Pixar Animation Power
TUTORIALS

These tutorials will take you through the workings of Pixar's powerful animation software, from the basics to the more complex examples. Basic knowledge of animation is assumed. The level is split up into 10 lessons, which must be completed one at a time. If you do not understand a lesson, you should not go on to the next one. Each lesson should take you about 1 hour to complete. Some lessons will be longer than others, and some will be shorter. Pixar's Animation Power has been in use since 1988, so many tips and tricks have been discovered over the years.

Here's a brief overview of the lessons:

- Lesson 1 - Quick introduction to the screen layout and basic drawing tools.
- Lesson 2 - Your first simple PAP animation. Animating rough ideas and planning out.
- Lesson 3 - This is the a walk cycle. Learn how to make your characters walk.
- Lesson 4 - Continue your exercise using Setup and inbetting frames.
- Lesson 5 - Using Cutouts - basics. Introducing the Ranger. Your character is going for a little walk.
- Lesson 6 - More Cutout tricks. And animating a character - dealing with your cycle and adding on their faces.
- Lesson 7 - Layers. Some tricks on all the more tricks layer functions of PAP. Adding in the final touches.

Before you start your first lesson of Pixar's Animation Power, you should read through the Pixar's Animation Power Glossary, which explains the terms used in the tutorials. This should also be read if you are a beginner.

Before you start most of lesson here PAP installed successfully on your computer - as well as a working drawing tablet (Wacom preferred). Also, you should have read through the Pixar's Animation Power Glossary.
Pixar's Animation Power is not responsible for any damage to your computer or equipment.

With these tutorials you need to be a bit listen to the right. Each computer or a PAP project folder containing animation. Some lessons will require you to open a project from a previous lesson, so keep all your PAP projects in a single folder for easy access. These tutorials are intended to be used in the order they are in, so you should not skip lessons. Some lessons will be longer than others, and some will be shorter. Some lessons will require more PAP work, meaning. Pixar's Animation Power is everything like the paper, print (or, Computer).

Ok - So shall we start the lesson?

When you start PAP, you will be asked to register and pay. If you haven't done that already. Please do this. It takes a few minutes, and it helps us to keep PAP up to date. Once you have done this, you are ready to start.

Bring the mouse cursor to the top of the screen. A menu bar appears. Click on the menu bar to open the menu. Click on the "Project" menu. Click on the "New" option. A dialog appears. Type in a name for your project. Click on the "Create" button. A new project is created. Now, click on the "Project" menu. Click on the "Open" option. Select your project. Click on the "Open" button. Your project is now open. Click on the "Close" button. Your project is closed. Now, open your project. Click on the "Save" button. Your project is saved. Now, close your project. Click on the "Quit" button. Pixar's Animation Power is closed. Now, open

Active Layer

cutouts, etc, is only done on the active layer.

Go ahead and draw some quick doodles.

Various ways of picking a Layer (making it Active)

Now go back to the first layer again, by clicking it, or use the function called **Last Active Layer**. This function activates the previous active one again. So use this to pop back and forth between two layers. **Last Active Layer** is very easy to hit, since [Tab] is the keyboard shortcut.

Draw some quick doodles again, so you have drawings on both (or more) layers. Jump back and forth and watch your layered drawings exchange.

Another way of making a layer the active one, is to use the **Go To Layer (1-6)** functions. Simply hit keys [1] to [6] on your numeric keyboard.

... Or you can step up or down through the layers, using **Go To Layer Above** and **- Below**. Shortcuts are [Alt Up] and [Alt Down].

You may have to go to the **Setup** Screen [F10] to find all these icons - or you could just use the keyboard for now.

Various ways of turning on Layers

But how do you make your layers (drawings) visible at the same time?

To make an in-active layer visible you switch on its lightbulb at the right side of the little bar in the Layer Panel. This way you can toggle each layer on or off.

You also have function icons that do this...

These are called **Toggle Layer (1-6)** and have [Shift 1 - 6] on you numeric keyboard as your shortcut.

Easily switch all visible layers off by hitting **Toggle Layers** [Shift Tab]. This function remembers which layers was on, so when you hit it again only the correct ones will turn visible again.

Reordering Layers

When a layer is on top of others it is partly covering the ones below it. To change which layer is on top of which, you can move it up or down - reordering the layer priority.

Try this by clicking the **Move Layer Up** [Alt PageUp] and **Move Layer Down** [Alt PageDown] functions.

Dragging features of the Layer Panel

A more intuitive method of doing the exact same, is by *dragging* your layers up or down the layer panel. Again, - the top layer will be above all others and so forth down to the lowest layer, which is represented at the bottom.

Go ahead and click-drag a layer up or down. Notice how your pointer changes its appearance.
As long as you are holding and dragging - your pointer will alternate between two images (modes). One is for dropping your layer between two others (move layer) - and the other is for merging layers .

When you **move**, you simply reorder the layers. The one you are dragging can be moved up or down the layer stack.

Merging Layers

When you **merge**, you take one layer and mix it with the other. - The other then has the combined lines of both in it. The first layer (the one you clicked and dragged) will be left as it was.

Try doing a merge. Of course you'll need two layers with drawings or animation in it to see the result.

Animated Layer Guide

Notice how the *Layer Guide* is animated to show what you are going to do. Again it alternates between *merging* and *moving*, as you are dragging upwards or downwards.

More about Layer Guide

By the way, the thumbnails of the Layer Guide will have a dotted frame if the layer is empty, a full frame if it holds any animation and a yellow frame if it is the *active layer*.

Layers are always numbered 1 to 6 from the top. These Layer numbers, and how many frames each layer holds, can be turned on (or off) at the options part of the **Setup** screen [F10]. The check-box is called "Show numeric info with Layer Guide".

Deleting frames of a Layer

After the merge, you may not need the drawings/animation of the first layer anymore. If that is the case, you simply **Clear** or **Delete** all frames. You know how to do that (use the "all" option if you have several frames), but remember to make sure you have the correct layer active! You are always messing with frames of the *Active Layer* - nothing else.

Play around

Now you can take the opportunity to rough out a little animation and play around testing Layers.

Load animation into a Layer

You could also load a couple of old .pap files into a seperate layer for each. You simply do this by picking the layer you want to load an animation into (making it active) and load a .pap file. Then go to another layer and load a new .pap file.

A Range for each Layer

Notice how each Layer has it's own number of frames and own Range settings. In the next lesson you'll see how you can extend a layer in time beyond its last frame, so you can make one layer loop while another is playing straight ahead.

Finishing off

That's almost it for this Lesson! Only one thing you need to know before we wrap this one up...

The LAP format

We are now introducing a new file format called LAP. This format holds *all layers*, as well as your *Layout* and your *sound* in one convenient file. You can still use the older file format PAP, which is good for saving or loading a single layer. Also use the PAP format when exchanging animation between older versions of Plastic Animation Paper or any version of the PAP:Shareware edition. But from version 3.2 the default file format for saving is LAP!

Now, more on Layers and details of the Light Setup screen... (Lesson 8 - 10 are coming soon)

Note: The active layer (with the pencil icon on it) will always be displayed on top of all other layers in the drawing area - no matter which is on or off and what priority it really has. Once it is not the active layer anymore - it will pop back in order, as well as beeing switched on or off according to its lightbulb status.

*Tip: Use **Toggle Layers** after starting PAP as a fast way of switching on **all** layers from the beginning.*

Tip: To 'copy' a layer - which is really copying all frames from one layer to another - you 'merge' with an empty layer.

*Tech-note: **6 Layers - no more, no less!** In order to keep the high general speed of PAP, you have a fixed number of layers available. The ones you don't need, you just don't use. You can not remove a layer, you just delete the frames in it. Layers which are not switched on will not steal any CPU power. Layers which have no frames will not steal any RAM.*

*Note: LAP is short for **Layered** (Plastic) **Animation Paper**.*

Note: After finishing an animation you want to export your frames for coloring and compositing. You save as you are used to - but as a frame-stack of single image files, one layer at a time. More about exporting in Lesson 10.