

3D animation trajectory

A dictionary of keywords and FAQs for learning Blender in TechLab 1.5 2025/26.

Trajectory

1. *modelling*
 2. *sculpting*
 3. *materials*
 4. *textures*
 5. *UV mapping*
 6. *rigging*
 7. *keyframing (animating)*
 8. *rendering*
 9. *extras*
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1. Modelling

- Why using **Blender**? How do I **navigate** Blender's interface? How do I **save** a file? How do I **undo** a mistake?
- How do I delete, hide, or create a new **primitive object**?
- How do I **select** or **grab/rotate/scale** (GRS) an object? How do I **duplicate** it? How do I **snap** it to an **axis**?
- What are **vertices/edges/faces** (VEFs)? How do I **select** or **GRS** them? How do I switch from **object mode** to **edit mode**?
- How do I use the **x-ray tool** to view the VEFs facing the back of my object? How do I switch

from **wireframe view** to **solid view**?

- How do I add or remove VEFs on an object? What's the difference between **extrude** and **inset**?
 - What is **beveling** and how do I do it? How do I **smooth** my corners?
 - What is **proportional editing** and how do I do it?
 - How do I cut a loop across the whole object (**loop cut**)?
 - How do I make a custom cut using the **knife** tool?
 - How do I **bridge** or **fill** multiple VEFs?
 - How do I edit my object **symmetrically**?
 - How do I add a **reference image** to my scene?
 - How do I **subdivide** my object?
 - What is **boolean** modelling? How do I **bool** other shapes with my object?
 - How do I make a **curve** primitive?
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2. Sculpting

- How do I change my interface to **sculpt mode**?
 - How to use **symmetry** in sculpt mode?
 - How to use the brushes that **grab**, **draw**, **smooth**, **flatten**, **inflate**, **clay strip**, **snake hook**, and generally affect the details of my object?
 - What are the different ways to **remesh** my object, and why would I need to? What is **topology**?
 - How do I use the **dynamic topology** tool in sculpt mode?
 - How do I use the **multi-resolution** tool?
 - How do I **join** two objects together?
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3. Materials

- What is a **3D material**? Why do I need one? How do I add a **material** to my object?
 - How do I switch to **material view** or **shading view**? What is the difference between a **material** and a **shader**?
 - Which **materials** can I use and how?
 - Which **shaders** can I use and how?
 - What are **normal maps**, **displacement maps**, **diffuse maps**, **bump maps**?
 - Which **lights** can I use and how?
 - How do I create **hair** or **fur**? What is a **particle system**? What is a **weight field** and how do I switch to **weight paint** mode?
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4. Textures

- What is a **texture**? How do I **import** an image as texture? How do I **generate** a texture?
 - How do I **paint** my own custom texture? How do I switch to **vertex paint** mode? And **texture paint** mode? What is the difference?
 - How do I change my **brush color**? How do I **mix** or **blur** two colors? How do I **erase** color?
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5. UV Mapping

- What is **UV mapping** and why is it important?
- How do I wrap a texture around my object (**UV texture**)? What are the different **UV unwrapping** methods?
- What are **seams**? how do I mark seams?
- How do I **GRS** my **UV texture**?

- How do I **export** it to **use** it elsewhere?
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6. Rigging

- What is **rigging**? How do I create an **armature**? How do I **GRS** a **bone**? How do I **extrude** a **bone**?
 - How do I **parent** bones? How else can I connect them? How do I create multiple bone structures in the same object?
 - How do I **deform** my **mesh** in relation to my **armature (weight deform)**?
 - How do I edit my object's **weight deformation**?
 - My deformation looks wrong, how do I fix it?
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7. Keyframing (animating)

- What is **keyframing**? How do I change my animation details like **fps** and **duration**?
 - How do I **record** one or multiple keyframes? How do I animate more bones at once? How do I move or duplicate keyframes?
 - What are **linear**, **bezier**, and **constant** curves? How do I edit my animation curves in the **graph editor**?
 - What else can I animate (camera, lights, objects)?
 - How do I animate a camera over a **path**?
 - How else can I animate an object (noise, waves)?
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8. Rendering

- What is **rendering**? How do I render an image of my

scene? How do I render an **animation**?

- How do I create a **camera object**? And a **light object**?
 - How do I change my **render settings**? And my **output settings**? How do I **export** a **video** or an **image sequence**? How do I make the **background transparent**?
 - How do I view my image sequence?
 - What happens if my render **crashes**?
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9. Extras

- How should I organise my **project folders**?
- Where can I download 3D objects?
- How do I use **Mixamo**? And what for?
- How to **3D scan** with my phone?
- How do I **export** the Blender project with the texture files (**assets**)?