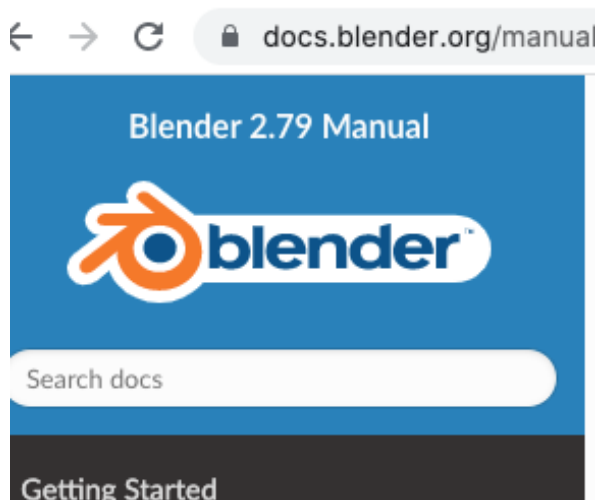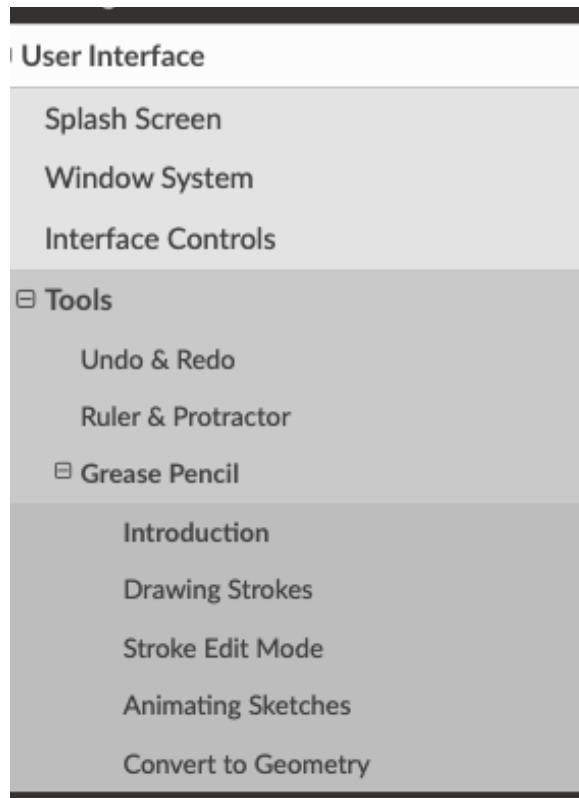# Week_24__animation

Welcome to Trinity's
Computer Animation 03/20/2024

Today's class will begin with a Blender Demo from Coach
Arthur, Then learn about Blender through an Tutorial
Video, lastly we will create a blender 2D Animation
through our class exercise.

Blender Demo from Coach Arthur…

Introduction

Years ago people needed a way to quickly draw on their monitors, they did this with a tool called a grease pencil. This is especially helpful for animators who need to add notes directly on their screen. However, not everyone wants to draw on their monitors. So a digital version was made, also called a Grease pencil.

You can use the Grease Pencil tool to draw free-hand

sketches and annotations in most of the [Editors](). The sketches that are made are saved with the blend-file so they can be seen at any time, an advantage over the old grease pencil. However, you can also do much more with the digital grease pencil such as:

- Planning animation poses and motion curves.
- Sketching out model topology.
- Hand-drawn storyboarding in 3D.
- As director's tool to review shots.
- 2D animations

  An advanced use of *Grease Pencil* is for different tools (e.g. add-ons). Allowing you to draw where the tool is to take effect.

Grease Pencil Basics

Enable the *Grease Pencil* by clicking *Draw, Line, Poly or Erase* from the Tool Shelf T. A new layer will be automatically added for you to draw on.

A new layer can be added from the Grease Pencil panel in the Properties region. This panel can also be used to customize the color, opacity and thickness of the pencil lines. Changes to these settings will affect all strokes on the current layer.
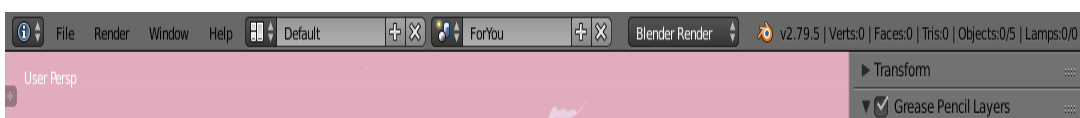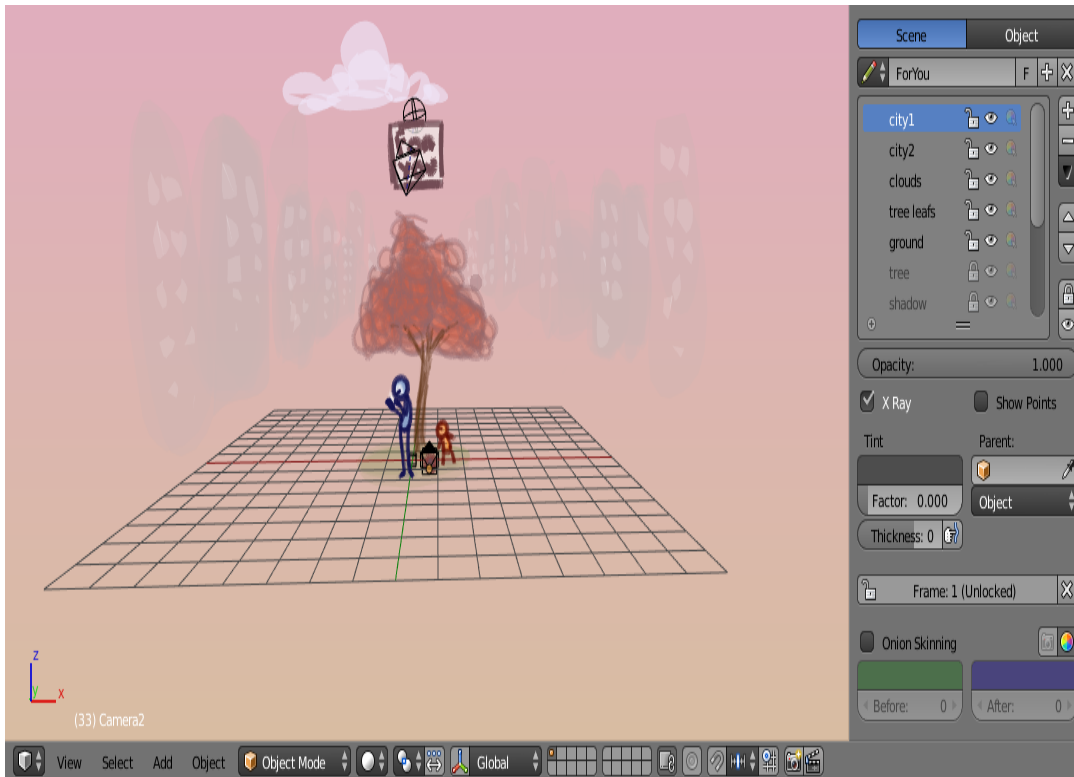
An example of Blender's Grease Pencil.

Grease Pencil sketches can be converted to editable geometry and used to aid the animation process.

Drawing

Mode:	All Modes
Panel:	Tool Shelf ‣ Grease Pencil ‣ Grease Pencil

The Tool Shelf provides a number of options for drawing with the *Grease Pencil* which are detailed below.

Draw D-LMB (left Mouse Button)

Draw a new stroke (multiple short, connected lines). The stroke will finish when you release the mouse button.

Line Ctrl-D-LMB

Draw a new line in rubber band mode. The line will finish when you release the mouse button.

Line Ctrl-D-LMB

Draw a new line in rubber band mode. The line will finish when you release the mouse button.

Poly Ctrl-D-RMB (Right Mouse Button)

Draw connected lines by clicking on position you want to add the next point. Lines will be automatically added to connect the two points. Holding LMB down and sliding mouse lets you place the new point/segment preview. The transformation of the point is locked to X/Y axis set by initial direction of the mouse movement.

Erase D-RMB, Eraser

Erases segments of strokes that fall within the radius of the eraser "brush" (with a linear falloff from the center of the eraser circle). The erasing will continue until the mouse button is released, while trying to reduce the thickness of strokes before removing them. The eraser operates on all visible and editable layers. If begun with *Erase*, either RMB or LMB will erase strokes. Its cursor is a red circle with a dashed outline.

The size of the eraser "brush" can be controlled with Wheel, or with NumpadPlus and NumpadMinus, while still holding RMB.

Insert Blank Frame D-B

This operator adds a new frame with nothing in it on the current frame. If there is already a frame there, all existing frames are shifted one frame later. [->]

Delete Frame(s) D-X

Remove all active frames if they are not locked.

Additive Drawing

With the "Additive Drawing" option enabled the active frame's strokes will be carried over/copied if you start drawing on an empty

Additive Drawing

With the "Additive Drawing" option enabled the active frame's strokes will be carried over/copied if you start drawing on an empty frame (i.e. one without any keyframe already). This saves the effort of keeping a Dope Sheet open, and having to remember to duplicate the current frame before starting to draw the next pose (or risk managing to draw the perfect pose, but without everything else).

This option makes it easier to animate shots where you're building on a result from a previous frame. Examples of cases where this comes in handy include animating facial expressions (when all outlines are on the same layer), or animating "growing" things (e.g. vines, or concentric circles growing from a central point).

Note

Even without this option enabled, this is the default behavior when using the eraser on an "empty" frame. This makes it easier to do shots where you're just changing parts of the facial expression, or if you're animating an "eraser" effect.

Continuous Drawing

Continuous Drawing allows for rapid sketching with the *Grease Pencil* when multiple strokes are desired. So that you only have to hold D once for the first stroke. Besides the checkbox *Continuous Drawing* is also enabled if the D key is released while pressing LMB. The eraser for one-off strokes (RMB) is still available. Note that with the *Eraser* both LMB or RMB can be used when drawing has started.

Use Esc or Return or clicking outside the current viewport (e.g. another region or editor) to exit the mode. Continuous drawing can

another region or editor, to exit the mode. Continuous drawing can be disabled using E key in order to get fast access to sculpt mode.

Draw on Back

New strokes are moved behind the drawing when confirming the drawing tool (lowered to the bottom of the stack).

Stroke Placement
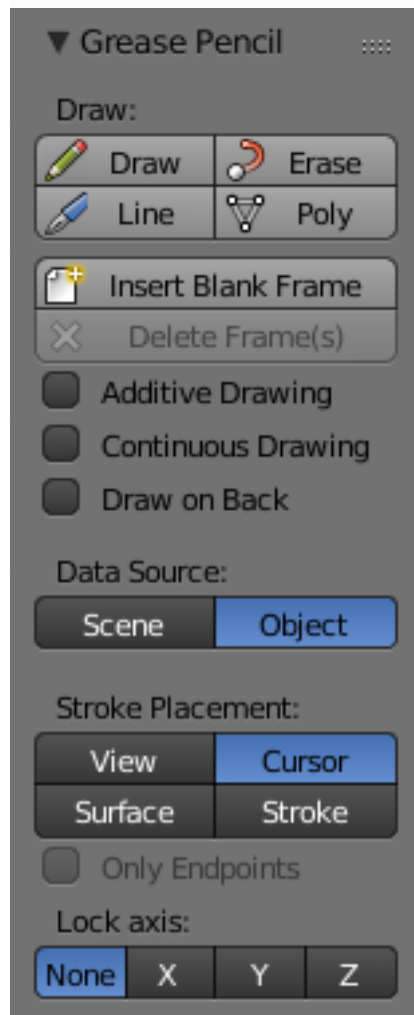
Grease Pencil panel.

Defines how the strokes are converted to 3D (or 2D) space.

View

View

New strokes are placed in screen space (2D) and are locked to the view.

Cursor

New strokes are drawn in 3D space, with position determined by the 3D cursor and the view rotation at the time of drawing. *Cursor* is available as an option in the *UV/Image Editor* but it functions identically to the *View* option. *(3D View only)*

Lock axis

Lock projection to a specified axis.

Surface

New strokes are drawn in 3D space, with their position projected onto the first visible surface. *(3D View only)*

Stroke

New strokes are drawn in 3D space, with their position projected onto existing visible strokes. Note that strokes created with *View* are not in 3D space and are not considered for this projection. *(3D View only)*

Only Endpoints

Applies the drawing setting only to the endpoints of the stroke. The part of the stroke between the endpoints is adjusted to lie on a plane passing through the endpoints.

on a plane passing through the endpoints.

Next we will have a video Tutorial:

2D - Animation intro video:
https1://www.youtube.com/watch?v=-zKhD5JCxP8

Homework:

1) Review this URL - (Please bookmark this page - on your browser)
https://docs.blender.org/manual/en/2.79/interface/grease_pencil/drawing/introduction.html

2) Go through (avoid the advertisements),
https://www.makeuseof.com/grease-pencil-blender-how-to/

https://www.makeuseof.com/grease-pencil-blender-how-to/