + `D`) and share materials in objects whenever possible.

4 File → External Data → **Automatically Pack Resources**
Activate for pack textures and resources into the .blend file.

5 Modifier: Decimate
Optimize polygon count in the scene.

6 *Add-on*: **Material Utilities →** `Shift` + `Q` → **Specials → Merge Base Names**
Merge duplicated materials used by assets (then, Clean Up).

7 Bake textures and reduce model polygon count.
Select blank image and bake type in Render → Bake.

8 Use Simplify, "**Persistent Data**" and other options detailed in "*Default file start-up config*".

Other

`Shift` + `Ñ` **Walk/fly navigation shortcut** 🎥
`[` *Or accent grave, depending your keyboard region*

`Space` *in a menu*: **Search in opened menu content**

`H` **Hide**   `Alt` + `H` **Show all hidden**

`Ctrl` + `L` **Link/transfer data**
For copy modifiers to multiple selected objects

🖼🖼🖼 **Free textures & assets:** *bit.ly/recursos-3d*

Interesting basic free add-ons

Node Wrangler   Material Utilities   Extra Objects   Loop Tools
Bool Tool   Images as Planes   ANT Landscape   Real Snow
Scatter Objects   Copy Attributes Menu   Easy HDRI *
UV Squares *   BlenderKit *   *All in Preferences → Add-ons, except* *

Default file start-up config

- In **Viewport shading**: *Random & Cavity.*
- In **Output**, check "*Render region*".
- In **Render**
  - Select **Cycles**. Config your samples.
  - In Eevee config, check "*Ambient Occlusion*".
  - **Simplify**: Config to your liking/project, useful.
  - Performance: check "*Persistent Data*".
  - Color Management: Choose to your liking.
- In the outliner filters, activate "*Selectable*".
- In **World**: Set "*Sky Texture*" at 0.130 strength.
- In Blender **preferences**: Up the "*Undo steps*" number and select **Cycles Render Device** if possible.

Geometry Nodes

Distribute Points on Faces   Instance On Points   Join Geometry   Random Value   Object Info   Weight Paint