



# ANIMATE

ANIMATION UNLIMITED

[Getting Started Guide](#)

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# Chapter 1 Introduction

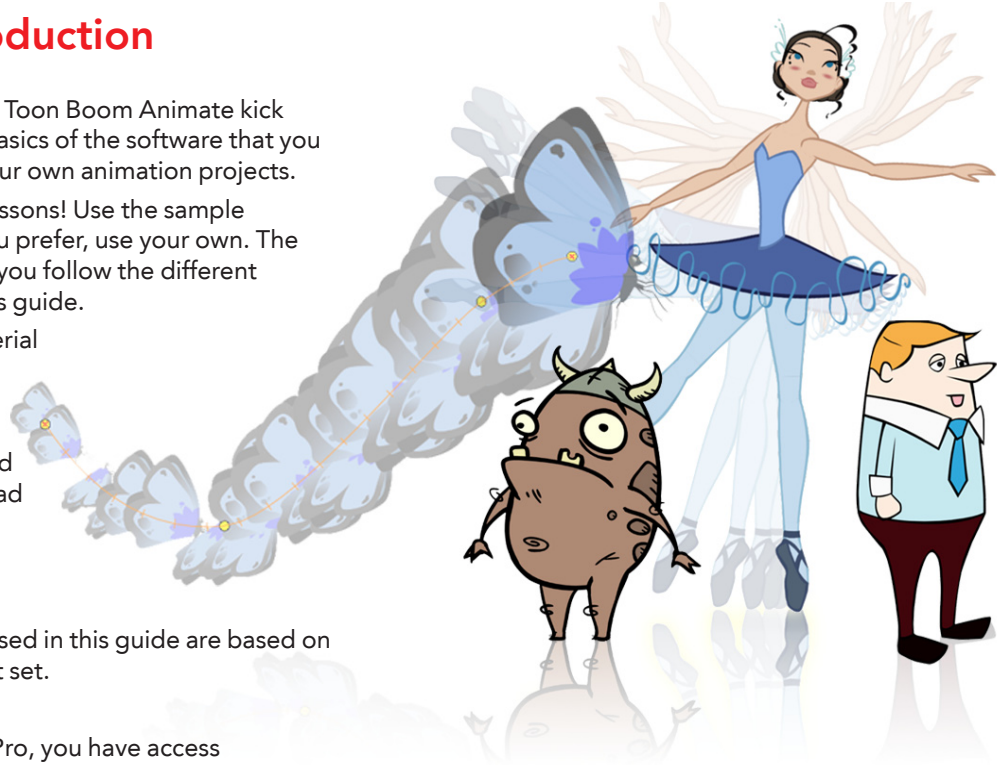
This guide is the absolute Toon Boom Animate kick start kit covering all the basics of the software that you need to get started on your own animation projects.

Discover Animate in 12 lessons! Use the sample material provided or if you prefer, use your own. The sample material will help you follow the different exercises contained in this guide.

To install the sample material provided, simply follow the installation instructions on the installation disc, at the end of this chapter or download them from our website at [toonboom.com](http://toonboom.com).

The keyboard shortcuts used in this guide are based on the Adobe®Flash® shortcut set.

If you are using Animate Pro, you have access to additional exclusive features that are not available in Animate. The Animate Pro Getting Started Guide adds chapters and lessons covering these extra features.



## Your Training Outline

Are you ready? Let's take a first glance at the training outline covered in this guide.

### Chapter 2 Creating Your Own Animation

Get to know the basics of Animate while you create a butterfly from some simple shapes and animate it.

### Chapter 3 Gathering Content

Learn how to import external content such as multilayer PSD and QuickTime movies to build a scene out of it.

### Chapter 4 Designing a Character

Learn to use the basic drawing tools available in Animate as well as many helpful features for the design tasks. Starting from the rough design through to the Ink and Paint process.

### Chapter 5 Painting Your Character

Get to know the different painting tools, the Tools Properties and the Palette concept in Animate while painting a character.

### Chapter 6 Using Symbols to Animate a Skateboard

Learn the concept of Symbols in Animate, and how to use them while creating a simple skateboarding animation.

### Chapter 7 Creating a Simple Hand-Drawn Animation

Learn the different tools and features available to you in Animate that let you easily create paperless animation.

### Chapter 8 Building a Cut-out Puppet

Learn the different steps and tasks involved in creating a cut-out puppet, from breaking it down to rigging it.

### Chapter 9 Animating Your Puppet

Learn how to use the different animation tools available in Animate while animating a cut-out puppet.

### Chapter 10 Creating a Multiplane and Animating the Camera

Learn how to use Animate's different views and tools to create multiplane effects and give the illusion of depth and 3D space to your project.



The aspect ratio is the relation between the width and height of any scene, frame or film format. The TV ratio is 4:3 and the widescreen is 16:9.

## Chapter 11 Sound and Lip-Sync

Get to know the different sound and lip-sync tools while creating a quick lip-sync animation. Learn how you can share your animation by exporting it in a QuickTime movie format.

## Chapter 12 Morphing a Flag

Get to know the Morphing tools and features while you create an animation of a flag.

## Chapter 13 Creating Effects (Animate Only)

Learn how to enhance the quality of your projects using the effect layers in the Timeline view.

\* **Note** that this chapter is **ONLY** valid for Animate. In Animate Pro, the effects are not created using the Timeline view, but using the Network view, exclusive in Animate Pro. Refer to Chapter 5 of the Animate Pro Getting Started Guide to learn how to add effects using Animate Pro.



The Ease-in is a gradual acceleration in the action.

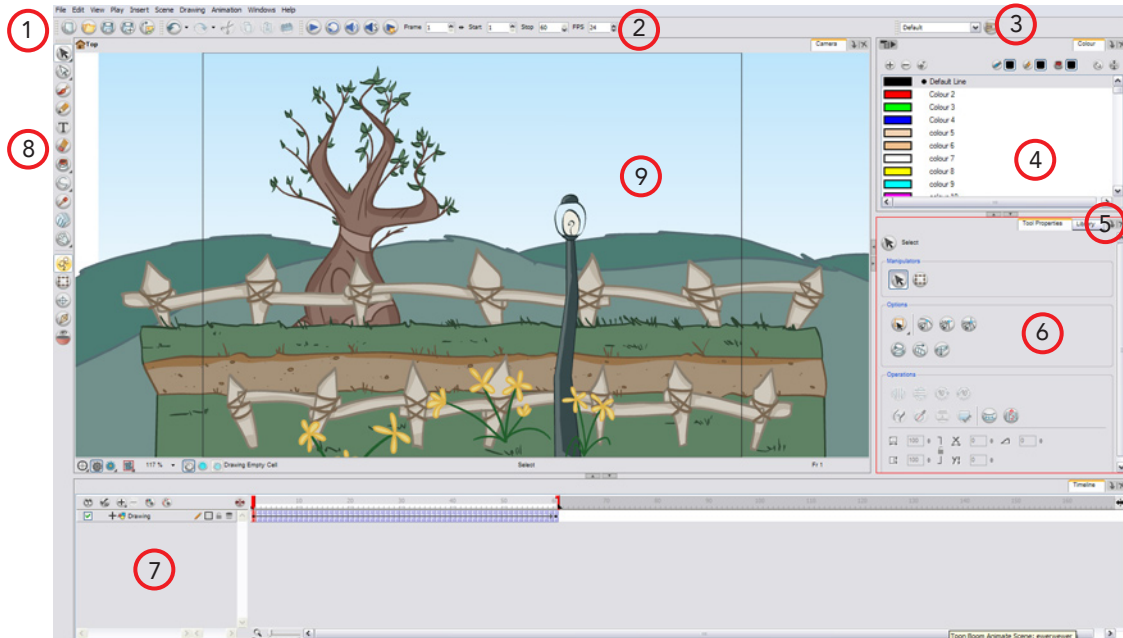
## Interface Highlights

It's important that you familiarise yourself with the interface before you start to navigate through Toon Boom Animate. As you work through this guide and learn to use the software, you can refer to the following section whenever you need to identify a specific view or toolbar.

**Note:** The numbers in this list correspond to the numbers in the interface diagram on the following page.

- 1. Top Menu**  
Contains most of the commands available in the software in the Top menu.
- 2. Playback Toolbar**  
This is used to play your animation, loop it, change the playback range and temporarily modify the frame rate.
- 3. Workspace Toolbar**  
This is used to customize and load different workspaces.
- 4. Colour View**  
This is used to select, create and modify colours. You can also create specific palettes and palette styles for your characters.
- 5. Library**  
This is used to store and reuse Symbols and templates. Anything you create in Animate, you can store in the Library.
- 6. Tool Properties View**  
Contains the options related to the currently selected tool. When you work with a tool, you will often use the Tool Properties view to either alter a selection or change the tool's behaviour.
- 7. Timeline View**  
This is mainly used to add layers, change the timing, create effects\* and order your elements. You can also change the scene length, create Symbols and templates, enter Symbols and add keyframes.
- 8. Tools Toolbar**  
Contains most of the drawing and animation tools you will use when working in Animate.
- 9. Camera View**  
This is the centre of your operations. This is where you draw, paint, animate, position your elements, and view the animation playback and results of any effects you add.

\* Available ONLY in Animate. For Animate Pro, see the Animate Pro Getting Started Guide.



In Animation, the Ease or velocity, is the acceleration or deceleration of a motion. This can be a motion created by a function curve or a series of animated drawings. Other common terms used are slow-in and slow-out.

## Timeline View Legend

The Timeline view is the main view used to adjust the timing of your drawings, [connect effects\\*](#) and order layers. Refer to the following legend to learn about the Timeline.

**Note:** The numbers in this legend correspond to the numbers in the Timeline View on the following page.

### 1. Layers used in the Timeline view:

-  Drawing
-  Camera
-  Peg
-  Effect
-  Mask
-  Sound

### 2.

When position keyframes are added on a Drawing layer, they are displayed as black squares. When interpolation is created between these keyframes, an arrow is displayed.

### 3.

An exposed drawing is represented by a grey block. Exposing the drawing for several frames extends the grey block. Exposing a second drawing displays a new grey block.

### 4.

An exposed Symbol is represented by a small film frame. Exposing a Symbol for several frames extends the film frame. Exposing a second Symbol's frame displays a new film frame.

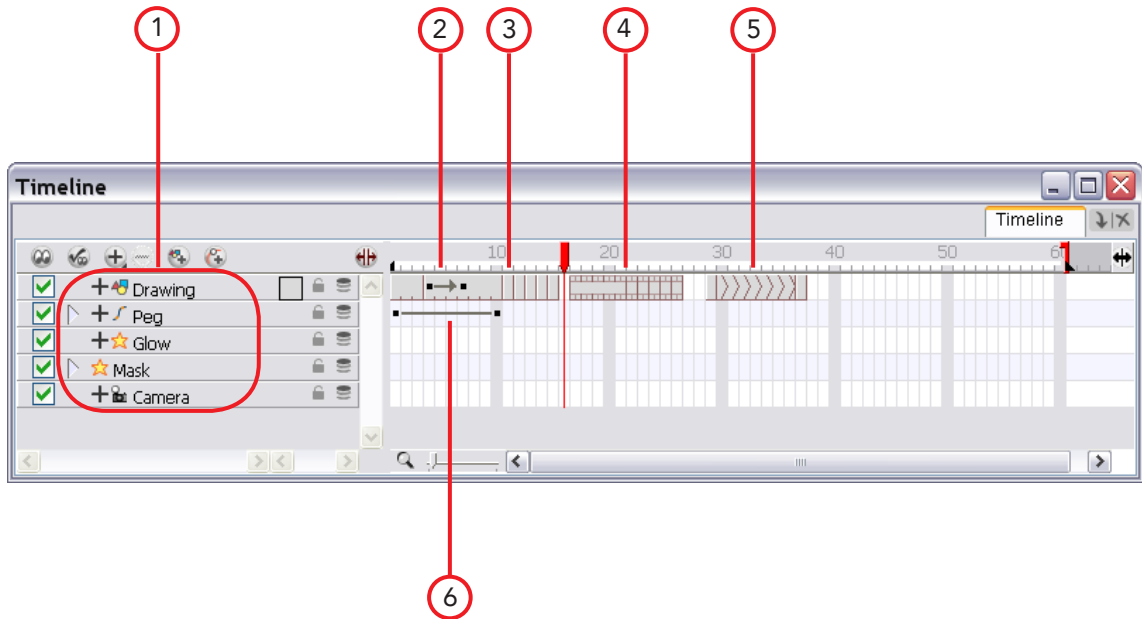
### 5.

When a Morphing sequence is created, it is represented by a series of arrows. The key drawings are still represented as grey blocks, but the morphed in-betweens are shown as a series of grey arrows.

### 6.

When a Peg layer contains keyframes, they are represented by black squares. A Peg layer is a motion path which you can attach drawing layers to. When an interpolation is created, a straight line is displayed between the keyframes.

\* Available ONLY in Animate. For Animate Pro, see the [Animate Pro Getting Started Guide](#).



## Buttons

In this guide, you will find tools that you will use frequently. Most tools have a button. Recognizing these allows you access the tools faster. You can find the most common ones on the next page.

- **Edit:** The Edit tools are used to copy, cut, paste, delete a selection and cancel actions.
- **File:** The File tools are used to import images, open, close and save scenes.
- **Animation:** The Animation tools are used to position and animate your elements on your stage.
- **Morphing:** The Morphing tools are used to set morphing hint points in your morphing sequences.
- **Selection:** The Selection tools are used to select drawing strokes and modify them.
- **Drawing:** The Drawing tools are used to draw and design your characters and backgrounds.
- **Drawing Mode:** The Drawing Mode tools are used to change a drawing tool behaviour.
- **Onion Skin:** The Onion Skin tool is used to view previous and next images.
- **Light:** The Light tool is used to see your other columns in the Drawing view.
- **Paint:** The Paint tools are used to paint your drawings.
- **Gap Closing:** The Gap Closing tools are used to close gaps while painting.
- **Gradient:** The Gradient tools are used to edit your gradient zones.
- **View:** The View tools are used to navigate in the Camera and Drawing views.
- **Drawing Markers:** The Drawing Markers tools are used to identify drawings in the Xsheet view.
- **Layers:** The Layers tools are used to add different types of layers in the Timeline view.
- **Flatten:** The Flatten tools are used to flatten drawing strokes.
- **Playback:** The Playback tools are used to play back your animation.
- **Sound:** The Sound tools are used to edit and play back the sound.
- **Ease:** The Ease tool is used to adjust your animation's velocity.
- **Layout:** The Layout tool lets you organize your workspace.



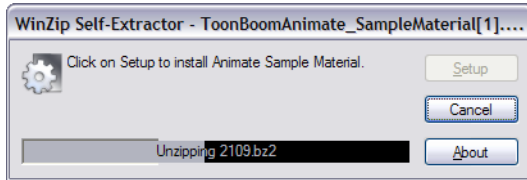


## Sample material setup guide

Templates and sample files will be required for some of the lessons in the Getting Started Guide. You must first install them, then follow steps to use them in your project.

### Step-by-step installation

1. Go to the following web page:  
[toonboom.com/products/animate/eLearning/](http://toonboom.com/products/animate/eLearning/)
2. In the Tutorials section download the Sample Material package.
3. Once the package is downloaded, double-click on it to launch it.
4. Follow the installer's instructions.



## To use the templates

### To use the templates:

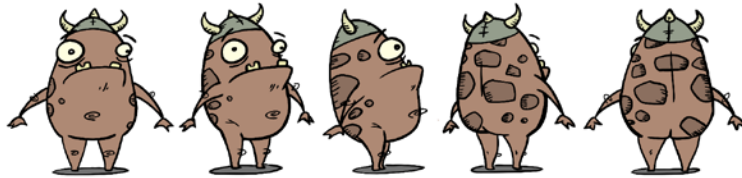
1. Launch Toon Boom Animate.
2. Create a new blank project.
3. In the Library view, click on one of the following folders to view the sample material content:
  - ▶ Templates
  - ▶ Templates > Undone\_example\_Sample\_material
  - ▶ Templates > Completed\_examples
4. Select a template from the right-hand side of the Library view.
5. Click and drag that template to the left-hand side of the Timeline view and drop it where the layers are ordered. You can also drop it directly in the Camera view.

The template now appears in both the Timeline and Camera views and is ready to be animated!

## Files in the Library view

Here are the types of files you will find in the templates folder:

- **Undone\_example\_Sample\_material**  
Prepared scenes to be completed during lessons in the Getting Started Guide.
- **Completed\_examples**  
The resulting scene files for completed lessons in the Getting Started Guide.
- **Templates**  
Various elements that can be used to completed some of the lessons in the Getting Started Guide.



## Extra sample material

You will need to browse and import some extra files from the following location:

- **Mac:** Applications/Toon Boom Animate 2/ Templates/Samples
- **Windows XP:** C:\Documents and Settings\All Users\Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples
- **Windows Vista and 7:** C:\Users\Public\ Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples

Files for chapters 3, 5 and 11:

- background\_tv.psd
- SuperHero\_Soundtracks (3 sound clips)
- Textures (16 examples)

[toonboom.com/animatepro/](http://toonboom.com/animatepro/)

# Need More Animation Power ?

Go **PRO**



Toon Boom Animate Pro is the professional version of Animate. Building upon Animate's capabilities, Animate Pro delivers additional exciting and powerful features that will make your creative process easier and smoother.

**Scan** and vectorize drawings following traditional methods

**Create** rich-looking effects and advanced puppet rigging

**Sketch** and design with textured brush styles

**Access** advanced traditional animation features

**Output** simultaneously to different resolutions and formats



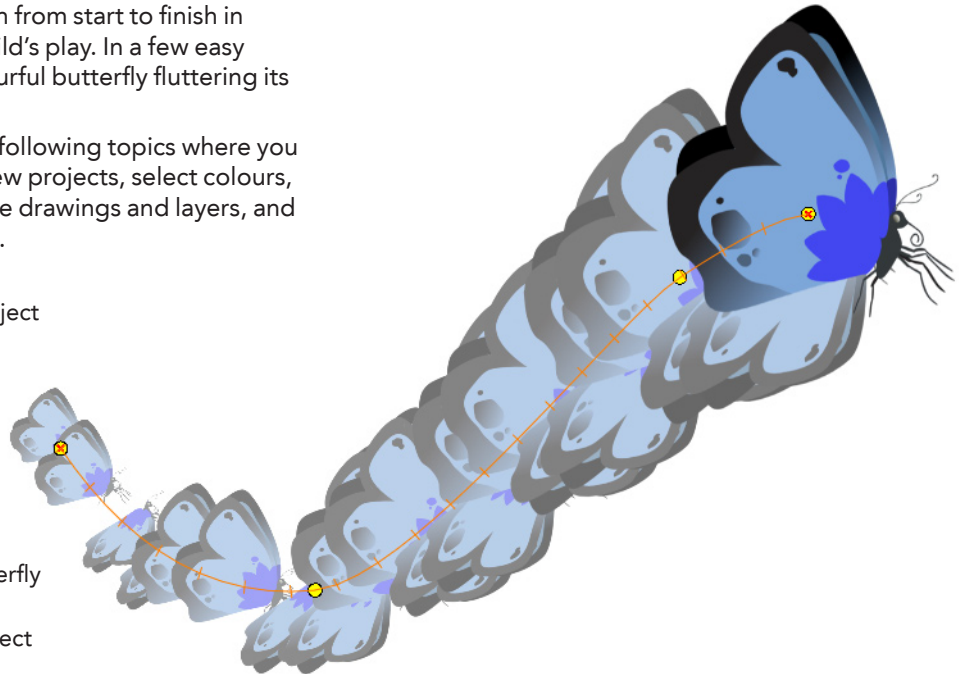
## Chapter 2 Creating Your Own Animation

Creating a basic animation from start to finish in Toon Boom Animate is child's play. In a few easy steps you can have a colourful butterfly fluttering its way across your screen!

This chapter contains the following topics where you will learn how to create new projects, select colours, use drawing tools, animate drawings and layers, and finally export your project.

The topics are:

- Creating a New Project
- Choosing a Colour
- Getting Ready to Draw
- Drawing a Butterfly
- Animating the Butterfly
- Animating the Butterfly Layer
- Exporting Your Project



## Creating a New Project

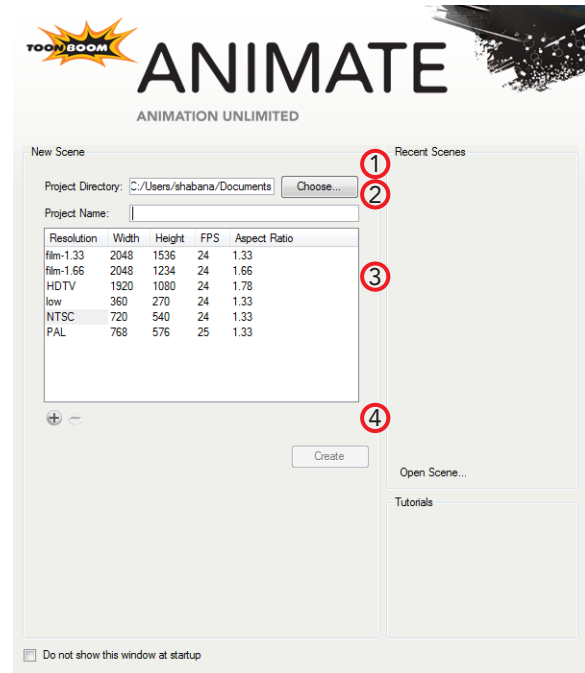
To start any animation, you need to create a new project from the Welcome Screen. You can also create new projects from the main interface's File menu.

### To create a new scene:

1. In the Welcome Screen, click on the Choose button to select the directory where to save the project.
2. In the Project Name field, type the name of the new project.
3. In the Resolution list, select a resolution for the project.
4. Click on the Create Button.

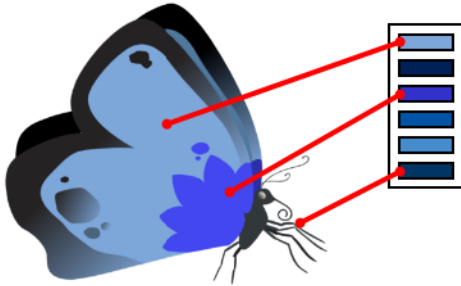
If you need to reopen a project, you can open it using the Welcome Screen and clicking on the Open Scene command.

You can also open it in **File > Open** or by clicking on the Open  button in the File toolbar.



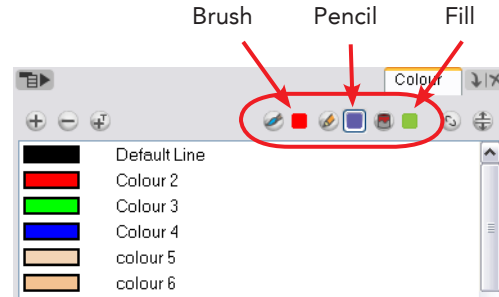
To create a custom resolution for your scene, refer to the [Animate User Guide](#).

## Choosing a Colour





The first thing you will do is to select a colour for your butterfly.

Toon Boom Animate has a colour palette which consists of a group of colour swatches. The important point to remember is that when a zone is painted with one of these colour swatches, that zone is linked to the swatch. This means that if you modify the swatch's colour, the zone is updated at the same time!



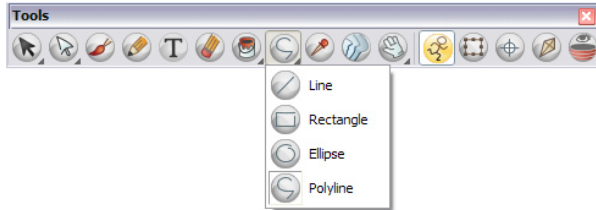
The Colour view can keep track of the colour you were using the last time you were using either the Brush tool, Pencil line tool (Pencil, Polyline, Line, Rectangle or Ellipse) or Paint tool.

- ▶ If you would prefer the Colour view to always use the selected swatch, click on the Link  button. Once the colours linked, the Link button will look like this .
- ▶ In the Colour List, select the colour you want to use to draw the butterfly's wings.







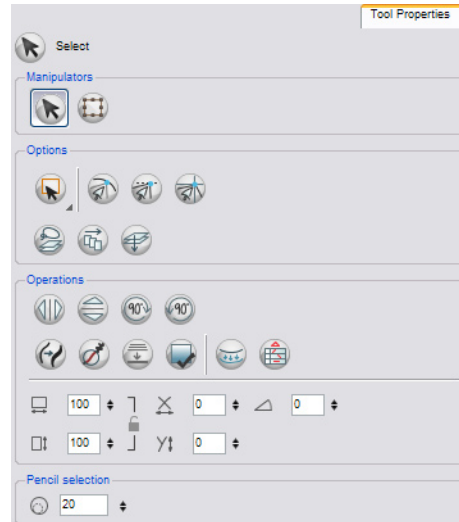
Double-click on a swatch to access the Colour Picker window and modify the swatch's colour. You can also click in the H, S, V, or R, G, B radio buttons to modify the picker display.

## Getting Ready to Draw



To design the butterfly, use the following tools found in the Tools toolbar:

-  Rectangle Tool  
Use this tool to draw a rectangle.
-  Contour Editor Tool  
Use this tool to reshape lines.
-  Select Tool  
Use this tool to reposition, scale, skew, rotate or delete drawing objects.
-  Paint Tool  
Use this tool to paint the drawings.

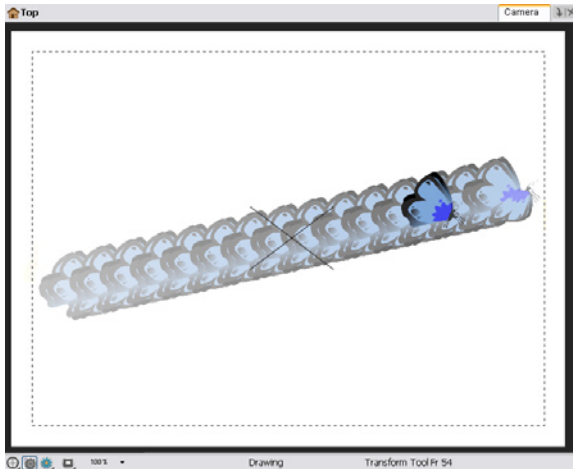


Each tool has a set of properties that can be found in the Tool Properties view. This way, each time you select a tool, you have quick access to the main actions performed with this tool.



If you need a drawing tool for a very short period of time, hold down its shortcut key without the [Alt] key while you use the tool. Once done, release the hot key.



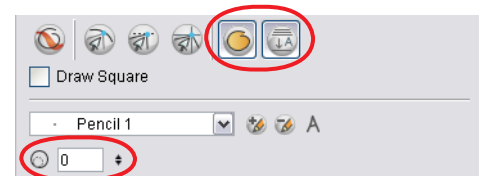




Most of the drawing, animation, design and scene setup occur in the Camera view. By default, when you draw in the Camera view, the lines are anti-aliased using the project resolution. To view the lines as plain vector, disable the antialiasing property in the Preferences panel.

1. To start drawing in the Camera view, select the cell where you want to draw by clicking on it in the Timeline view.



2. In the Tools toolbar, select the Rectangle tool.



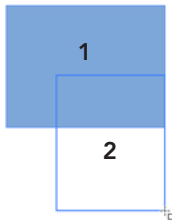
3. In the Tool Properties view, enable the following options:
  - ▶  Automatically Fill Inside Region
  - ▶  Auto-Flatten
4. Set the tool size to 0 (zero) so you do not have any border around the shape.



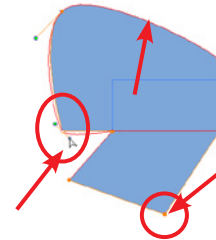
**Disabling the antialiasing preference. In Windows, Edit > Preferences > OpenGL > Real-Time Antialiasing. For Mac, Animate > Preferences > OpenGL > Real-Time Antialiasing. In both cases uncheck the Enable box.**


## Drawing a Butterfly

In the Camera view, you will draw a butterfly using the Rectangle and Contour Editor tools. This will help you to learn how to design characters out of shapes instead of just drawing their contours with the Brush tool.



1. In the Camera view, draw two rectangles to form the basic shape of the first wing.  
A warning message opens to indicate that you are not displaying the invisible lines.
2. Click on the OK button to ignore the message.
  - ▶ If you want to see the invisible line, select **View > Show > Show Strokes** or use the default keyboard shortcut [D].



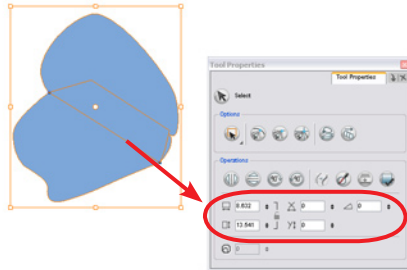
3. In the Tools toolbar, select the Contour Editor  tool.
4. Select an area of the drawing and move the rectangles' contours to form a butterfly wing in the up position.



You can modify a shape by doing one of the following:

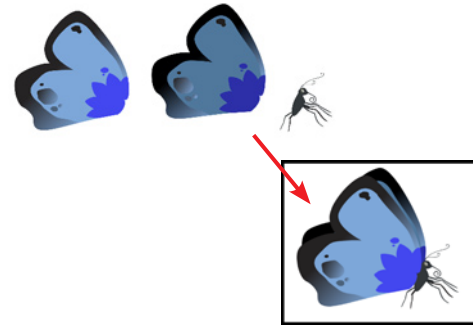
- Directly moving the point
- Pulling the stroke between two points
- Rotating and pulling on a point's Bezier handle





With the Contour Editor tool, move one of the two Bezier handles by holding down the [Alt] key and nudging selected points using the arrow keys. You can add a point by using the [Ctrl] key and clicking.



5. In the Tools toolbar, click on the Select  tool and select the wing in the Camera view.
6. Rotate and resize the wing. You can do this using the Tool Properties view or by moving the anchor points on the selection bounding box.
7. Using the Ellipse  tool and different colours, draw a series of circles and ellipses on the wing.
8. Select the butterfly wing and select **Edit > Group > Group** to group the wing as one element.



9. If you have finished drawing, disable the Auto-Flatten  mode in the Tool Properties view.
10. Next, draw the butterfly's body and duplicate the first wing by copying and pasting it.
11. Assemble the butterfly using the Select  tool. Bring the wings in front of or behind the body using **Drawing > Arrange > Bring to Front** or **Send to Back**.



You can group a selection by using the default keyboard shortcut [Ctrl]+[G] (Windows), [⌘]+[G] (Mac) or Edit > Group > Group. This shortcut is valid only when working in the Camera or Drawing view.

## Animating the Butterfly



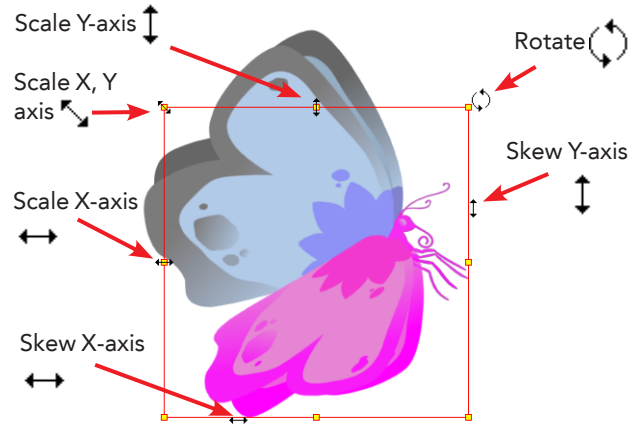
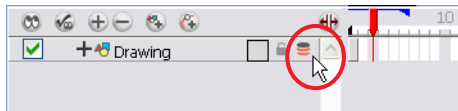
To animate your butterfly:

1. In the Tools toolbar, select the Select tool.
2. In the Camera view, select the entire butterfly drawing.
3. Select **Edit > Copy Drawing Object**.

4. In the Timeline view, select the third cell of the butterfly layer.



5. Paste the butterfly drawing into Camera view using **Edit > Paste Drawing Object**.
6. To see the previous drawing, enable the Onion Skin button in the butterfly layer.




Next, create a second drawing with the wings in the down position and the trick will be done!

7. In the Timeline view, select cell #3.
8. In the Camera view, using the Select tool, select the wings and flip them vertically moving the bounding box's anchor points. You can use **Drawing > Transform > Flip Vertical** or the keyboard shortcut [5].

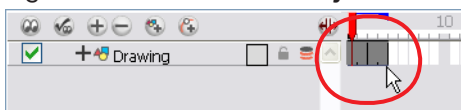


If you want to extend the exposure of one of your drawing, in the Timeline view, select your drawing and then press the [+] key once to increase the drawing's exposure by one cell.

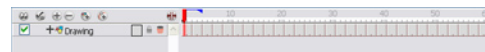
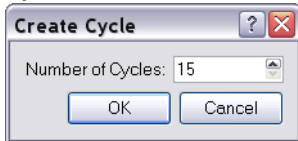
9. Adjust the wings using the Select  tool.  
In the Timeline view, make sure the second butterfly drawing is selected and then press the [+] key once to increase the drawing's exposure by one cell. You now have a flapping butterfly wing.



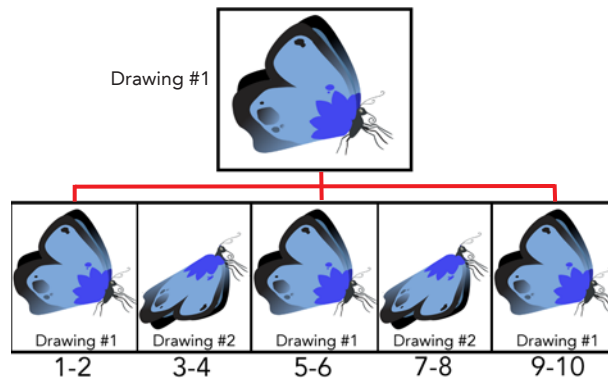
10. In the Timeline view, select the four butterfly cells. Right-click and select **Create Cycle**.



11. In the Create Cycle dialog box, set the Number of Cycles field to 15 to fill the 60 frames length.



You now have an animation 60 frames long.



You can easily modify the colour or design of the butterfly, if you like. The looped drawings are linked to the original ones, so you can modify any of the butterflies with the wings in the up position on the layer and all of them will update. You can also do the same for the butterflies with the wings in the down position.





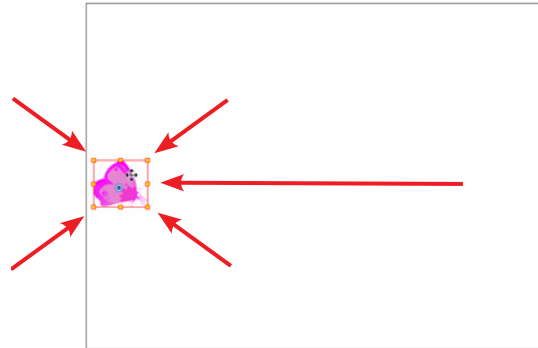
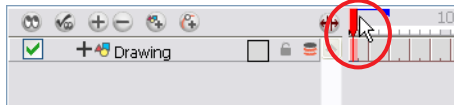
You can use the [+] and [-] keyboard shortcuts to increase or decrease a selected cell's exposure.

## Animating the Butterfly Layer



It's easy to animate a layer, press two buttons, position your drawing and you're done!

1. In the Tools toolbar, enable the Animate  mode.  
The default keyboard shortcut is [Shift]+[A].
2. In the Tools toolbar, select the Transform  tool.  
The default keyboard shortcut is [Alt]+[Q].
3. In the Timeline view, go to the first frame.



4. In the Camera view, select the butterfly and move it to the left or right of your screen depending on how you designed the butterfly.
  - ▶ When you move the butterfly using the Transform tool a keyframe is automatically created in the Timeline view.
5. Use the bounding box's corner anchor points to scale it down.

The butterfly should be small enough for it to be able to fly across the screen over 60 frames.

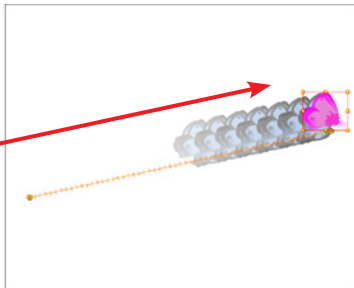


**To animate a layer, use the Transform tool and enable the Animate mode. If you want to reposition a layer without animating it, disable the Animate mode.**

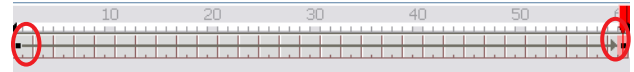
6. In the Timeline view, go to the last frame.



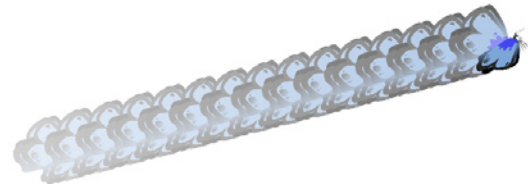
7. In the Camera view, move the butterfly to the other side. You can press [Shift]+[F11] (Windows) or [⌘]+[F11] (Mac) to view the path.



By default, the interpolation is automatically calculated between the keyframes. There is no need to do anything.

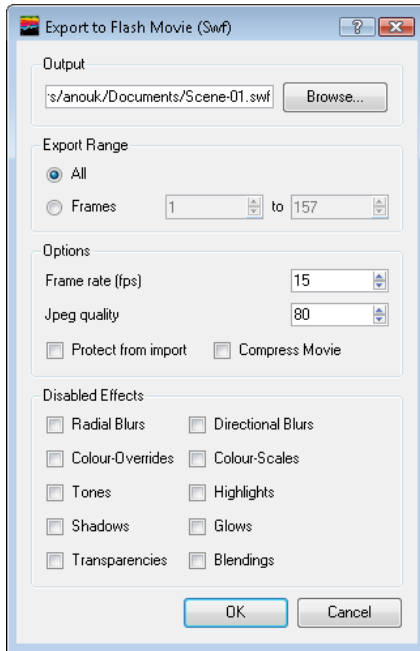


8. In the Playback toolbar, press the Play button to see your animation.
9. In the Playback toolbar, press the Loop button to play your animation repeatedly.



You can move between the Timeline frames using the [,] and [.] keys.

## Exporting Your Project



Now that your animation is complete you can export it. Toon Boom Animate allows you to export to different formats. In this case, we will export the project as an SWF format.

### To export the project as a SWF file:

1. In the top menu, select **File > Export > SWF**.
2. In the Export dialog box, click on the Choose button to name and select where you will store your movie.
3. Click on the OK button to start the export process.

There you go! You have just completed your first project using Toon Boom Animate.



You can export your projects as image sequences, QuickTime movies, Flash movies (SWF) and Flash videos (FLV).



## Chapter 3 Gathering Content

Toon Boom Animate allows you to draw directly in the software, and import external content.

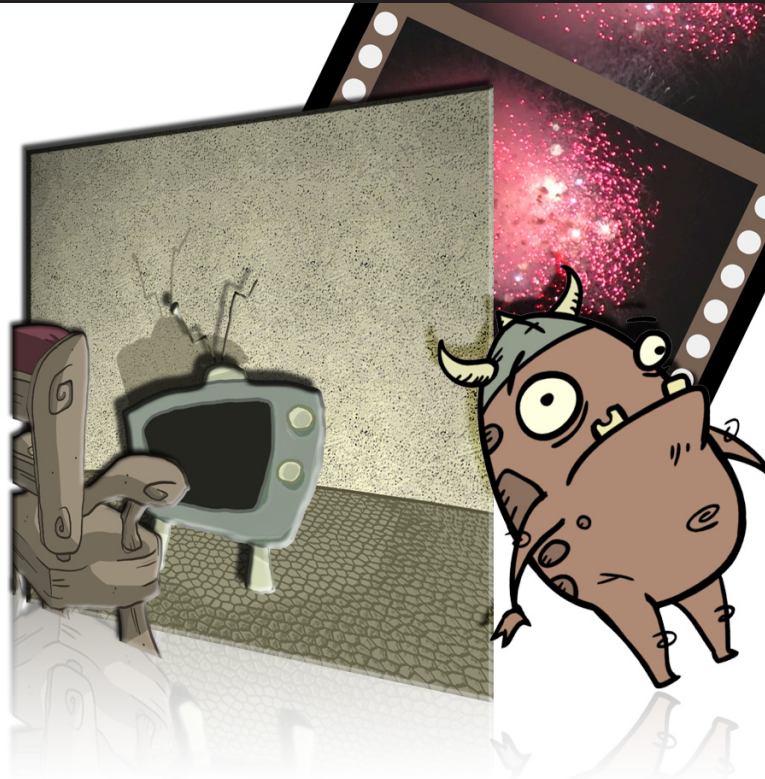
You can import QuickTime videos, pictures, multi-layered PSD files, as well as AI, SWF and PDF files.

For this lesson, you can either use your own content or the files from the sample material package.

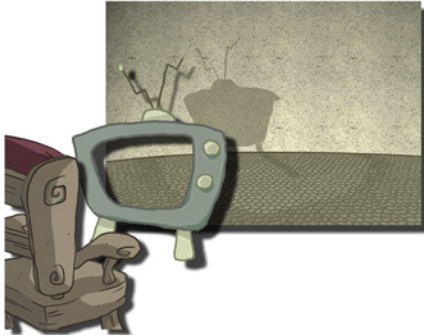
- Templates/limpa.tpl
- **Mac:** Applications/Toon Boom Animate 2/ Templates/Samples/ background\_tv.psd and fireworks.mov
- **Windows XP:** C:\Documents and Settings\All Users\Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples\ background\_tv.psd and fireworks.mov
- **Windows Vista and 7:** C:\Users\Public\ Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples\ background\_tv.psd and fireworks.mov

The topics are:

- Setting Up the Living Room
- Importing a QuickTime Movie
- Get Limpa to Celebrate



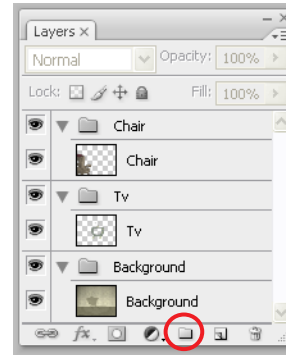
## Setting Up the Living Room



For some of your projects, you will probably want to paint your backgrounds in a bitmap editing software such as Adobe® Photoshop® . With Animate, you can import multi-layered PSD backgrounds and keep the layers separated!

To start building the scene, we will import a living room background. This background has three layers; a wall, a television and a chair. We will import the file so that each one of these PSD layers will be inserted in a separate timeline layer.

To do this, you must group your layers in Adobe® Photoshop® .

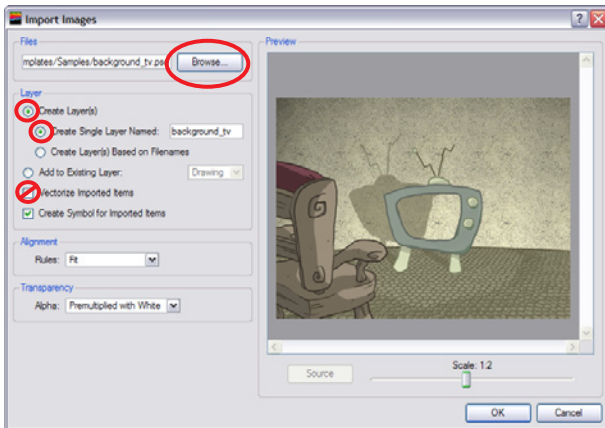


1. In Adobe® Photoshop® , group your layers. Each PSD layer you want on a separate timeline layer must be in a different group.
  - ▶ If you want some of your PSD layers to be integrated in the same timeline layer, insert them in the same group.

If you name your groups, their name will be preserved once you import the file in Animate.

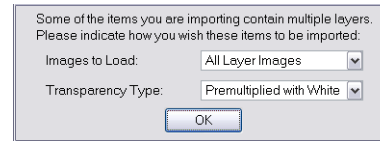


To import a photo puppet in Adobe® Photoshop® put all the hands in one group, the heads in another one and so on, so that when you import it in Animate each body part has its own layer containing all of its own pieces.

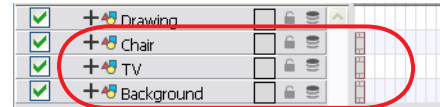


2. In Animate, select **Files > Import > Images**.
3. In the **Import Drawings** dialog box, browse for the PSD file to import.
4. In the Layer section, enable the **Create Layer(s)** and the **Create Single Layer Named** options.
5. Disable the **Vectorize the Imported Items** option.
6. Click on the **OK** button.

7. In the **Image to Load** field of the **Multilayer Image Import Settings** dialog box, select the **All Layer Images** option.

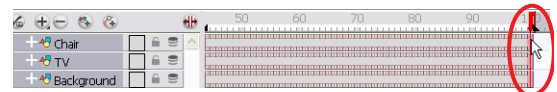


8. Select the **Transparency Type** if applicable.
9. Press the **OK** button.



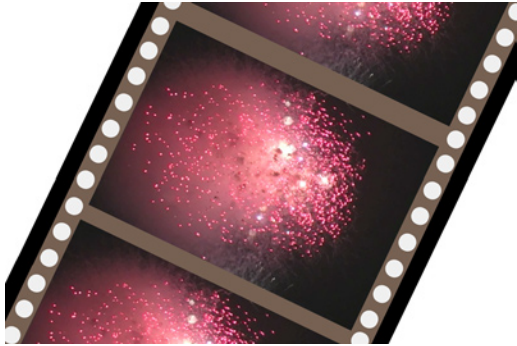
Your background appears in the Timeline view and the new layers are named as your PSD groups. The only thing left to do is to extend their exposure.

10. In the Timeline view, select the last cell of each layer and press [F5] to extend their exposure.



To vectorize the images you import, learn more about the **Alignment** and **Transparency** options, refer to the **Animate User Guide** to learn more.

## Importing a QuickTime Movie



If you have a live-action clip you want to integrate into your project, you can do it with Animate! Using Animate you can import QuickTime movies. This way, you can integrate your videos with your animation and push the envelop even further!

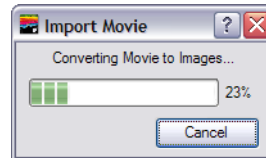
If your clip is not a QuickTime movie you need to convert it to \*.mov format first. You can do this using an editing software.

In this example, we import a Happy New Year fireworks clip that we will position inside the television.

### To import a QuickTime movie:

1. In the top menu, select **Files > Import > Movie**.
2. In the **Import QuickTime Movie** dialog box, browse for the movie to import.
3. Click on the Open button.

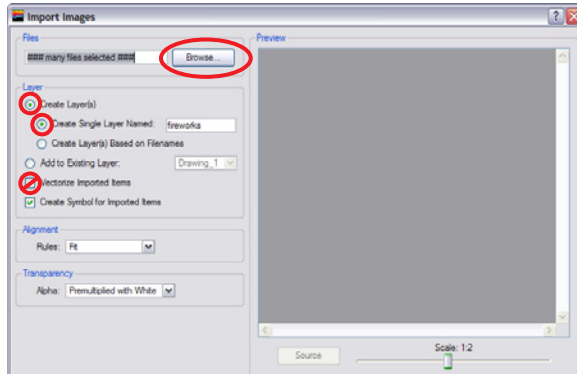
**Note:** Your movie will be transformed into an image sequence and a sound layer will be added to contain the sound if there is any.



Once the import process is completed, you will be asked where and how you want to insert your movie's images.

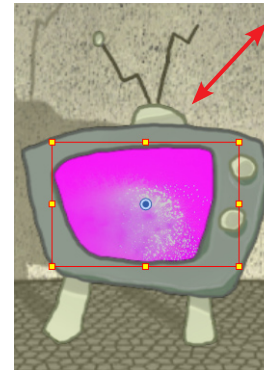


When you import a QuickTime movie in Animate it is converted to an image sequence. The sound is extracted from it and placed in a sound layer. This way, you can modify your clip's timing.



4. In the **Import Images** dialog box, enable the **Create Layer(s)** and the **Create Single Layer Named** options.
5. Name your new layer with a relevant name.
6. Disable the **Vectorize the Imported Items** option.
7. Enable the **Create Symbol for Imported Items** option if you want your movie to be a Symbol.
8. Click on the **OK** button to import your image sequence.

9. In the **Timeline** view, drag and drop the fireworks layer below the TV one.



10. In the **Tools** toolbar, select the **Transform** tool and disable the **Animate** mode.
11. In the **Timeline** view, select your **QuickTime Movie** layer.
12. In the **Camera** view, resize your clip to the tv screen size.
  - ▶ Hold the **[Shift]** key down to maintain aspect ratio of the movie.



You can extend the scene length by selecting **Scene > Scene Length** or by dragging the **Timeline** view's red length bracket.


## Get Limpa to Celebrate




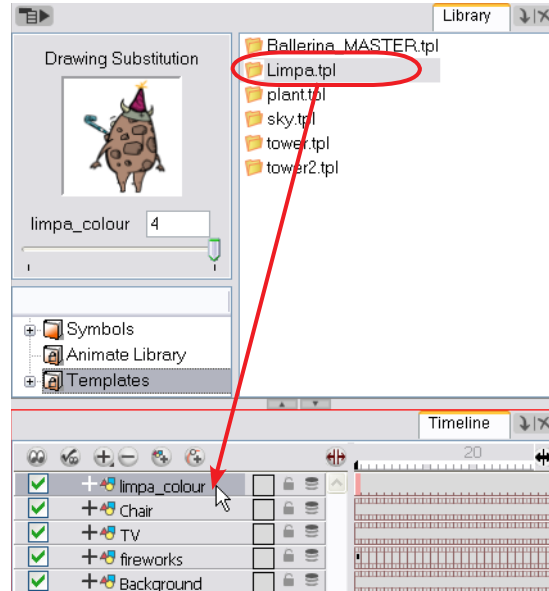
Now that the living room is ready for the celebration and the television is switched on, you can locate the Limpa character's template in the Library and import him in the scene!

Limpa was previously designed and stored in the sample library as a template.

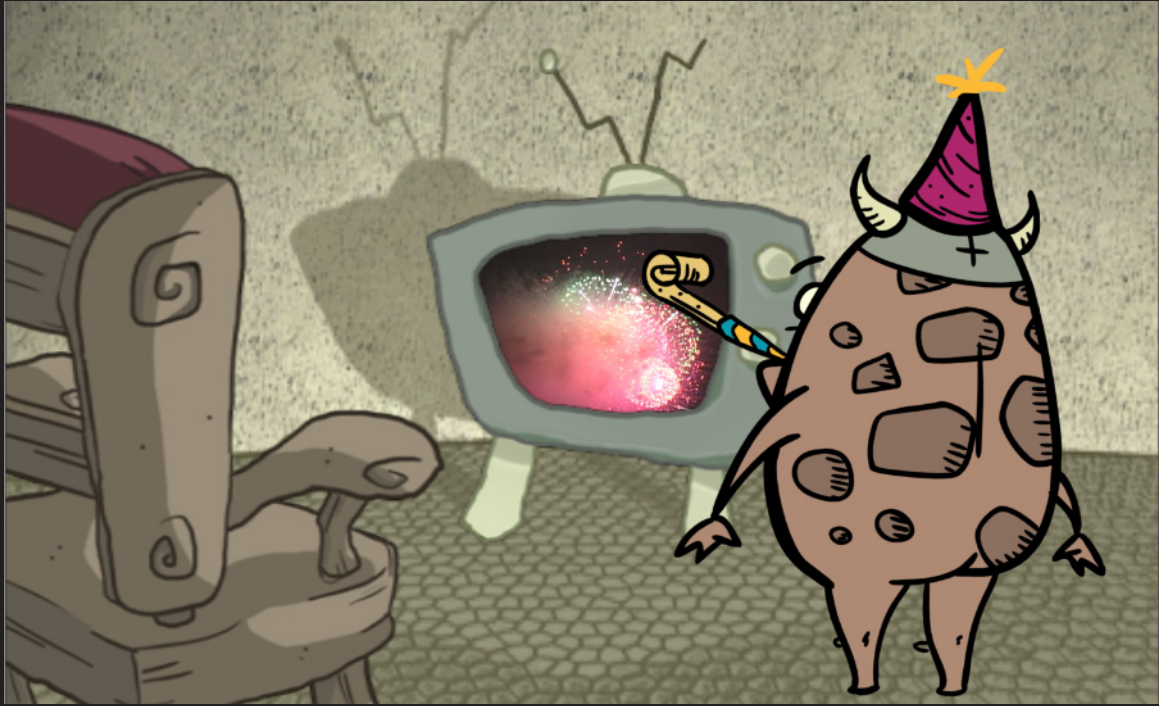
A template is a small scene or container that you can import into any of your projects and its content will be copied in your scene.

1. In the Library, select the Templates folder and then select the Limpa.tpl template.
2. Drag the selected template to your Timeline view.
3. Use the Transform  tool to position Limpa on the stage.

4. In the Playback toolbar, press the Play  button to play back your animation.

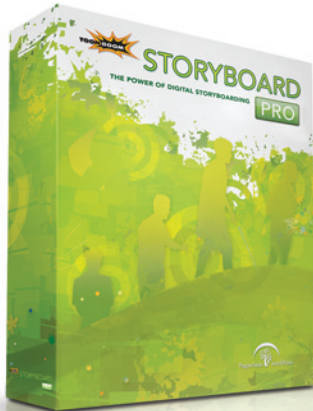


Any drawing or animation you create in Animate can be stored as a template in the Library. Refer to the [Animate User Guide](#) to learn more about creating templates.



[toonboom.com/storyboardpro/](http://toonboom.com/storyboardpro/)

# The power of digital storyboarding



Toon Boom Storyboard Pro is a system for visual storytelling, perfectly suited to traditional and paperless methods. Truly completing the production pipeline, Storyboard Pro helps you take an idea and translate it into a visual story that will become a complete production, whether animated or live-action.

**Work** like you always have, but faster and smarter while maximizing the benefits of working digitally

**Create** instant animatics as you work, in the same time it takes to storyboard

**Play back** your storyboard in sync with audio

**Enjoy** interactive review and faster approval process





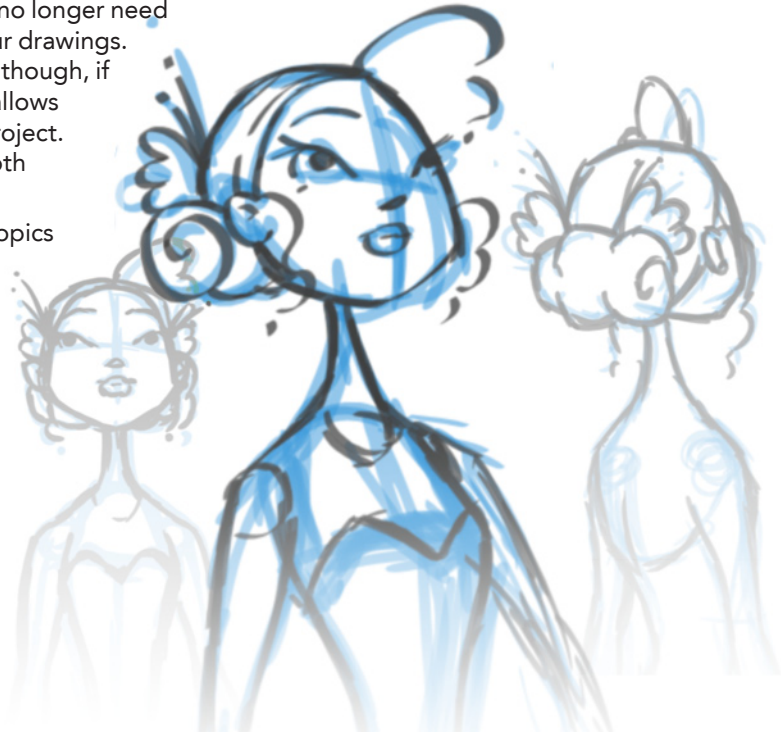
## Chapter 4 Designing a Character

With Animate's advanced tools, you no longer need to draw on paper, scan and clean your drawings. You can do all that in the software. Although, if you love to draw on paper, Animate allows you to import your artwork in your project. Using Animate you get the best of both worlds.

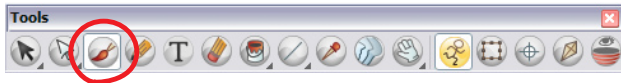
This chapter contains the following topics where you will learn how to use the Brush tool, add new layers and clean up the drawings.

The topics are:

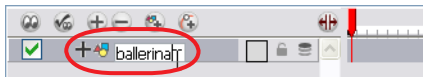
- Drawing Using the Brush Tool
- Other Useful Drawing Tools
- Adding a New Layer
- Tracing Over Your Character
- Adding Thick and Thin Lines



## Drawing Using the Brush Tool

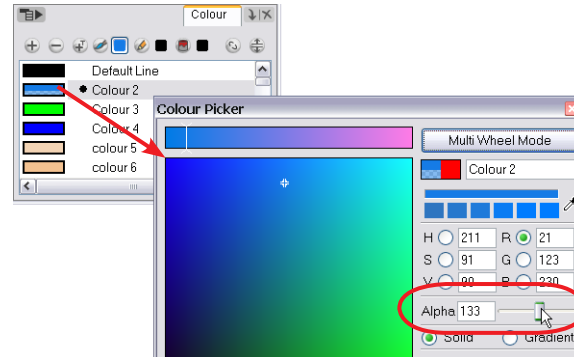


The Brush tool supports pressure sensitivity and several brush tips.



To keep your work organized, rename the default layer with your new character's name.

1. In the Timeline view, double-click on the layer name and type the new name.
2. Press [Return] to validate the name.
3. Select the cell where you want to draw.



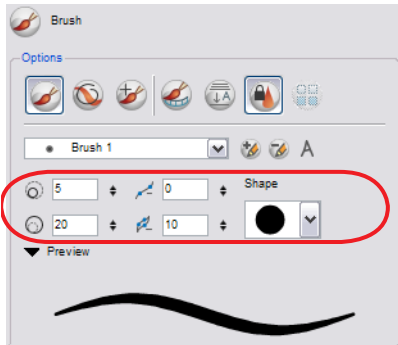
To get a feeling similar to drawing on paper with blue pencils, you can modify a colour swatch's colour and transparency.

4. Double-click on the colour swatch if you want to modify the tint.
5. To modify the colour's transparency, slide the Alpha cursor to the right or left.






The Contour Optimization smooths the contour of your line once the line has been traced.

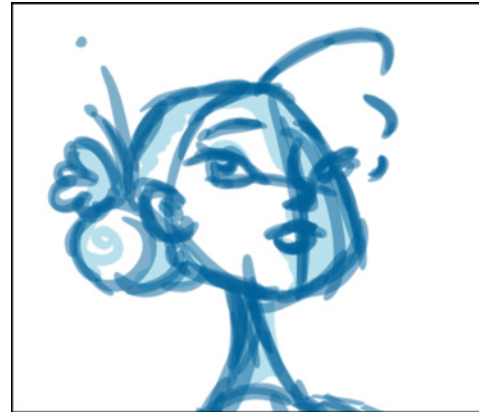


**Rename a layer by clicking on its name in the Timeline view or in the Layer's editor.**




There are several parameters which you can adjust in the Brush Properties:

-  Minimum Size
-  Maximum Size
-  Smoothness
-  Contour Optimization
-  Brush Tips



You are now ready to throw all kinds of ideas onto your canvas, which in this case is the Camera view.

6. In the Camera view, sketch your character.
7. If you want to draw some shading on your character, enable the Draw Behind  option in the Brush Tool Properties.







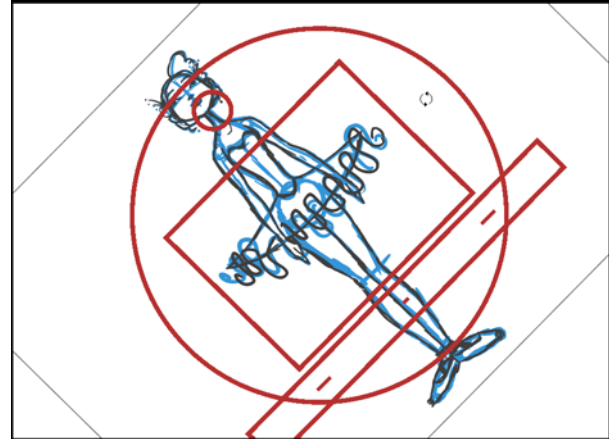
The Smoothness option smooths the initial movement of your line. Increasing the value results in a line with less control points. The Contour Optimization smooths the contour of your line once the line has been traced.

## Other Useful Drawing Tools




There are several other useful drawing tools you can use to perfect your work such as:

-  Select Tool  
The Select tool allows to reposition, scale, skew, rotate and delete a selection.
-  Cutter Tool  
The Cutter tool allows to select a portion of a drawing to reposition it or delete it.
-  Eraser Tool  
The Eraser tool allows to erase any section of a line or drawing.
-  Rotate View Tool  
The Rotate tool allows to turn the workspace the same as an animation table.



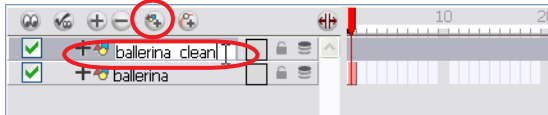
To use the Rotate View  tool, hold down the [Ctrl]+[Alt] keys on Windows and [⌘]+[Alt] on Mac OS.

The default keyboard shortcut to reset the Camera view rotation is [Shift]+[X]. Or press the Reset View  button in the Camera view's bottom toolbar.




**Refer to the Animate User Guide to learn more about these drawing tools and their properties. Take a look at the other exciting and innovative tools available to help you produce some world class animation.**

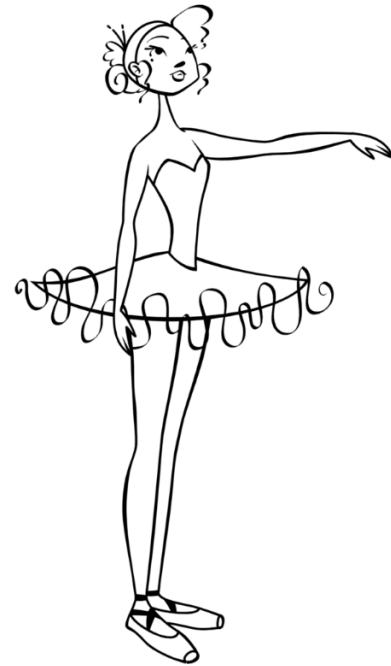
## Adding a New Layer



Now that your sketch is completed, you will learn how to trace over it to get a clean drawing.

1. In the Timeline view, click on the Add Drawing Layer  button to add a new layer for your clean drawing.
2. Rename the layer as **clean** or any other appropriate name.

It is now time to clean your character!



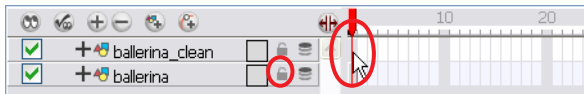
You can add an unlimited number of layers in the Timeline view.

## Tracing Over Your Character

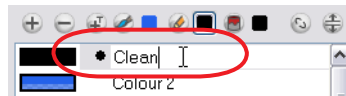
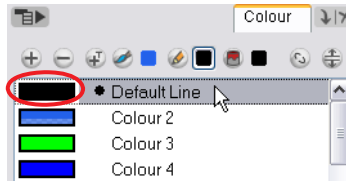


There are many ways to clean up your character's sketch. Here we will demonstrate how to use the Pencil tool and the Polyline tool to do it, although you could also use the Brush tool for this task.

1. In the Timeline view, in your `clean` layer, select the cell just above your sketch drawing.



Drawing in the clean layer cell does not affect your sketch. To make sure that you don't modify your original drawing, you can lock it by clicking on the Lock button of this layer.

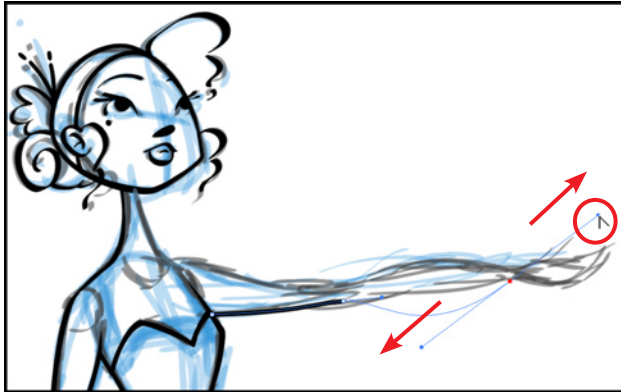





You may find it confusing if all of the Colour swatches are named sequentially, such as Colour 1, Colour 2, and so on. To avoid this confusion you can rename your swatches by double-clicking on their name and then pressing the [Return] key to validate the name.

Pressing [Return], when you have a series of colour swatches, selects the next colour swatch.

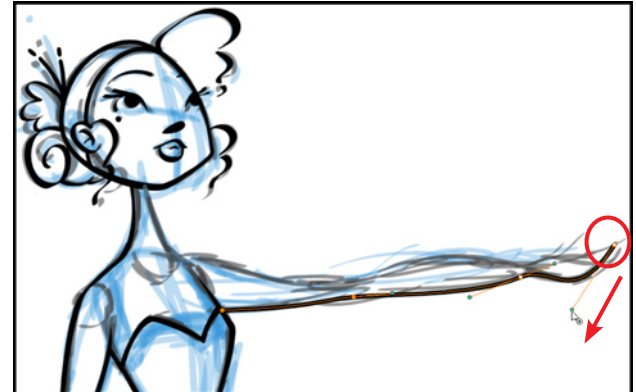




To remove colour swatches from the Colour view, click on the Remove Colour button in the Colour view toolbar.





Using the Polyline  tool to clean your drawing allows you to shape your lines easier than if you were tracing them by hand using the Brush  tool or the Pencil  tool.

2. Click to set a point along your drawing and then pull away from it while holding down the left mouse button. You will see the line shape as you move the handles.



To fine-tune the lines you created with the Polyline  tool, use the Contour Editor  tool.

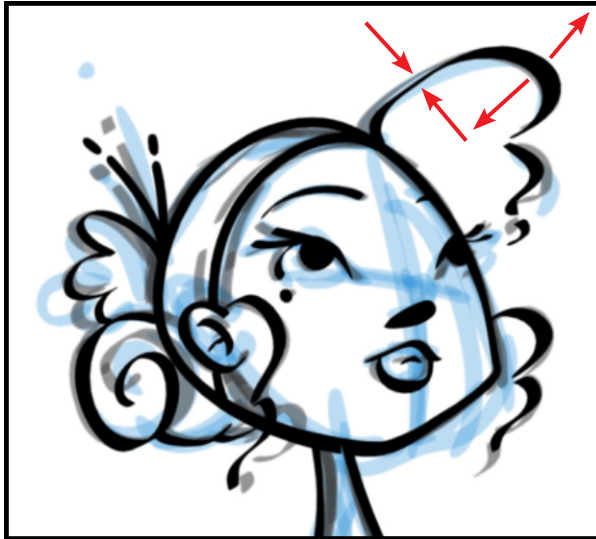
3. Click on the line to see the points appear.
4. Then, click on a point to select it and move its Bezier handles to reshape the line.

Use the Pencil  tool to draw the lines you don't want to do with the Polyline  tool.

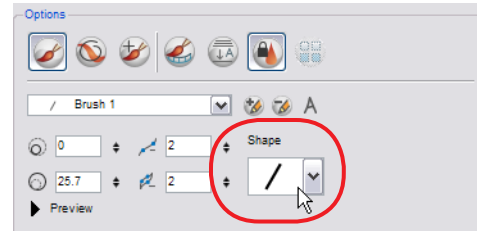


To move only one of the two Bezier handles using the Polyline or Contour Editor tool, hold down the [Alt] key.

## Adding Thick and Thin Lines



Since you drew your lines as a central vector type, using the Polyline tool and the Pencil tool, your drawing does not contain thick and thin lines. There are different techniques you can use to add these lines.



The first method is to use the Brush tool to draw some of the lines and change the tip to an oblique shape or use a pen tablet which provides you with pressure sensitivity and allows you to draw lines of variable thickness.

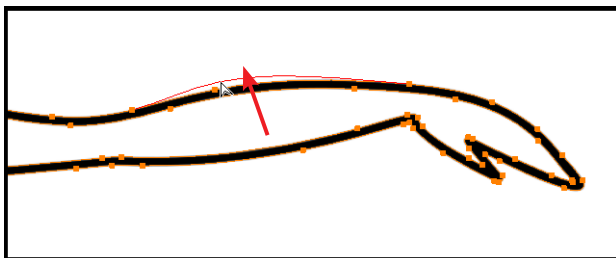
Drawing with the Brush tool does not allow you to reshape your lines as easily as with the Polyline or Pencil tool. The Brush tool creates contour vector lines (also known as fills) where the vector points are situated on the line's contour, Pencil lines are central vector lines in which the points follow the centre of the line.


Central vector lines **do not** support thick and thin lines, but have the same thickness throughout. Contour lines **support** thick and thin lines, but take longer to reshape.






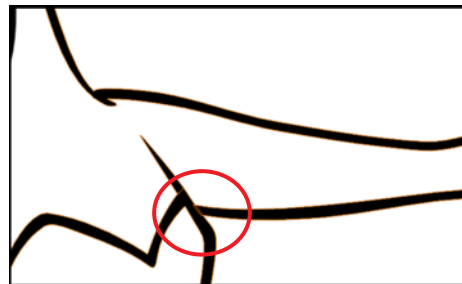
You can convert contour lines to central lines and central lines to contour lines. You can make an invisible line by setting the size of the Pencil tool, Ellipse tool, Rectangle tool, Line tool or Polyline tool to 0 (zero).







The second technique is to convert the central lines to contour lines and to add some thick and thin lines by using the Contour Editor  tool.

1. In the Tools toolbar, select the Select  tool.
2. In the Camera view, select the lines to convert to contour lines.
3. In the Tool Properties view, click on the Convert Pencil Lines to Brush Lines  button.
4. In the Tools toolbar, select the Contour Editor  tool.
5. In the Camera view, push the points and contours to add the desired thickness.



No matter which tools you use to draw with you must finally flatten the lines so that your character outline is a single shape instead of being built out of many strokes. This makes it easier and lighter to manipulate.

1. In the Tools toolbar, select the Select  tool.
2. In the Camera view, select the lines to flatten.
3. In the Tool Properties view, click on the Flatten  tool.

There you go! You now know how to design and clean a complete character in Toon Boom Animate.



**If you plan to use this character as a cut-out puppet in a later step, you can decide not to flatten your lines for an easier breakdown process. Refer to the [Creating a Cut-out Puppet](#) chapter for more information.**

Animating  
is **fun!**



[toonboom.com/kids](https://toonboom.com/kids)

## Chapter 5 Painting Your Character

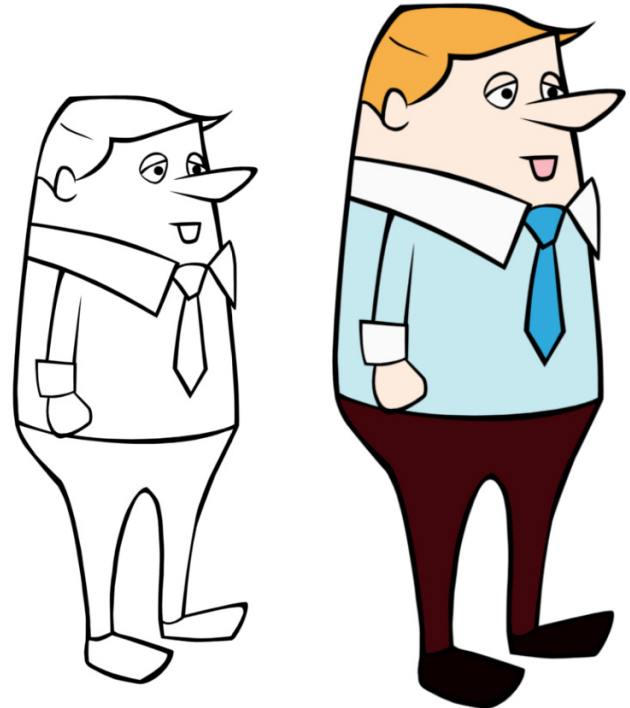
One of the greatest benefits of using Animate are its colour palettes. With Animate, you can create a group of colours specifically for your character which will stay with it throughout your project. You can change the colours at any time.

You can use the character you drew previously or a character model from the sample material package:

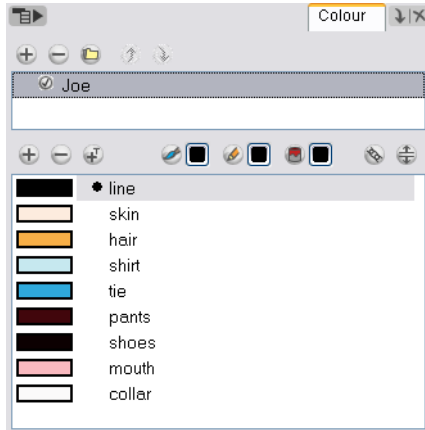
- Templates/Joe\_unpainted.tpl
- **Mac:** Applications/Toon Boom Animate 2/Templates/Samples/Textures
- **Windows XP:** C:\Documents and Settings\All Users\Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples\Textures
- **Windows Vista and 7:** C:\Users\Public\Documents\Toon Boom Animation\Toon Boom Animate 2\Templates\Samples\Textures

The topics are:

- Creating a Colour Palette
- Painting the Character
- Closing Gaps
- Creating Gradient Colours
- Painting With Bitmap Textures
- Editing Gradients and Textures
- Creating a Palette Style

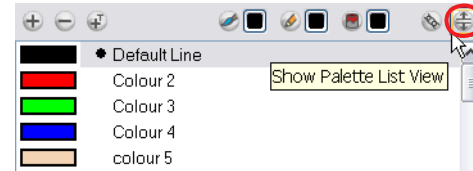



## Creating a Colour Palette

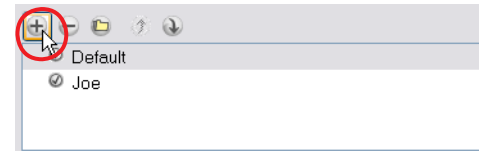


You don't need to use the default palette to paint all of your drawings and animations. You can create a small group of colours specifically for your character! This helps to keep your work organized by keeping your character's colours together. These groups of colours are known as colour palettes.

1. To access the Palette List, in the Colour view, click on the Show Palette List View  button.



2. In the Colour toolbar, click on the New Palette  button.




3. In the **Palette Browser** dialog box, name your palette with a relevant name.
4. Click on the OK button to validate the palette's creation.

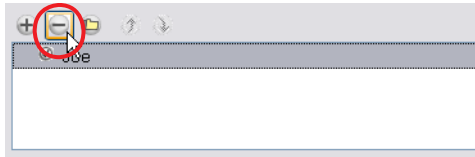


Refer to the **Creating Your Own Animation** chapter to review the Colour view basics.

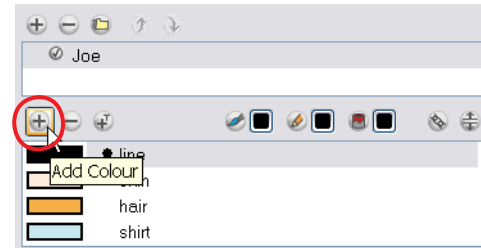
If you are not using the default palette, remove it from the Palette List.


**Note:** The default palette itself will not be deleted and it can always be brought back later.

5. In the Colour view, select the default palette.
6. In the Colour view toolbar, click on the Remove Palette  button.



You are now ready to add colour swatches to your new palette.

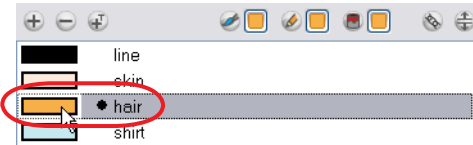
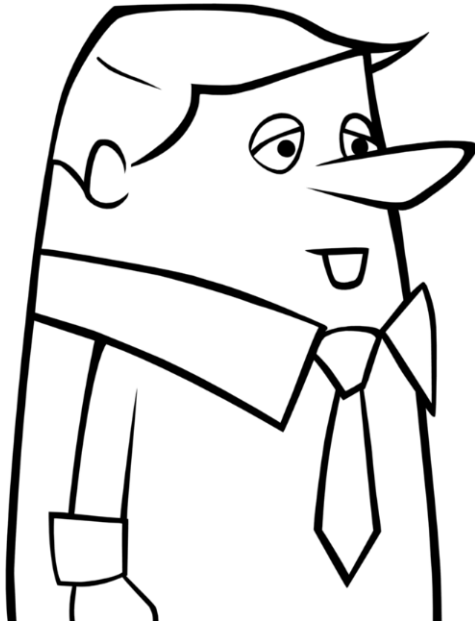



7. In the Colour view, click on the Add Colour  button to add new colour swatches.
8. Double-click on a colour swatch to open the Colour Picker window and modify the colour.
9. Click on the colour swatch's name to rename it.

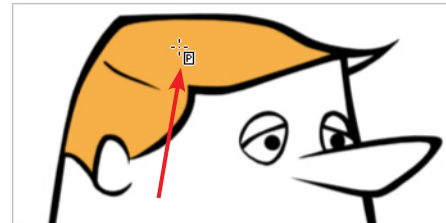


Remember that when you paint a zone with a specific colour swatch, the zone is linked to this colour swatch. When you modify the swatch, the zone will be updated along with it.

## Painting the Character



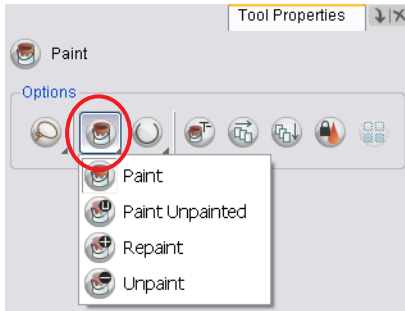
1. In the Tools toolbar, select the Paint  tool.
2. In the Colour view, select the colour switch corresponding to the zone you want to paint.




3. In the Camera view, paint the zone.
4. Repeat this process until the drawing is entirely painted.

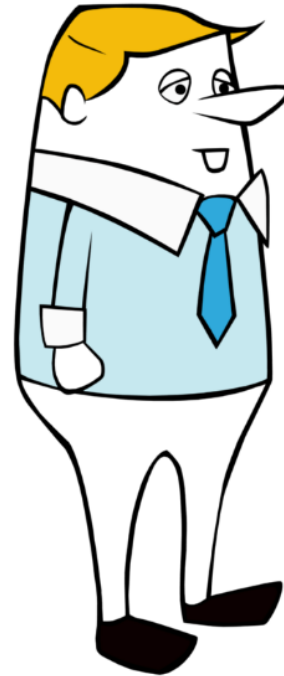


With the Paint tool you can only paint closed zones. If a zone is open, you will need to close it either with the Brush tool or the Close Gap tool.



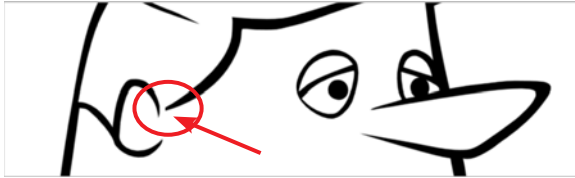
There are many Paint  tool options available. You can set these options in the Tool Properties view:


- Paint  
Paints everything it touches
- Paint Unpainted  
Paints only unpainted zones
- Repaint  
Paints only already painted zones
- Unpaint  
Unpaints everything it touches



**To quickly paint a series of drawings, it is advantageous to set the Paint tool's painting option to Paint Unpainted.**


## Closing Gaps

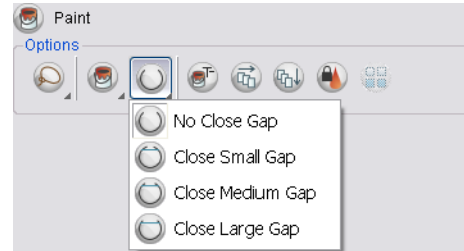


If your drawing has a gap in a line, the Paint  tool cannot paint the unclosed zone. First you need to close it. You can do this using the automatic Close Gap mode or the Close Gap tool. You could also use the Brush, Contour Editor or Pencil tools.




### To use the Close Gap tool:

1. In the Tools toolbar, select the Close Gap  tool.
2. Press [D] to display the invisible strokes.
3. In the Camera view, trace a stroke near to the gap.



You can also use the automatic close gap available in the Paint's Tool Properties. You can choose the size of the gap that you want the system to automatically ignore while painting. Gap closing only occurs when you paint using the Paint tool.

### To use the automatic Close Gap mode:

1. In the Tools toolbar, select the Paint  tool.
2. In the Tool Properties view, select one of the gap closing options from the drop-down list.
3. In the Camera view, paint your drawing.



You can set the automated gap closing to Close Small Gap. Selecting Close Large Gap could result in not painting all of the small areas in your drawings.

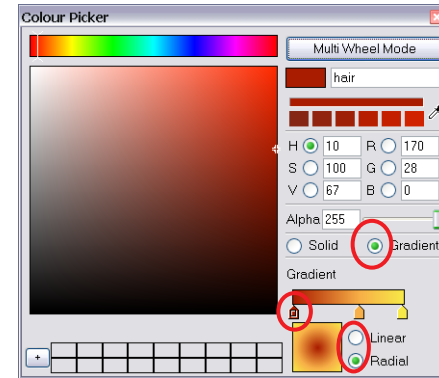


## Creating Gradient Colours



Animate adds life to your drawings by letting you paint with both gradient and solid colours.

Creating a gradient colour is so easy to do. You can even modify one of your existing colour swatches. As a bonus you can see the result on your painted character as you adjust the gradient!

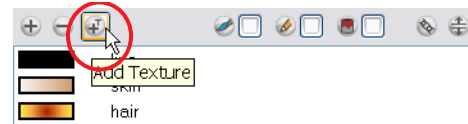





1. In the Colour view, double-click on the colour swatch to transform it into a gradient.
2. In the Colour Picker window, enable the Gradient option.
3. Choose a Linear or Radial gradient.
4. Click on the gradient arrows and adjust their position and colour.



Refer to the Animate User Guide to learn more about editing gradient swatches.

## Painting With Bitmap Textures



1. In the Colour view, click on the Add Texture  button.
2. Browse for a PSD or TGA picture.
3. In the Tools toolbar, select the Paint  tool.
4. In the Colour view, click on the Paint Colour  button.
5. In the Colour view, select your new texture swatch.
6. In the Camera view, paint the desired zone.

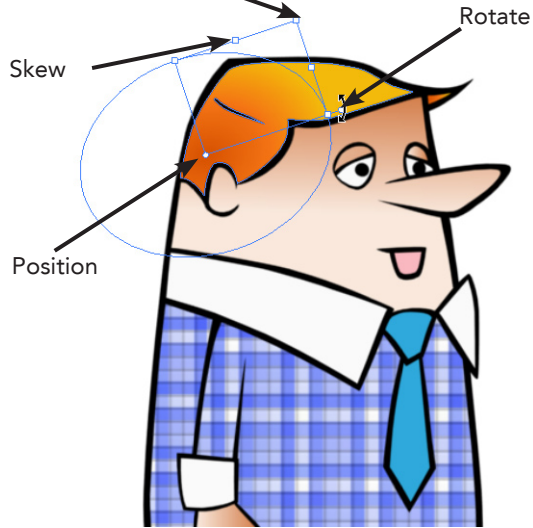
After painting with solid and gradient colours, you can also paint with bitmap textures.




**You can use any photo or textured image in your computer and paint your animation with it. It only needs to be in PSD or TGA format.**


## Editing Gradients and Textures





Squash and Stretch



After you paint a zone with a gradient or texture colour, you can reposition and adjust it.

1. In the Tools toolbar, select the Edit Gradient/Texture  tool.
2. In the Camera view, click on the gradient or texture zone to modify.
3. Using the tool's anchor points, modify the gradient or texture's size, angle and position.

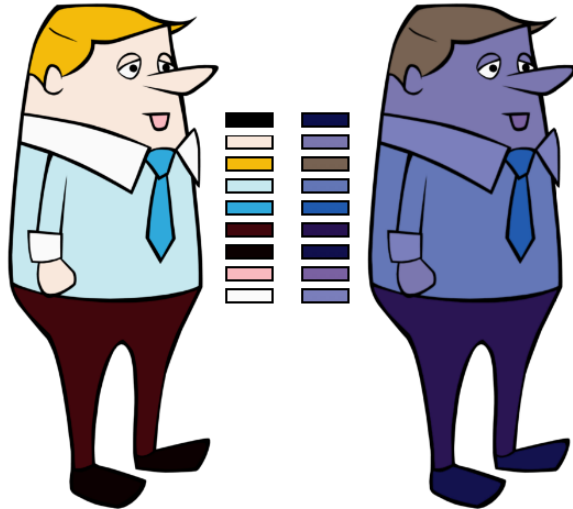
If you like the gradient position you made with the Edit Gradient/Texture  tool, you can store it so that next time you paint with a gradient or a texture it will be positioned the same.

1. In the Tools toolbar, select the Select  tool and select the desired gradient zone.
2. In the Select  tool's Tool Properties view, click on the Store Gradient Colour  button.
3. To use the stored gradient, in the Brush or Paint Tool Properties view enable the Use Stored Gradient Colour  option.



You can copy and paste a gradient/texture position using the Edit Gradient/Texture tool. This can be very handy when you have a hand-drawn animation painted with gradient colours.

## Creating a Palette Style





Day Palette Style

Night Palette Style

You can create palette styles for your character such as a Day palette or a Night palette.

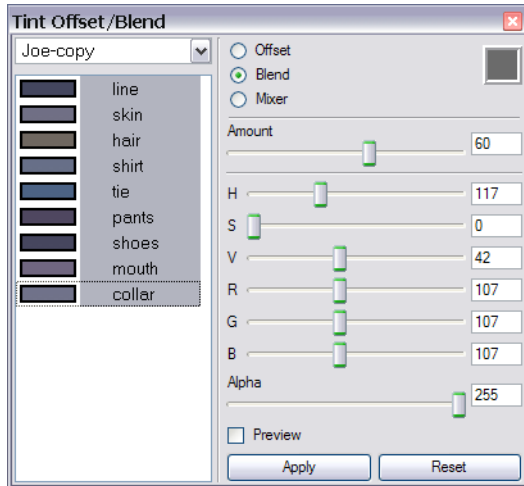
A palette style is created by cloning your original palette. This links the colour swatches to the same zones as the original palette. This has the advantage of letting you change the colours in your cloned palette, and then by replacing the original palette with the clone the character's colours will update automatically without you having to repaint!



1. To access the Palette List, in the Colour view, click on the Show Palette List View  button.
2. In the Colour view, click on the Menu  button and select **Palettes > Clone**.
3. In the **Clone Palette** dialog box, name the palette appropriately. We recommend keeping the suffix **-clone** as part of the palette's name. For example, **Joe-clone**.
4. In the Colour View, select the new cloned palette.




You can use the Tint Panel to modify all of your palette's colours at once. You do not have to modify them individually.



To modify the cloned palette colours, edit them one at a time in the Colour Picker window or you can offset all of the colours at once using the Tint Panel window.

The Tint Panel window allows you to offset or blend a colour in all your selected swatches.

1. In the Colour view, click on the Menu  button and select **Palettes > Tint Panel**.
2. In the Tint Panel window, select the palette to modify, in this case, your clone palette.
3. In the Colour list, select the swatches you want to modify.
4. Choose between Offset or Blend mode.
5. If you are using the Blend mode, increase the blending amount.
6. Modify the offset or blend tint.
7. Click on the Apply button to apply the changes to your palette or click on the Reset button to reset the changes.



If you want to use your painted character as a colour model, you can store it in your library as a template. Refer to the Animate User Guide to learn more about creating templates.

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01/29/10	Studio Hangloose srl	Rome (Other), IT	Cartoon series - 10 episode	
01/26/10	BingBang Studios	Peekskill (NY), US	Ink & Paint (Traditional Style) animation	
01/29/10	Desgraf	Toronto (ON), CA	Teacher 3D modeling and texturing	
01/17/10	Desgraf	Toronto (ON), CA	Teacher programming of 3D game engine	
01/17/10	Desgraf	Sherbrooke (QC), CA	Enseignant/animé en animation 3D sur 2010/10	
01/17/10	Desgraf	Toronto (ON), CA	Teacher of 3D animation with 2010/10	
01/17/10	Desgraf	Sherbrooke (QC), CA	Enseignant/animé en illustration et animation 2D	
01/17/10	Desgraf	Toronto (ON), CA	Teacher 2D illustration and animation	
01/17/10	Desgraf	Sherbrooke (QC), CA	Enseignant/animé en modélisation 3D et texturation	
12/25/09	Desgraf	Sherbrooke (QC), CA	Enseignant/animé en programmation 2010/10	
12/08/09	PaperCut Studios	Johannesburg (Other), Animation Professionals ZA		
12/01/09	Blue man	El Paso (TX), US	need flash animation intro for website and 15-30sec commercial spot	
11/11/09	private tutoring	Toronto (ON), CA	gait time tutor in east toronto	

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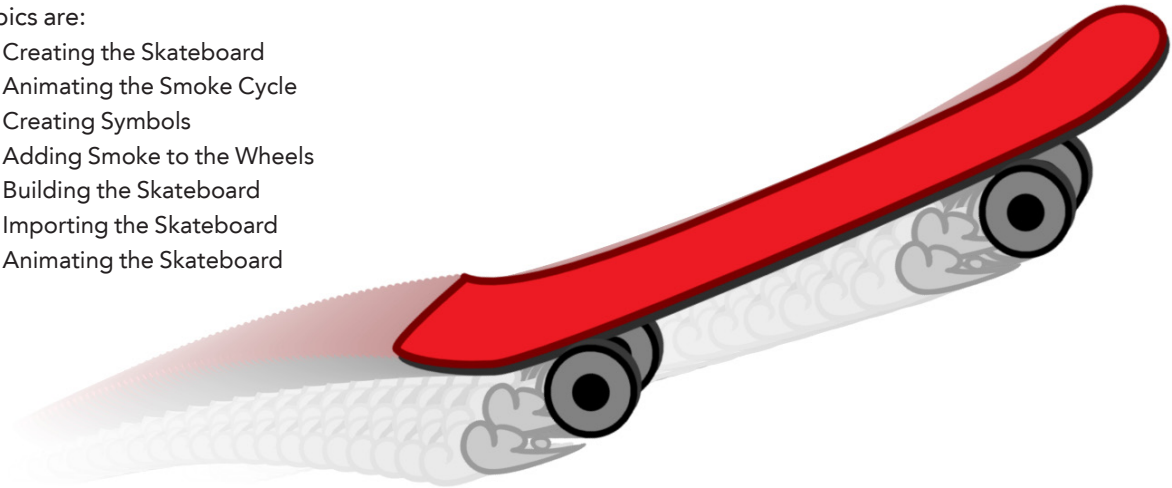
## Chapter 6 Using Symbols to Animate a Skateboard

With Symbols, Toon Boom extends Animate's spectacular animation capabilities even further. For example, by using Symbols, you can build animated props and manipulate them as a unified object.

This chapter contains the following topics where you will learn how to create, combine, extend, edit, cycle and animate Symbols.

The topics are:

- Creating the Skateboard
- Animating the Smoke Cycle
- Creating Symbols
- Adding Smoke to the Wheels
- Building the Skateboard
- Importing the Skateboard
- Animating the Skateboard

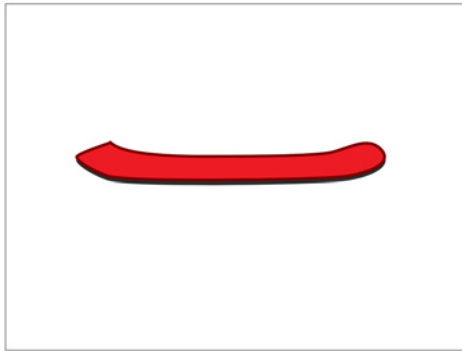


## Creating the Skateboard

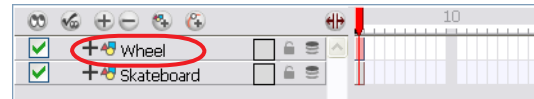
1. In the Timeline view, add a new layer and rename it as **Skateboard**.



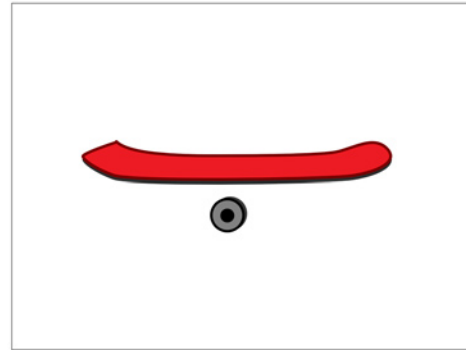
2. Using the tools you learned about in the previous lessons, draw the board without the wheels. The wheels will be drawn on a separate layer.



3. In the Timeline view, add a new layer and rename it as **Wheel1**.



4. In the Camera view, draw a wheel to match the scale of your board. There is no need to draw it in any particular location as you will reposition it later.

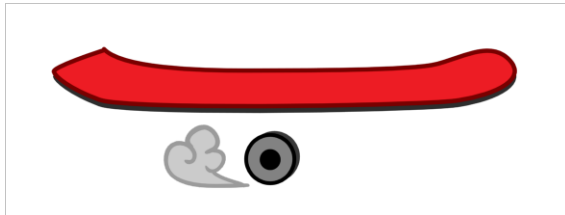


To add a new layer in your Timeline view, click on the Add Drawing Layer button in the Timeline layer toolbar.

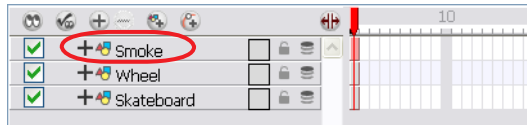


## Animating the Smoke Cycle

You will create a three drawing animation cycle. The animation cycle will be done later after you have imported the smoke symbol back into your scene. For now, just create the three main drawings.

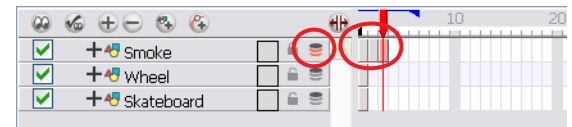


1. In the Timeline view, add a new layer and rename it **Smoke**.



2. In the Camera view, draw the first smoke drawing.

3. Using the Onion Skin feature, draw the second and third drawings.

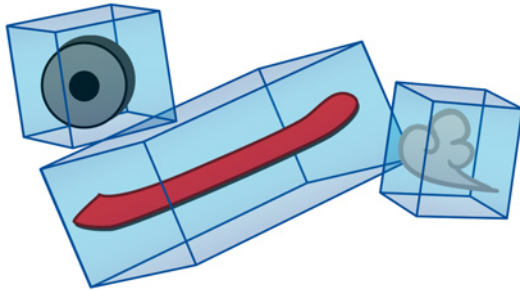


4. To change the number of drawings visible in the Onion Skin display, push or pull on the Onion Skin blue arrows.



Refer to the Animate User Guide to learn how to add effects on your animations. For example, you could add a transparency and a blur on your smoke animation.

## Creating Symbols



Animate has a library where you can store your drawings and animation for reuse in your scene or sharing in your projects.

To reuse drawings or animation in another scene, you need to create a template out of them.

A good example of reuse is shown in the skateboard you are building, it has four wheels. However, you only need to draw one wheel and then reuse it three more times to create the three missing wheels. To do this, you must create a Symbol out of the wheel and then reimport it into your scene.

Creating a Symbol is easy. You only need to select the drawings or layers you want to transform and drag them to your Library view.

You can either select:

- A single drawing
- Several drawings in a row on a single layer
- Several drawings in a row on many layers
- A single layer
- Several layers

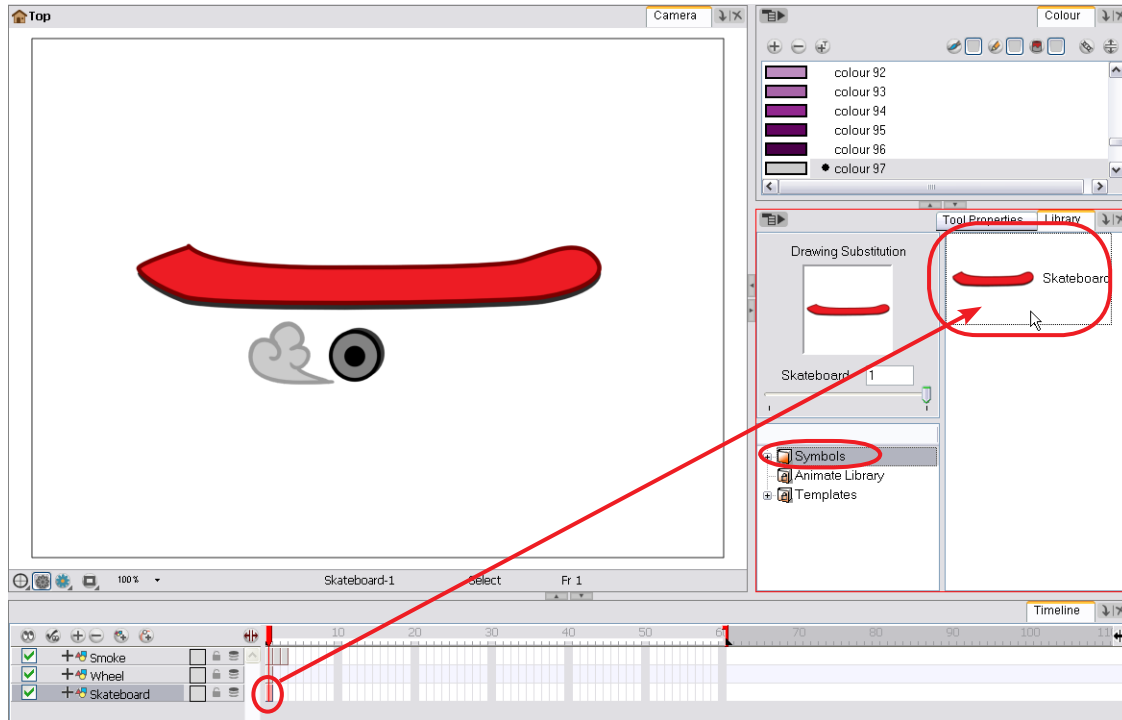
### To build your skateboard:

1. In the Timeline view, select the skateboard drawing and drag it to the Library view inside the Symbols folder.
2. Select the wheel drawing and drag it to the Library view inside the Symbols folder.
3. Select the three smoke drawings and drag them to the Library view inside the Symbols folder. Or use the default keyboard shortcut [F8].

All your skateboard elements should now be in the Library as Symbols.



Refer to the Animate User Guide to learn more about creating Symbols and templates.

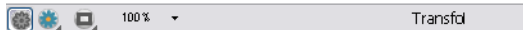
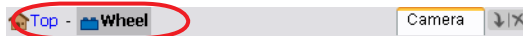


By right-clicking in Windows (or [Ctrl] + click in Mac OS) on the Symbols folder, you can add a new folder and rename it to organize your Symbols.

## Adding Smoke to the Wheels

To add the smoke to each wheel and cycle it, you will enter the Wheel Symbol and add the smoke animation. This way all the wheels will receive the smoke cycle simultaneously.

1. In the Library, double-click on the Wheel Symbol. You should now be inside the Wheel Symbol where you can edit it.



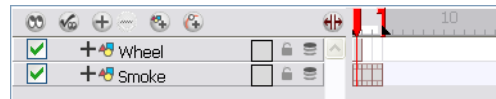
Before importing the Smoke Symbol, you will need to extend the symbol length.

2. In the Timeline view, pull on the scene length red bracket and extend it to frame 3.



You will now import the Smoke Symbol:

3. In the Library, select the Smoke Symbol.
4. Drag and drop the Smoke Symbol into the Timeline's left section to create a new layer.

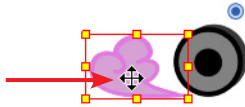


You should now see the three smoke frames in your Timeline.



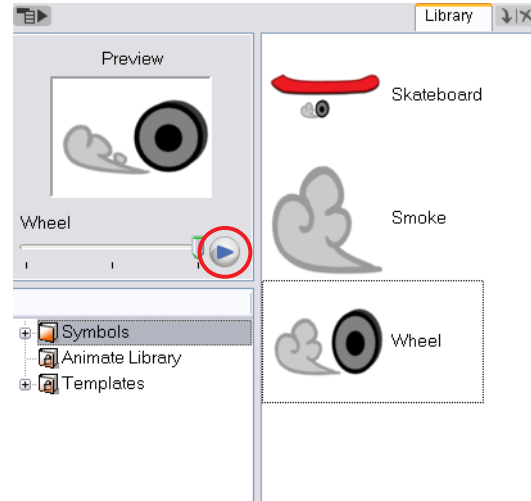
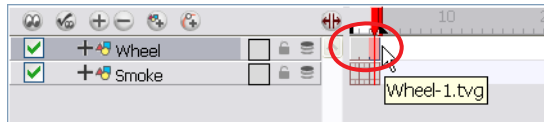
Extend or reduce a symbol's length by sliding the Timeline's red bracket to the left or right. Moving it towards the left reduces the symbol's length, while moving it towards the right extends the symbol's length.

- In the Tools toolbar, disable the Animate mode and select the Transform tool.
- In the Camera view, position the Smoke layer. If the smoke needs to be resized, use the Transform tool's corner anchor points to resize it. The whole animation will be scaled together.



As you can see, the wheel's exposure is only one frame long. You must extend it to three frames.

- In the Timeline, select the wheel's last cell and press the [F5] key to extend the wheel's exposure.



Your Wheel Symbol now contains your Smoke Symbol.

In the Library, click on the Wheel Symbol to preview it and press the Play button to view the animation.



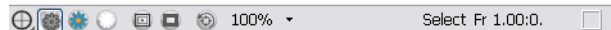
**You must save your project in order to save the Symbols stored in your Library.**

## Building the Skateboard

Now you need to add the completed wheels inside the Skateboard Symbol. This will enable you to manage your skateboard as a single object instead of many.

1. In the Library, double-click on the skateboard Symbol.

You will see the name of the Symbol at the top of the Camera view. You should now be inside the Skateboard Symbol.



You can enter a selected symbol by using the default keyboard shortcut **[Ctrl]+[E]** on Windows or **[⌘]+[E]** on Mac OS.

Before importing the Wheel Symbols, you will need to extend the Skateboard Symbol's length.

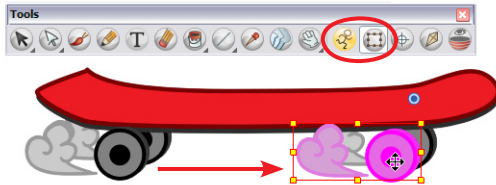
2. In the Timeline view, pull on the scene length red bracket and extend it to frame 3.



3. From the library, import four Wheel Symbols. Place two of the wheel layers above and two more below the Skateboard layer. Remember to rename your layers correctly.



4. In the Tools toolbar, disable the Animate 🧠 mode and select the Transform 🛠️ tool.

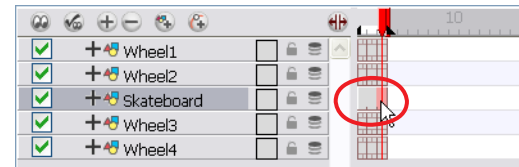


5. In the Camera view, position the wheels. If the wheel is the wrong size, use the Transform tool's corner anchor points to scale it.

To modify the Wheel Symbol, double-click on a wheel. Once inside the Wheel Symbol, modify whatever you want to and the four wheels on your skateboard will be automatically updated to include the modification.

The skateboard's exposure is only one frame long. Change it to three frames long to match the wheel's exposure.

6. In the Timeline view, select the board's third cell and press the [F5] key to extend the skateboard's exposure.



You now have a complete skateboard which you can manage as a single object. Get ready to add it to your scene and do some tricks!





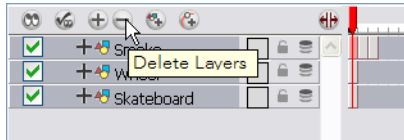
When editing a symbol, go back to the scene's root, click on the word "Top" at the top of your Camera view.

## Importing the Skateboard

Your completed Skateboard Symbol is ready to animate, but first, you must clear the content of the Timeline.

### To clear the Timeline:

1. In the Camera view top area, click on the Top  button to go back to the scene's root.
2. In the Timeline view, select all of your layers.
3. In the Timeline view toolbar, click on the Delete Layers  button.



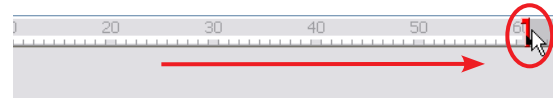
4. In the **Confirm Delete** dialog box, click on the OK button.

You are now ready to import your skateboard from the library, but before dropping it into your Timeline, you will perform an extra operation called: Paste Special. The Paste Special command allows to expose the symbol's full length and then create a cycle from it in a several different ways.

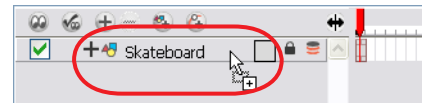
Before importing the Skateboard Symbol, you will need to extend the scene length.

### To import the Skateboard Symbol:

1. In the Timeline view, pull on the scene length red bracket and extend it to frame 60.



2. In the Library, select the Skateboard Symbol.
3. Start dragging the Skateboard Symbol toward your Timeline view.

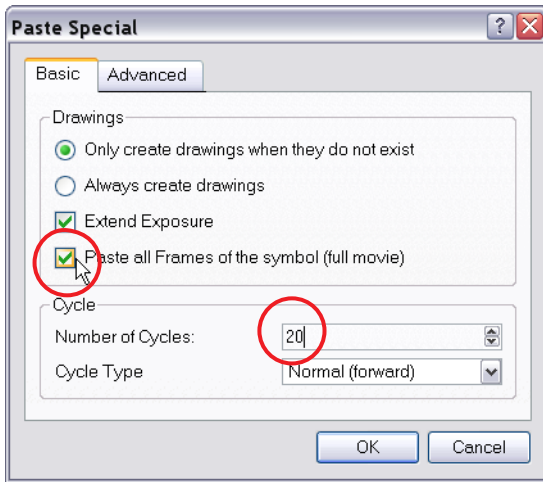


4. Press and Hold down the [Alt] (Windows) or [Ctrl] (Mac) key before releasing the Symbol.
5. Drop the symbol in your Timeline's left side while holding down the [Alt] (Windows) or [Ctrl] (Mac) key.



Once you store a drawing or a layer as a Symbol in your Library, you can delete it from your Timeline. Your work will still be available as a Symbol in the Library view.

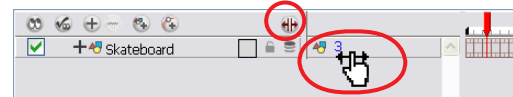




6. In the **Paste Special** dialog box, enable the **Paste All Frames of the Symbol (full movie)**.
7. Set the Number of Cycles field to 20.
8. Click on the OK button.

If you forgot to use the Paste Special command when you imported, do the following:

1. In the Timeline view, select the symbol's frame.
2. In the top menu, select **Edit > Copy**.
3. In the Timeline, right-click in Windows or [Ctrl] + click in Mac OS and select **Paste Special**.






The default keyboard shortcut for the Paste Special command is [Ctrl]+[Shift]+[B] (Windows) or [Shift]+[⌘]+[B] (Mac OS X).

## Animating the Skateboard



To complete your project, animate the Skateboard Symbol's position.



1. In the Tools toolbar, enable the Animate  mode and select the Transform  tool.
2. In the Timeline view, go to the first frame.
3. In the Camera view, select the Skateboard and position it to the left side of the screen.
4. In the Timeline view, go to the last frame.
5. In the Camera view, select the Skateboard and position it to the right side of the screen.
6. In the Playback toolbar, click on the Play  button to view your completed animation!



To learn more about animating with Symbols, read the [Animating a Cut-out Puppet](#) chapter in the [Animate User Guide](#).

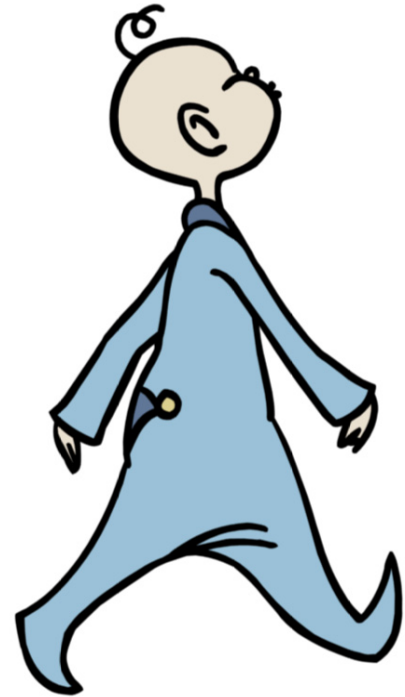
## Chapter 7 Creating a Simple Hand-Drawn Animation

In Toon Boom Animate, you can take advantage of useful tools and features to animate paperlessly. Animate lets you create traditional looking animation without paper, pencils or scans.

This chapter will focus on the Xsheet view and its functionality, but everything can be also achieved in the Timeline view if you prefer.

The topics are:

- Sketching your Rough Keyposes
- Marking Keyposes in the Xsheet
- Completing the Animation
- Setting the Exposure and Testing the Animation
- Cleaning Up the Animation
- Painting the Animation



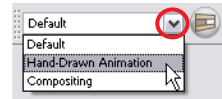
## Sketching your Rough Keyposes



The first step in hand-drawn animation is to draw a rough sketch. This step lets you create and test your animation. You can concentrate on the flow of movement without being concerned about the character's details. You can focus on the details during the clean up process later on.

To easily draw your animation, first switch to the Hand-Drawn Animation workspace.

1. In the Workspace toolbar, select the Hand-Drawn Animation workspace from the drop-down menu.




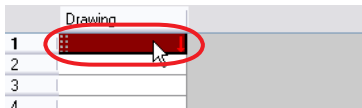
To ensure that your scene is kept well organized, enable the Use Current Frame As Drawing Name option. This uses the current frame number to name each new drawing.

2. Press [Ctrl]+[U] (Windows) or [⌘]+[, ] (Mac OS X) to open the Preferences panel.
3. In the Exposure Sheet tab, enable the Use Current Frame as Drawing Name option.



Refer to the [Discovering the Interface Chapter](#) in the [Animate User Guide](#) to learn more about Preferences.

4. In the Tools toolbar, select the Brush  tool.
5. In the Colour view, select a colour swatch. This is the colour you are going to use for your sketch. Sketching with a light colour helps during cleanup.
6. In the Xsheet view, select the first cell in the Drawing column.




7. In the Camera view, sketch your first keypose.



The first keypose in the walk cycle animation is the character with legs and arms spread apart.

To sketch the second keypose of your animation, you will use the Onion Skin feature. The Onion Skin lets you see the previous and next drawings in washed-out colours. This mimics the effect of working with a stack of paper on an animation disc and light table.

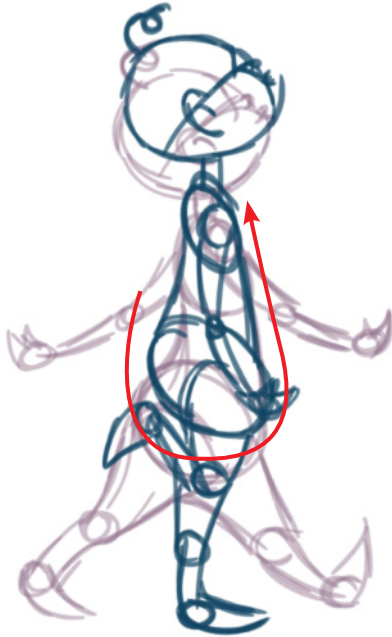
8. In the Tools toolbar, enable the Onion Skin  feature.
9. In the Xsheet view, select cell number 4, this will be the location of the second keypose.
10. In the Timeline view, click and drag the blue arrows to decide the number of previous and next drawings that will appear in the Camera view.



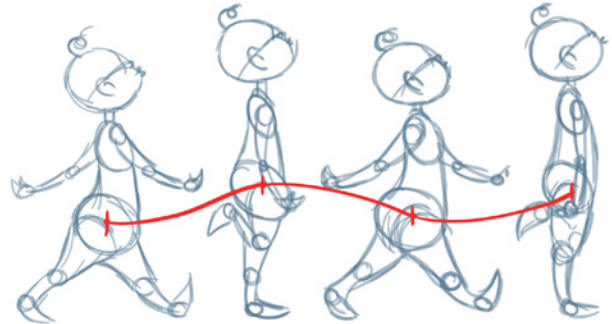
11. In the Camera view, sketch the second keypose.



You can customize the Onion Skin display options such as the render style and washed out values in the Preferences panel under the Drawing tab: **Edit > Preferences (Windows)** or **Animate > Preferences (Mac)**.



The second keypose is the highest point of the walk cycle. The leg that was pointing forward on the first one should now be straight beneath the character.



Keypose 1  
Cell 1

Keypose 2  
Cell 4

Keypose 3  
Cell 7

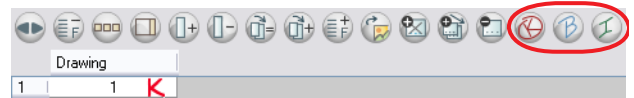
Keypose 4  
Cell 10


Using this picture as a guide, complete the four keyposes of the simple walk cycle animation.


## Marking Keyposes in the Xsheet




Once you have sketched your keyposes, you should mark them in the Xsheet view so you can keep your animation organized. Doing this helps you to rapidly determine which poses are keyframes, breakdowns or in-betweens.



1. In the Xsheet view, select the cell containing the first keypose.
2. In the Xsheet Tools toolbar, click on the **Mark as Key Drawing**  button. A Key **K** marker will appear in the cell.
3. Repeat these steps for each keypose.

You can do the same for breakdown drawings using the Mark as Breakdown Drawing  button. This places a Breakdown **B** marker in the selected cell.

The Mark As In-between Drawing  option will not add a marker in the Xsheet view.

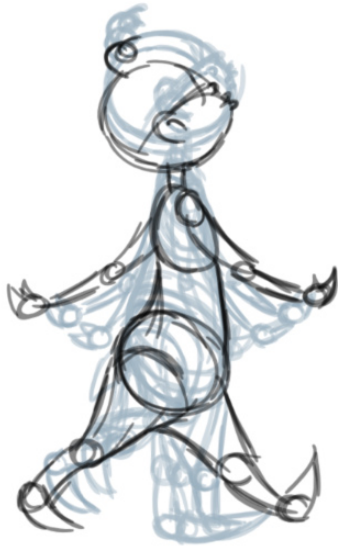
Another great way to keep organized is by renaming your Xsheet columns.

1. In the Xsheet view, double-click on the Drawing column's header.
2. In the Layer Properties dialog box, enter a relevant name for the column in the name field.



The Mark as In-between Drawing option will not add a marker in your Xsheet view. It is used to switch from a key or breakdown to an in-between drawing by removing the current marker.

## Completing the Animation



It is now time to complete the rough animation. Do this by adding two in-between drawings between each keyframe.



1. In the Xsheet view, right-click (Windows) or [Ctrl] + click (Mac) on any cell between two keyposes, and select **Drawing > Create Empty Drawing**.

1		1	K
2		2	
3			
4		4	K

This will add a new empty drawing in your layer ready for your next pose to be drawn in.

2. Add new drawings and sketch your poses with the help of the Onion Skin feature. Continue until you complete the walk cycle animation.

The completed animation should be composed of a total of twelve different drawings.

Your Xsheet should look like this.

Drawing			
1		1	K
2		2	
3		3	B
4		4	K
5		5	
6		6	B
7		7	K
8		8	
9		9	B
10		10	K
11		11	
12		12	B



You can use the default shortcuts [F] and [G] to quickly flip through the different poses to get a feel of the motion as you sketch your animation.



## Setting the Exposure and Testing the Animation



Testing your animation is a crucial step. You will finally see the motion in the Camera view and decide if it is good or not.

Before testing the animation, set the exposure and reduce the scene length. The correct timing for this simple walk cycle example is a double exposure.

1. In the Top menu, select **Scene > Scene Length**.
2. In the **Set Scene Length** dialog box, extend the scene to 24 frames.
3. In the Xsheet view, select your twelve drawings, right-click and select **Exposure > Set Exposure to > Set Exposure to 2**.
4. Use the [F] and [G] keyboard shortcuts to flip through your drawings.

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	



1. In the Playback toolbar, click on the Loop button to enable the looping feature.
2. To start the playback, click on the Play button in the Playback toolbar.



Refer to the Animate User Guide to learn more about the Playback toolbar features.

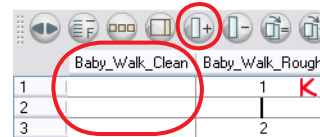
## Cleaning Up the Animation





When you are satisfied with your animation, you can begin the clean up process.

In the rough sketch layer, start by cleaning up the key poses first and then do the in-between drawings.

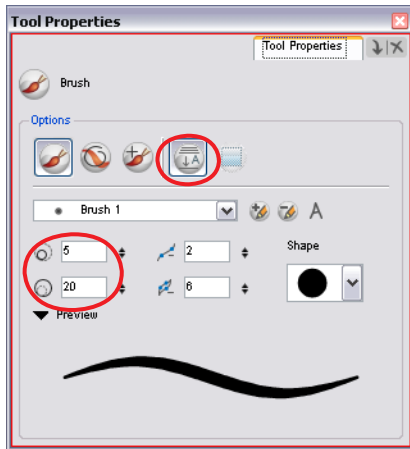
Remember, you can use the Onion Skin feature to verify the accuracy of the line between the different poses.




1. In the Xsheet view, click on the **Add Column**  button.
2. In the Add Columns dialog box, name your column **Baby\_Walk\_Clean**.
3. In the Tools toolbars, click on the **Brush**  button.



If you are animating in the Drawing view you will need to enable the Light Table feature to see your other layers. Simply press [Shift]+[L], the default keyboard shortcut.



4. In the Tools Properties view, click on the Auto Flatten  button and modify the minimum and maximum brush sizes.

The Auto Flatten option flattens your brush lines as you draw them. It also simplifies the process of perfecting your lines with the Contour Editor tool.

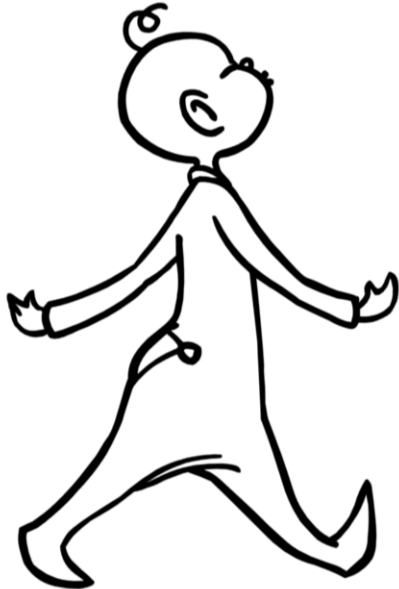


5. In the Colour view, click on the desired colour swatch. Choose a darker colour that will contrast with your rough sketch.
6. In the Camera view, carefully trace the poses.







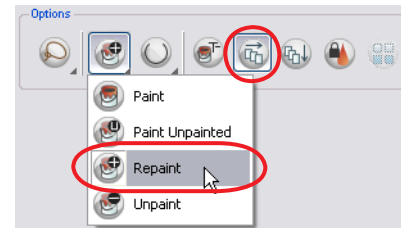
Refer to the **Character Design** chapter to learn more on how to perfect your brush line using the Contour Editor as well as other useful tips on cleaning up your drawings.


## Painting the Animation




It is time to create a palette for your character and repaint the outlines using the colours contained in this palette.

1. In the top part of the Colour view, click on the New Palette  button.
2. Name your palette in the Palette Browser window.
3. Rename the default colour swatch and call it **Line**.
4. In the Tools toolbar, select the Paint  tool.
5. In the Tools Properties view, select the Repaint  mode and click on the Apply to Multiple Drawings  button.



The Repaint mode  will make sure that only the lines will be repainted, all the empty zones will remain.

The Apply to Multiple Drawings  option lets you repaint the lines on all your drawings at once.



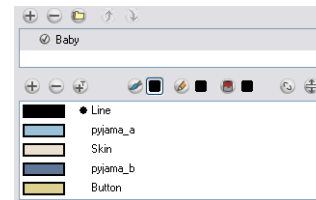
Refer to the **Painting your Character** chapter to learn more about colour palettes features and helpful painting tips.


Use the Onion Skin feature to check that no part of the animation is left outside the selection.

6. In the Camera view, make a selection around your animation.



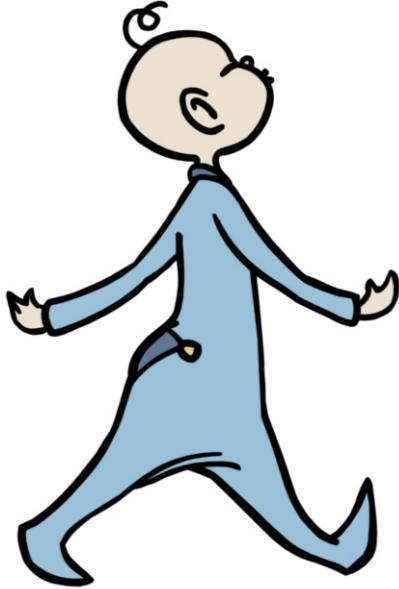
Now you can add and customize the different colours that will be painted in your animation. Be creative! You can work with one colour at a time or create them all at once. Remember, you can modify them anytime you want without repainting your drawings.





1. In the bottom part of the Colour view, click on the Add Colour  button.
2. In the Colour view, double-click on the new colour swatch.
3. In the Colour Picker dialog box, pick the desired colour and rename your colour swatch.
4. Repeat these steps for each colour. In this exercise, you will need a total of five colours, including the line.



Refer to the **Painting your Character** chapter to learn more about the **Colour Picker** dialog box and **Palettes**.



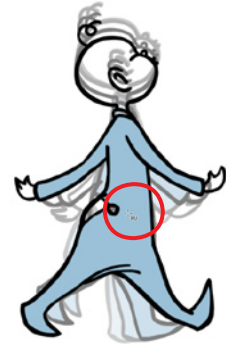
As soon as your palette is completed you can start to fill the zones.

1. In the Tool Properties view, select the Paint Unpainted  mode and click on the Apply to Multiple Drawings  button.

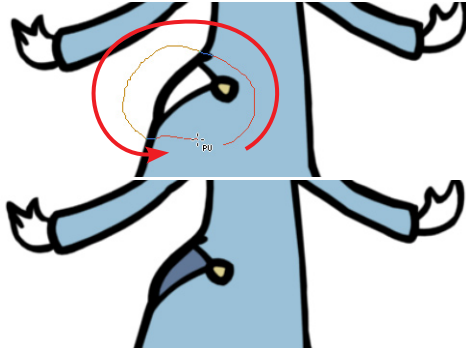
The Paint Unpainted mode will only allow the empty zone to be painted, preventing lines from being accidentally repainted.

The Apply to Multiple Drawings feature is useful when you want to paint the central body zone on all of your drawings at once. It can also be used on the head zone.

2. In the Tools toolbar, enable the Onion Skin feature.
3. In the Colour view, select the colour of the pyjamas.
4. Click inside the central zone you want to paint.
5. Enable the Apply to Multiple Drawings feature again and repeat these steps for the head.



To paint the final details, disable the Onion Skin feature so you can see one drawing at a time. Use the Paint tool in Paint Unpainted mode to speed up the painting process.



1. In the Colour view, click on the colour swatch.
2. In the Camera view, click on the zone corresponding to the selected colour.
3. Flip through the drawings by pressing [F] and [G], the default keyboard shortcuts.
4. Repeat these steps for each colour until every zone is painted!



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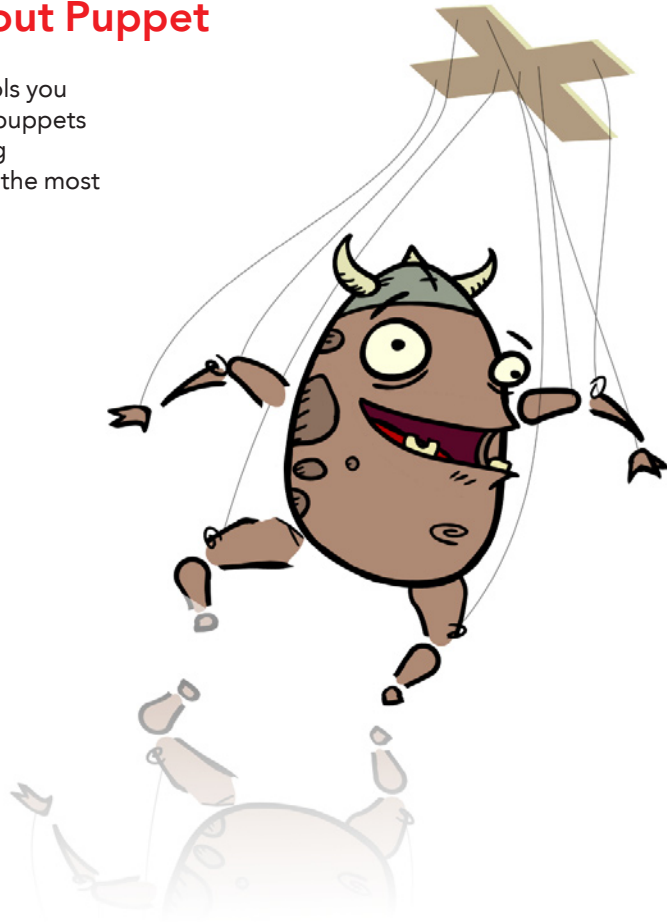


## Chapter 8 Building a Cut-out Puppet

In Toon Boom Animate you will find all the tools you ever wished for to build and animate cut-out puppets with. A wide variety of breakdown and rigging techniques are available since Animate mixes the most common and popular concepts.

The topics are:

- Getting Ready for the Breakdown
- Breaking Down the Main Parts
- Fixing Articulations and Gaps
- Breaking Down the Other Views
- Ordering the Puppet's Layers
- Setting the Pivots
- Creating Hierarchies
- Ordering Layer Hierarchy
- Adding a Master Peg
- Storing the Puppet in the Library



## Getting Ready for the Breakdown



To build your puppet, you will first need the character's picture. It's even better if you have a complete turnaround.

You can use the sample template provided in your library:

- Templates > limpa\_colour.tpl



Breaking down a puppet, consists of cutting the body into parts and placing them on different layers so that the character becomes articulated.



This tutorial shows you how to build a basic puppet. To get more information on how to build a cut-out puppet for a production, refer to the Animate User Guide.

The breakdown task will be easier if your turnaround views are placed in separate cells on the same layer and centred in the Camera view. If your puppets are placed one beside the other, your final puppets will not align and will need to be repositioned.

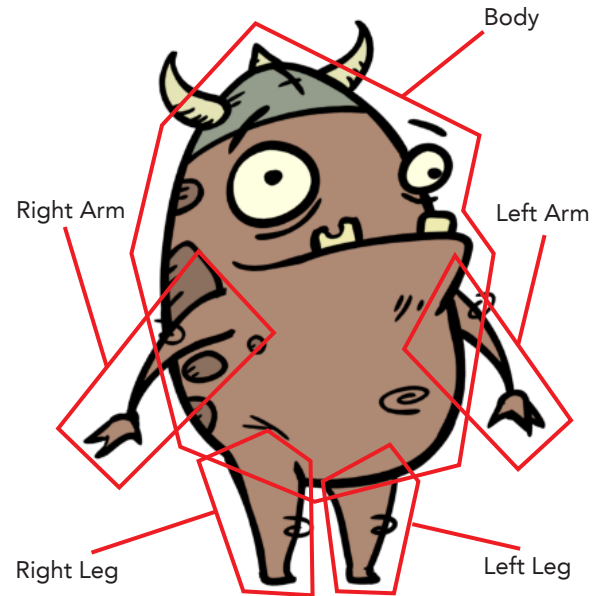
Start by analyzing your character. What are the main parts? If you look at this sample character, Limpa, you can identify five main pieces:

- Body
- Left Arm
- Right Arm
- Left Leg
- Right Leg

Later on, you will break those sections in smaller pieces such as right hand, left foot, right eye, mouth, head, etc.

Before starting any breaking down, try to decide what will be separated from what. For example, to keep this puppet simple, we will keep the hat attached to the head, but you



could decide to separate it from the head to be able to animate it independently.



**It is wise to analyze your character before starting to cut it apart. You should be careful what you separate from each part. For example, do you want to separate the mouth from the head or not.**

## Breaking Down the Main Parts



To breakdown your character, use the Select  tool and the Cutter  tool.

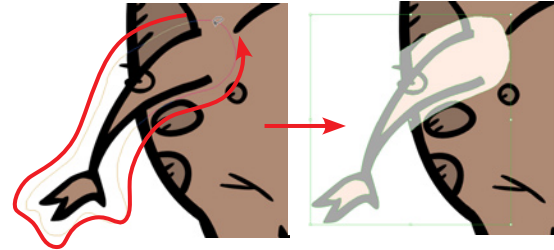
You do not need to create new layers when you break down your character. They will be created as you go.



Start by creating the main pieces of your character. In this case, the body, arms and legs.

Use the Cutter and Select tools to extract the parts, such as the arms, from the body and send them to separate layers. It does not matter if there are bits from other parts or gaps. You will fill and fix those later.

Only do the front or three-quarter view for now. You will break down the other views later on.

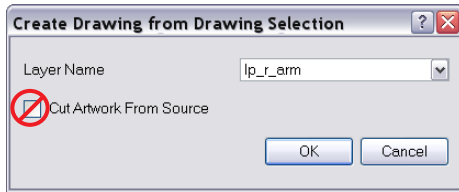
**Note:** You could also decide to add layers manually and redraw over the model if this technique does not suit your needs.



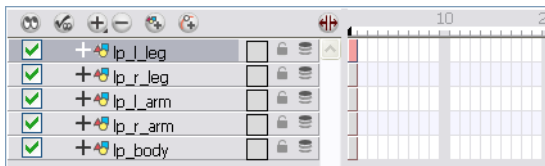
1. In the Tools toolbar, select the Cutter  tool.
2. In the Tool Properties view, select the Lasso Selection  option.
3. In the Camera view, trace a selection around the first part to separate it. In this case, we will do the right arm.
  - ▶ You can hold down the [Shift] key if you want to create a second area.
  - ▶ If you simply click on a line, it will be entirely selected until it meets an intersection.



There are several breakdown techniques. In this lesson, we show you the most commonly used. Refer to the [Animate User Guide](#) to get more tips about breaking down your puppet.



4. In the top menu, select **Edit > Create Drawing from Drawing Selection**. The default keyboard shortcut is [F9] (Windows) or [⌘]+[F9] (Mac OS X).
5. In the dialog box, type the new layer name.
6. Disable the **Cut Artwork from Source** option. When you create layers out of your colour model, you do not want to cut out the artwork.
7. Press the OK button to validate.
8. Repeat the process for each main piece: body, legs, arms, head, etc.



Once your main pieces are separated, you can start to break them down.

9. In the Camera view, select the hand from the new arm layer. **Do not** select it from the model.
10. In the top menu, select **Edit > Create Drawing from Drawing Selection**.
11. In the dialog box, type the new layer name.
12. Enable the **Cut Artwork from Source** option. You want to cut the hand away from the arm.
13. Click on the OK button.
14. Repeat the process for each part in the character to be broken down.

All of the parts should now be in separate layers.








If you forget to send something into your new layer, you can add it afterward. If you select it and use the **Create Drawing from Drawing Selection** option, you can choose the existing layer in the drop-down menu.

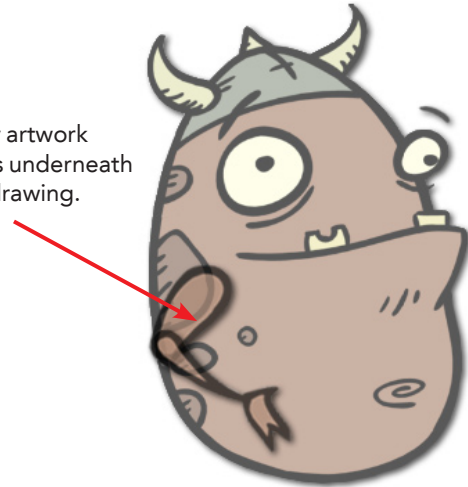
## Fixing Articulations and Gaps



Now that all your parts are in their respective layers, it is time to fix the rough cuts you did earlier and draw nice articulations. To do so, you will use tools such as:

-  Eraser tool
-  Paint tool
-  Contour Editor tool
-  Brush tool
-  Select tool

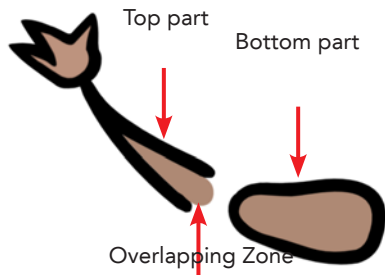
The body artwork continues underneath the arm drawing.



When you fix the joints, make sure they overlap properly. Remember that the puppet will be animated and each part will move and rotate, so make sure not to leave a gap in the part underneath.



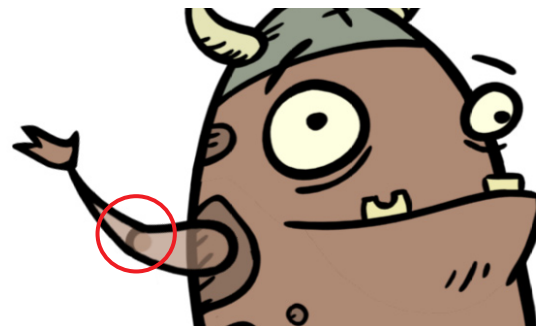
**You could fix the gaps and remove the extra lines while breaking down the parts, but since you will have to fix the articulations afterward you are better off doing everything together.**



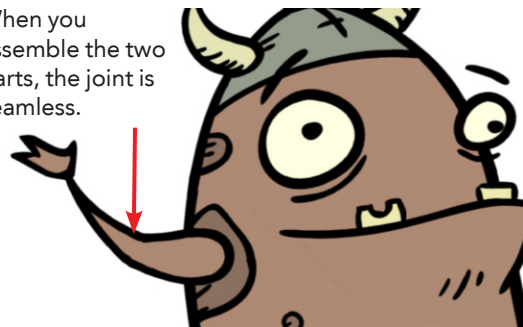
The easiest articulation to make is the classic joint. The classic joint consists in removing a portion of the outline on the overlapping part. For example, the outline around the elbow can be erased on the forearm piece. The arm placed beneath the forearm will keep its entire outline.

When you assemble those two pieces together, the joint is seamless and it looks like a single drawing!

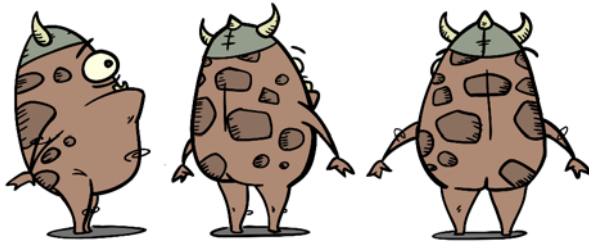
There are other ways to build articulations that are even more efficient. This one is the simplest and is often quite sufficient.



When you assemble the two parts, the joint is seamless.



## Breaking Down the Other Views





When you have finished fixing your drawings and joints on your three-quarter view, you can start breaking down the other views such as side and back views.

Since you already broke down a view, the layers already exist and are named. You won't need to do it twice!

The breakdown principle is the same, except that your layers already exist.

1. In the Timeline view, select the cell containing your view to breakdown.



2. In the Tools toolbar, select the Cutter  tool or Select  tool.
3. In the Camera view, trace a selection around the first part to separate it.

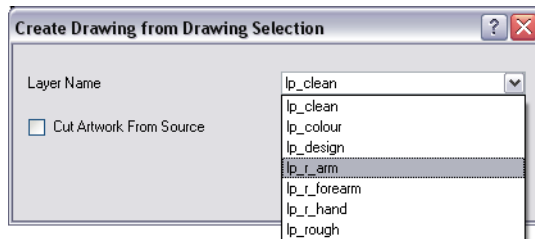


**In the Timeline view, disable the checkbox if you want to hide certain layers while working. You can also enable the Lock option to avoid selecting or modifying layers.**



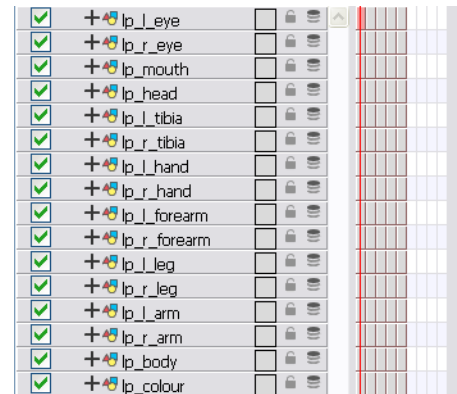
This time, you will add your selection to an existing layer, instead of creating a new layer.

4. In the top menu, select **Edit > Create Drawing from Drawing Selection**.
5. In the dialog box, select the desired layer from the Layer Name drop-down menu.
  - ▶ Disable or enable the **Cut Artwork from Source** option depending on what you are doing.



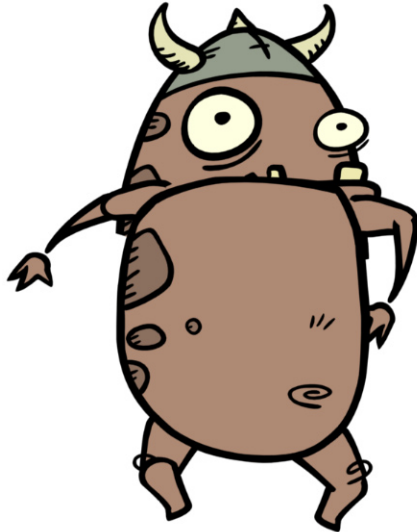
6. Click on the OK button.
7. Once the view is all broken down, fix the articulations and gaps.
8. Repeat the process for each view.

Once your timeline is completed it should look similar to this example.



Refer to the [Animate User Guide](#) to find out more about the **Create Drawing from Drawing Selection** feature.

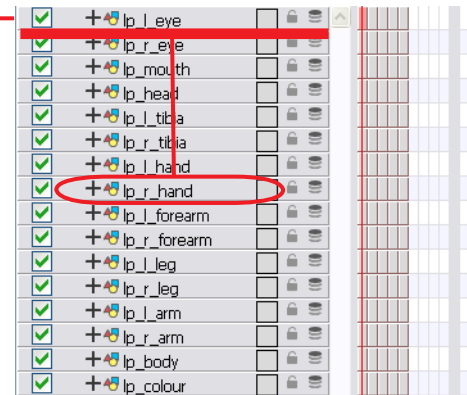
## Ordering the Puppet's Layers



It is possible at this point your character's pieces may show up in the wrong order. There are two ways to fix this.

Displayed in Front

Displayed Behind



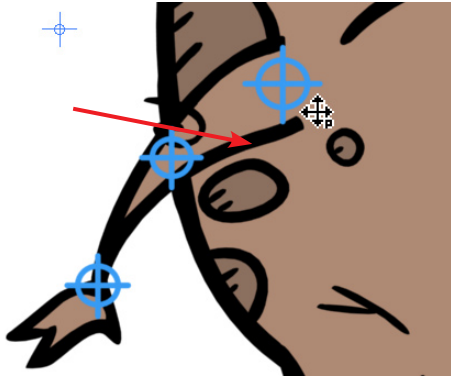
To reorder your layers drag them to a higher or lower level in the Timeline view. The top layer is displayed in front of the others and the bottom one is displayed behind.

1. In the Timeline view, drag the layer to reorder it and drop it in-between the other layers.  
**Note:** If you drop it on a layer, it will create a parent hierarchy, so make sure to drop it in-between layers.



If you select a layer and reposition it, its child layers will follow. There is no need to select all the layers.


## Setting the Pivots



If you want your puppet's pieces to rotate properly, you need to set the pivot points. Even the eyes and mouth require you to set their pivots.

Do the following steps for each layer in the Timeline view.

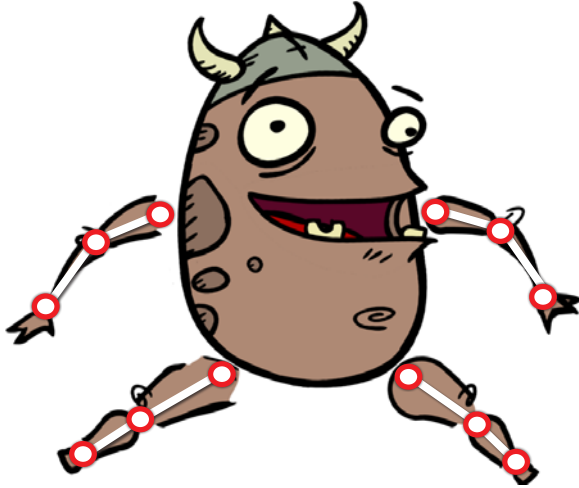
### To set the pivots for the Body parts:

1. In the Tools toolbar, select the Pivot  tool.
2. In the Timeline view, select the cell you want to set the pivot for.
3. In the Camera view, click where you want the pivot to be. You can also drag the pivot marker to the desired location.
4. In the Timeline view, select the cell where you want to set the new pivot.
5. In the Camera view move the pivot to the desired position.



For more information about pivots, refer to the [Animate User Guide](#).

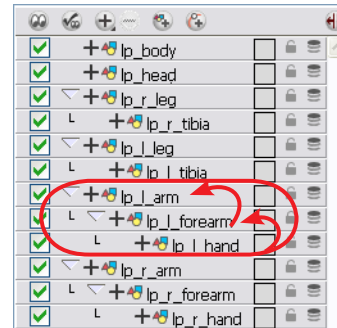
## Creating Hierarchies



Animate lets you extend your rigging techniques beyond normal boundaries and set new standards. You can create hierarchies without encapsulating your layers inside each other by creating a linked structure between your layers.

To create a hierarchy:

1. Simply drag the child piece (hand) and drop it ON the parent piece (forearm). Then, you can drag the parent (forearm) piece on another parent piece (arm).



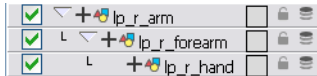
You should create a hierarchy of your arms and legs and keep the arms and legs separate from the body. This gives you more animation freedom.



Refer to the Animate User Guide to learn more about complete production rigging.

## Ordering Layer Hierarchy

If you created a hierarchy of your arms, legs or other body parts, it is possible that you will want a child part, such as the hand, to appear in front of its parent. If you move the hand layer above the arm layer, you will break the hierarchy.

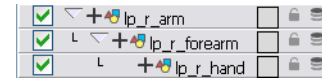
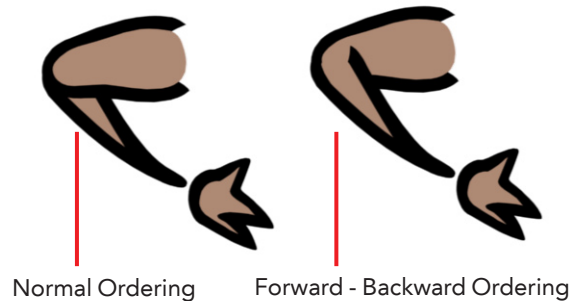




Therefore, to reorder a layer rigged in a hierarchy, nudge it forward or backward.

Animate allows you to move your elements in the three dimensions:

- Up and Down (Y)
- Left and Right (X)
- Forward and Backward (Z)

The same way you can create multiplane backgrounds (depth), you can do a micro nudge on the part to be reordered. This makes possible for a reordered part to appear in front of the other elements even if its layer is behind the other ones in the Timeline view. The Forward-Backward position can also be animated over time.




1. In the Tools toolbar, select the Transform  tool. Make sure to disable the Animate  mode.
2. In the Camera view, select the element to reorder.
3. To move the element forward, use the default keyboard shortcut [Alt] + [Down Arrow] and to move the element backward, use the default keyboard shortcut [Alt] + [Up Arrow].

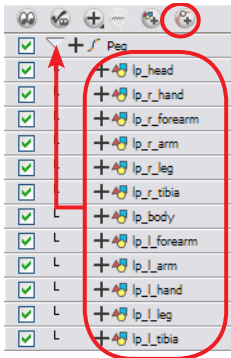


To move elements along the Z-axis, use the default keyboard shortcut [Alt] + Up Arrow to move the layer backward and [Alt] + Down Arrow to move the element forward.

## Adding a Master Peg

To control all your puppet's pieces together, you will need to add a peg layer at the top of your hierarchy. A peg layer is a trajectory on which you can attach your character. This way you can scale and reposition your complete character for the entire scene or over time.

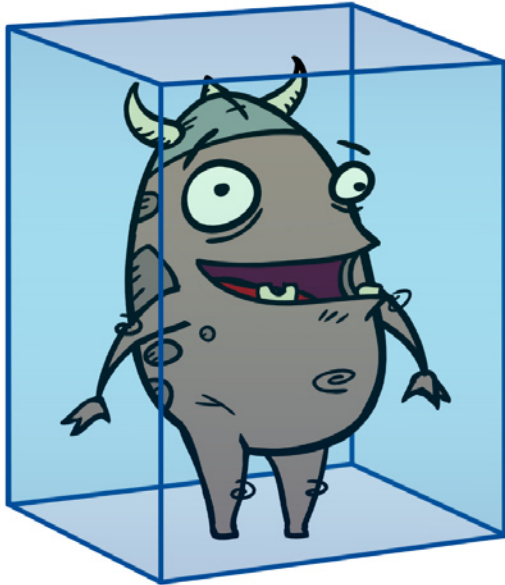
1. In the Timeline view, click on the Add Peg  button. Name the new peg Master.
2. In the Timeline view, select all of the layers you want to attach to your new peg.



3. Drag your selection right on the peg layer to parent all your character's pieces to the peg.



## Storing the Puppet in the Library



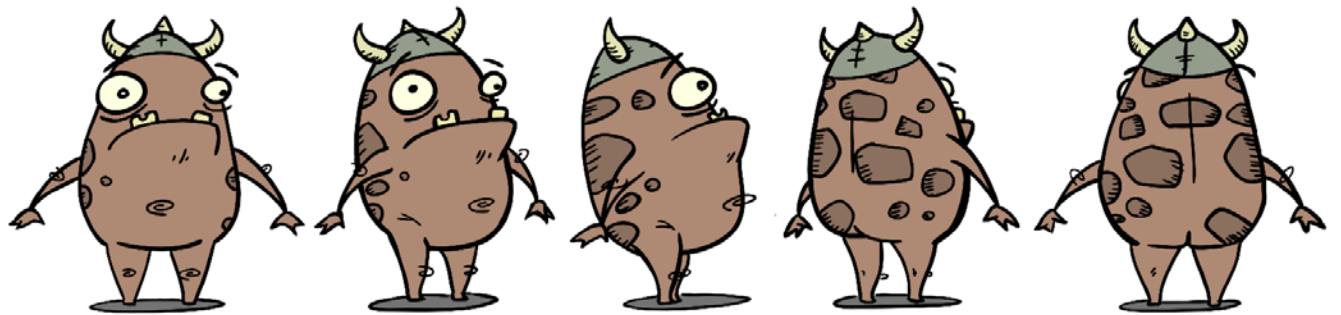
To store your character in the library you first need to create a position keyframe on all your layers and finally store it as a template in a sharing library.

1. In the Timeline view, select the first frame of every layer.
2. In the top menu, select **Insert > Keyframe** or use the default keyboard shortcut [Ctrl] + [F6] (Windows) or [⌘]+[F6] (Mac).
3. In the Library view, select the Animate Library folder, right-click (Windows) or [Ctrl]+click (Mac OS) and select **Right To Modify**.
4. In the Timeline view, select all of your layers and drag them into the Animate Library.

You now have a complete cut-out puppet!



To find out more about sharing templates via the library, refer to the [Animate User Guide](#).





## Chapter 9 Animating Your Puppet

It is time to show off your animation skills! Toon Boom Animate was created for you to animate. It contains a series of animation tools beyond your expectations.

This lesson will cover the basics of cut-out animation, but there are an infinite number of possibilities. Take a look at the Animate User Guide to discover more about animation.

You can use the character you drew previously or use a character model from the sample material package:

- Undone\_example\_Sample\_material > Chapter09\_Sample\_material.tpl

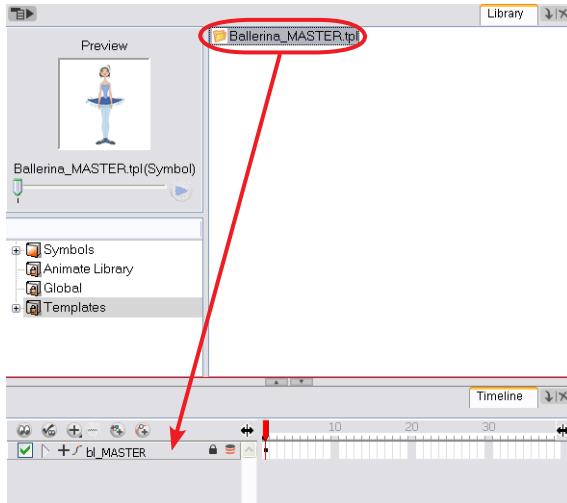
The topics are:

- Getting Ready to Animate
- Repositioning the Character
- Animating Using the Transform Tool
- Motion and Stop-Motion
- Swapping Images
- Inverse Kinematics Tool
- Easing



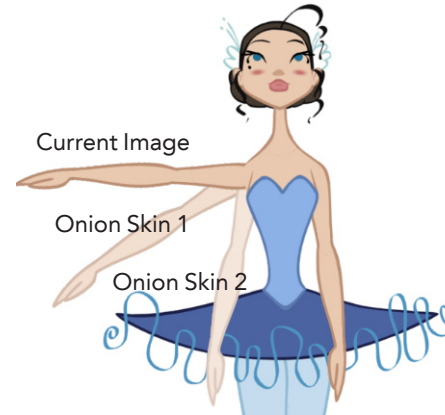


## Getting Ready to Animate





To start this lesson, import your character into a new scene.

1. Create a new Animate project.
2. From the library, drag your character template into the Timeline view's left side.



Before starting your animation, you may want to enable the Onion Skin feature to see your previous and next frames as a reference.

- ▶ In the Tools toolbar, enable the Onion Skin  option.
- ▶ You can also enable individual layer's onion skin by clicking on their Onion Skin  icon in the Timeline view.



To use a character you previously built in another project and transformed into a symbol, drag the symbol into the Animate Library or into any other templates folder and transform it into a template.

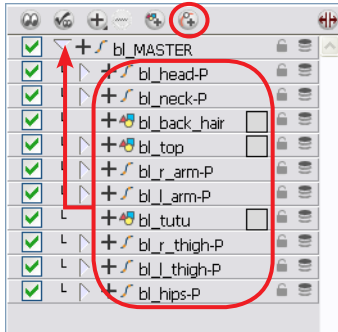
## Repositioning the Character

Now that you have your puppet on your stage, you probably need to resize and reposition it to fit your scene. When you need to scale down or move your character it's a good idea to hook (attach) the whole puppet to a trajectory.


In Animate, there is a type of layer you can add to your timeline allowing you to create a motion path or to reposition drawings. This trajectory layer is called a Peg. Any drawing or layer you hook to a peg will follow the defined motion path, rotation, scaling and skewing information.

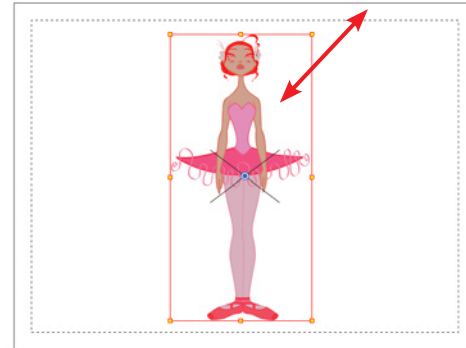
Attaching your puppet to a peg will allow you to scale it and reposition it without having to do it on all of your different parts and pieces. Only one layer will contain the position information, this makes your animation easier to modify and control.







If you do not have a top peg layer to control your character, you can add one at any time. A peg layer is a trajectory on which you can attach your character. This way you can scale and reposition your character for the entire scene or over time.

1. In the Timeline view, click on the Add Peg  button. The new peg should be called **Master**.
2. In the Timeline view, select all of the layers you want to attach to your new peg.
3. Drag your selection right on the peg layer to parent all your character's pieces to the peg.



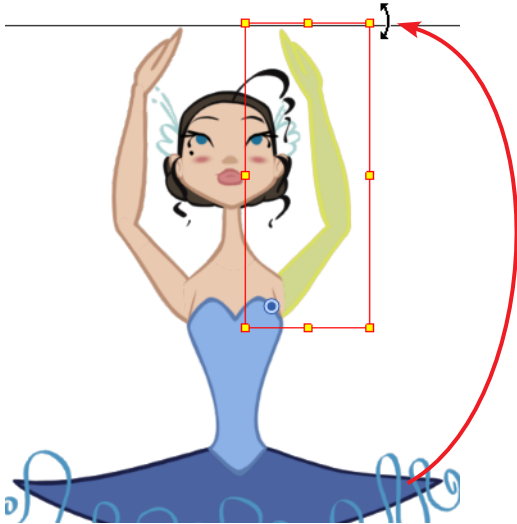
Next, you need to position your character on the stage by moving and scaling it to the correct size. You will not scale each layer individually. You either want to do it on the top symbol or top peg layer.


4. In the Timeline view, select the top peg layer (master peg).
5. In the Tools toolbar, select the Transform  tool and disable the Animate  mode.
6. In the Camera view, position the character.

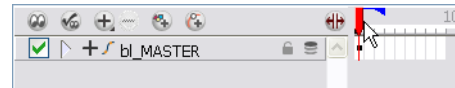




You can change the Onion Skin display's look in the Preferences panel. In Edit > Preferences (Windows) or Animate > Preferences in (Mac OS X) go to the Drawing tab and change the Onion Skin Render Style option.

## Animating Using the Transform Tool



From now on, the Transform  tool will become your most useful tool. You will use it to do most of your animation. With the Transform tool, you can select, move, scale, rotate, skew, squash and stretch.



1. In the Timeline view, go to the frame where you want to animate your first pose. At this point, it is generally the first frame.
2. In the Tools toolbar, select the Transform  tool and enable the Animate  mode.
3. In the Camera view, select the part you want to animate and using the Transform tool's anchor points, move it to its new position.

The pose you are doing is automatically retained. There is no need to set a keyframe before moving your parts. As soon as you move an element in your Camera view, a keyframe is set on the current frame in the Timeline view.

Remember, animation keyframes and drawings are not the same thing. If you swap a drawing, you do not need to insert a keyframe in your timeline.

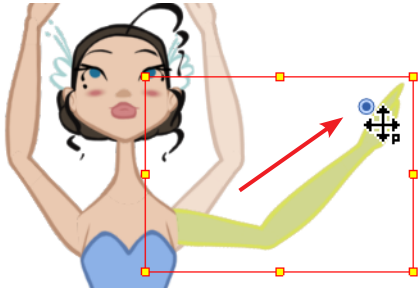


**To avoid selecting some layers, click on the Lock button in the Timeline view. In the Preferences panel, you can go to the Camera view tab and enable the Show Locked Drawings as Outlines to see through them.**

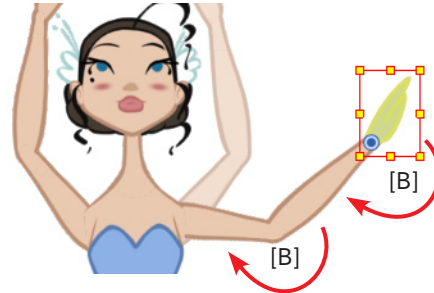


Once your first pose is ready, move on to your next key pose.

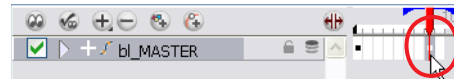
4. In the Timeline view, move to the frame where you want your second pose.



If you need to, you can temporarily move the Transform tool's pivot to provide a better rotation or scale centre. Simply drag it to where you need it. Next time you select your element, it will be back to its original place.



You can also select your current selection's parent layer by using the default keyboard shortcut [B]. If you press on it repeatedly, you will go up the entire parent chain until the master peg or highest layer in the tree.



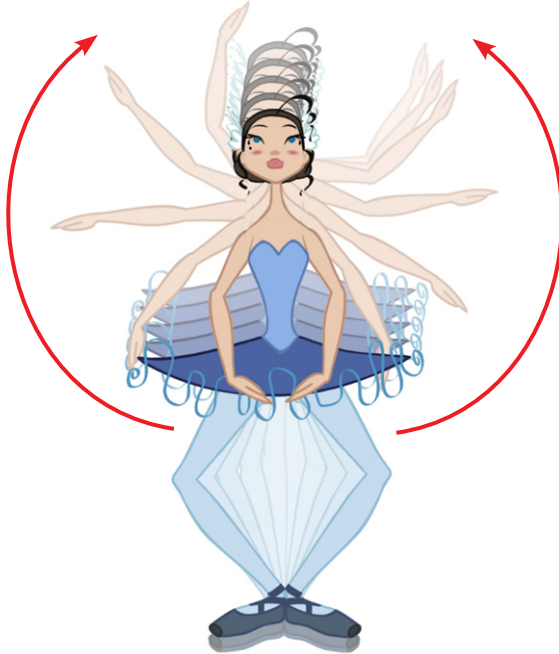
We recommend that you collapse your master peg and add a keyframe after your pose is set. This will lock all of the parts in place. You only need to do this once.

5. In the Timeline view, select the pose and press [F6].



When you select a series of elements using the [Shift] key, the pivot used by the Transform tool will be in the first selected element.

## Motion and Stop-Motion






By default, your keyframes will be created as Motion Keyframes. This means that Animate automatically generates the animation between your poses.

Because you may not necessarily want that, you can set your keyframe creation mode to create Stop-Motion Keyframes. Later on, you will be able to convert the desired keyframes to Motion Keyframes.

- ▶ In the top menu, select **Animation > Stop-Motion Keyframe**.

### To switch between Motion and Stop-Motion Keyframes:

1. In the Timeline view, select the keyframes to convert.
2. Right-click (Windows) or [Ctrl] + click (Mac OS X) and select **Set Stop-Motion Keyframe**  or **Set Motion Keyframe** .
3. Press the  button to see your animation.



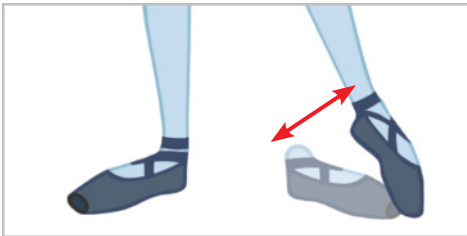
To flip between the keyframes of the selected layer, use the [PgUp] and [PgDown] keyboard shortcuts.




## Swapping Images

Cut-out animation is not only about moving pieces around, it's also about switching some drawings around. For example, the ballerina Giselle wants to point her toes.

Instead of rotating the foot, you can swap the regular foot drawing for another one that you drew when you built your character. You could also create an empty drawing on your foot layer and draw a new foot while animating.



### To swap a drawing:


1. In the Camera view, with the Transform  tool, select the part you want to swap.
2. In the Library view, go to the Drawing Substitution section.
3. Move the substitution slider to the right or left to scroll through the symbol's frames or drawings. You can also use the keyboard shortcuts [ ] and [ ]].



To quickly swap drawings and frames around, use the [ ] and the [ ] keyboard shortcuts.

## Inverse Kinematics Tool




The Inverse Kinematics  tool (IK) allows you to pull on your character's extremities, such as the hands and feet, and get the rest of the body to follow!

For the IK to work on your character, there are some preconditions:

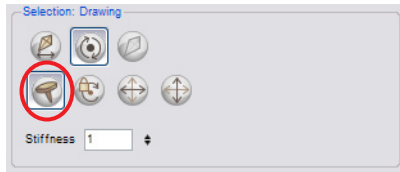
- Your character must have hierarchy chains, for instance, the hand is attached to the forearm and the forearm is attached to the arm.
- Your character is not required to be entirely done with hierarchy chains. You can have mixed technique and it will still work well. IK works with characters rigged with symbols, drawing layers and pegs.



The IK will work at its best when you lock a part on the spot, such as a foot on the floor, and then select the entire body or another extremity and move it.

To lock a piece in place, you will use the IK Nail  option.



While using the IK tool, you can hold down the [Ctrl] key to select any part.

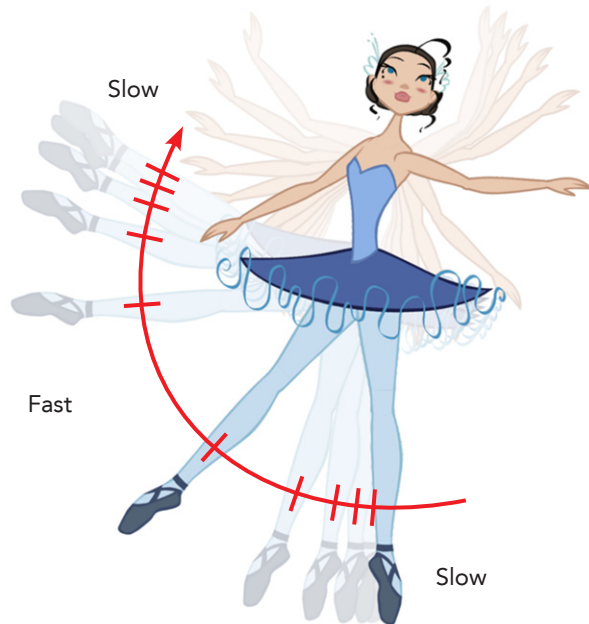


1. In the Tools toolbar, select the Inverse Kinematics  tool.
2. In the Camera view, hold down [Ctrl] (Windows) or [⌘] (Mac OS X) and click on the part you want to lock down.
3. In the IK Tool Properties, click on the IK Nail  button.
4. In the Camera view, press the [B] key until the body is completely selected.
5. Click on the pieces' bone to reposition the character.
6. Using the IK tool and the Transform tool, fine-tune the character's pose.
  - ▶ Using the IK tool, holding down the [Alt] key, you can rotate the selected part without moving the rest of the body.



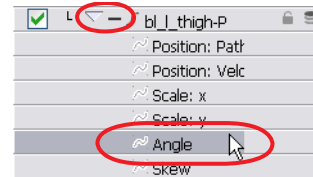
The Inverse Kinematics tool has a lot of options. Refer to the Animate User Guide for more information about them.

## Easing



If you used Motion Keyframes in your animation, you will certainly want to add some ease in and ease out to smooth out your movements and avoid having a robotic animation.

There are two ways to set an ease on your animation: directly on the function curve or using the Set Ease For Multiple Parameters script.



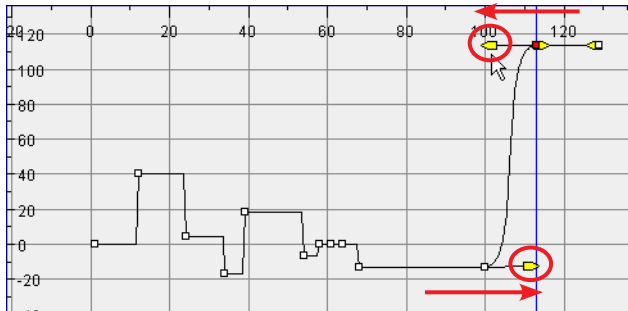
1. In the Timeline view, expand the layer corresponding to the part you want to set the ease on by clicking on the Show Functions **+** button. If the layer is a parent, make sure to expand its children by clicking on the Expand Hierarchy **▾** arrow.
2. Double-click on the function corresponding to the movement you want to ease, such as Angle, for the rotation of the thigh. This opens the Function Editor.



You can display function curves in the Function view by clicking on the function layers in the Timeline view.

In the Function Editor, you can see all of the keyframes corresponding to the thigh rotation animation.

3. In the function curve, locate the keyframe corresponding to the animation you want to ease.
4. Select the keyframe and pull on the Bezier handle.



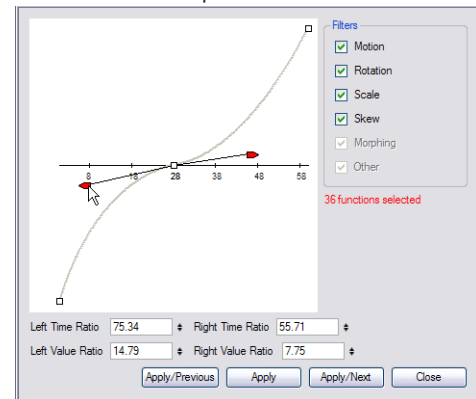
► The more you pull on it, the stronger the ease will be.

This technique is good when you have to do a simple ease. However, when you have a series of layers you want to set to the same ease it can be tedious and repetitive. Instead, you will use the Set Ease for Multiple Parameters function.

1. In the Timeline view, collapse the parent peg layer containing all of the layers you want to ease.



2. Right-click (Windows) or [Ctrl]+click (Mac) and select Set Ease for Multiple Parameters.



3. Pull on the Bezier handle and adjust the keyframe's velocity.
4. Click on the Apply button and then on the Close button.



To display a toolbar, select Window > Toolbars and the desired toolbar.

[toonboom.com/edu/](http://toonboom.com/edu/)

# Developing creativity from elementary to university



# Chapter 10 Creating a Multiplane and Animating the Camera

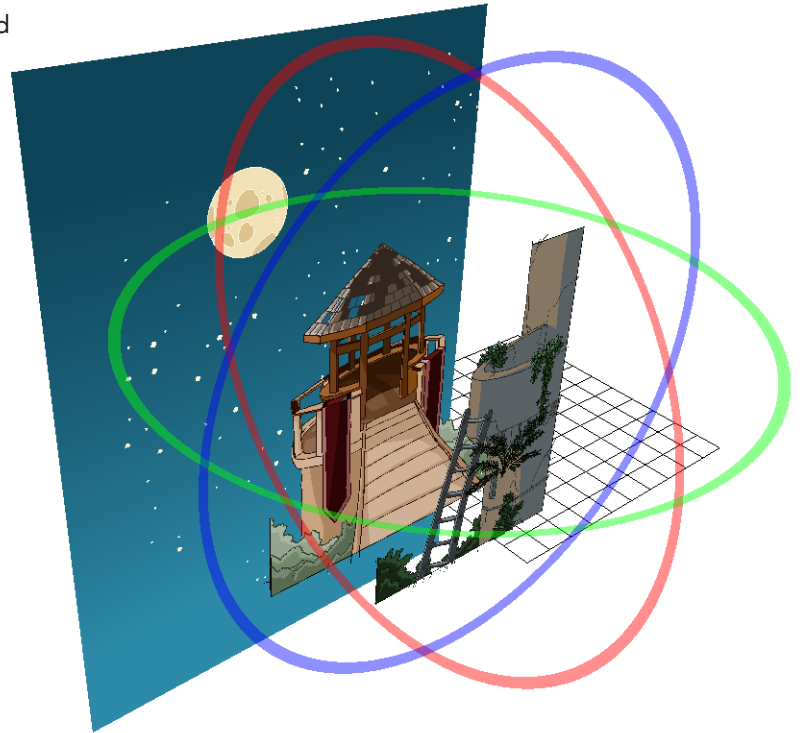
One of the most exciting features in Toon Boom Animate is the Multiplane, also called Z-depth. In the Multiplane you can create backgrounds in several layers, spread them on the Z-axis, add depth, and then move the camera through this environment to create an impressive perspective illusion.

You can create your own background, use a layered PSD file or use a project from the sample material package:

- Undone\_example\_Sample\_material > Chapter10\_Sample\_material.tpl

The topics are:

- Building a Multiplane
- Setting the Multiplane Space
- Animating the Camera



## Building a Multiplane



To construct a multiplane, you must imagine what a real environment is like. Take a look at this picture and imagine the camera moving across the space. You will notice that objects in the picture will move at different speeds depending on where they are in relation to the camera lens.

In this picture the moon is almost stationary and the tower in front of it is moving very slowly, but the tower closest to

the foreground is moving faster and the plant in the foreground is flying by really quickly.

Building a multiplane requires an understanding of your background and which object should be placed in the different layers. You want to separate all the main elements, but not every small object.

For example, in this background, the main objects to be separated are:

- Fern
- Front tower
- Second tower
- Moon
- Stars
- Sky

However, some objects are not separated, such as the plants and the front tower or the roof and the second tower.

Also, each layer must be a complete drawing because even if the bottom of the tower is hidden behind the plant and the ladder, later on in the scene, the hidden portions may show up.



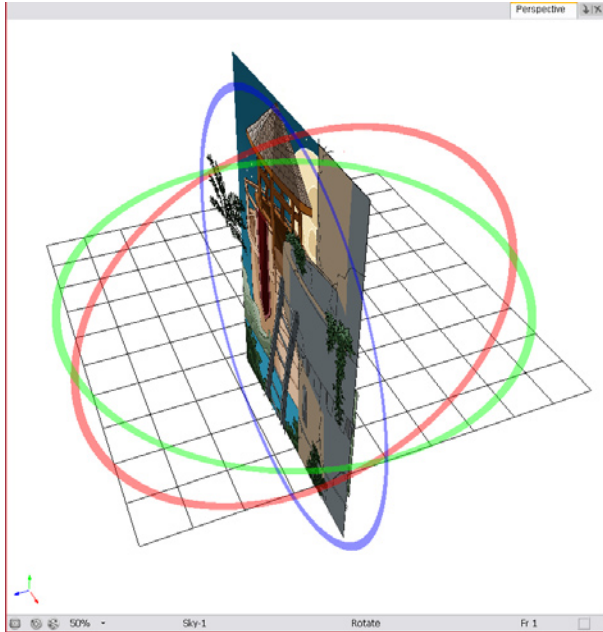
**If you move a camera over a drawing, all the objects in the drawing move at the same speed. If you move the camera across the room, you will see all the objects are moving at different speeds, producing a depth effect.**






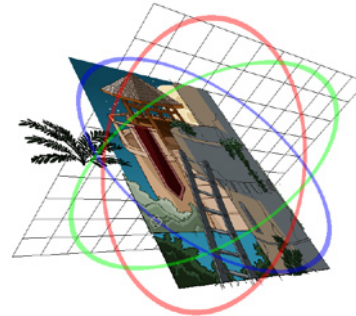
**Build your backgrounds in Toon Boom Animate so that they are vector drawings. You can zoom as much as you want on vector drawings, but zooming a lot on bitmap images will result in pixelation.**

## Setting the Multiplane Space

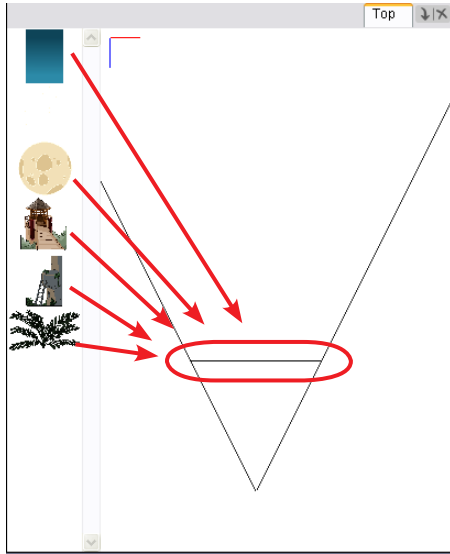


By default, all of your layers are set at the same distance. They are all located at "0". You can see it better in the Perspective view.


1. To open the Perspective view, select **Windows > Perspective**.
2. In the Tools toolbar, select the Rotate View  tool. The default keyboard shortcut is [Ctrl]+[Alt] for Windows or [⌘]+[Alt] for Mac.
3. In the Perspective view, rotate the stage to view the 3D space.

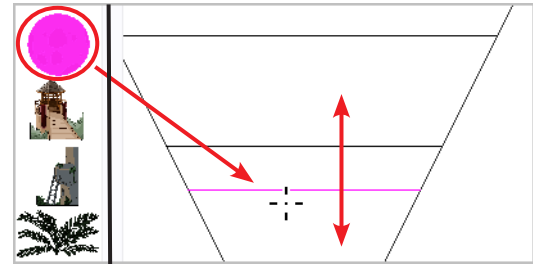


Use the default keyboard shortcut [Ctrl]+[Alt] in Windows or [⌘]+[Alt] in Mac OS to rotate the Perspective view.



To set your multiplane space, you will use the Top view. In the Top view, you can see the camera cone and all the layers set at the same distance.

1. To display the Top view, select **Windows > Top**.
2. To display the Advanced Animation toolbar, select **Windows > Toolbars > Advanced Animation**.
3. In the Advanced Animation toolbar, select the Maintain Size  tool. This tool scales your layer as you move forward or backward in the Top view.
4. In the Top view's left side, select the layer you want to move.



5. In the Top view's right side, move the selected layer up to push it backward, or down to bring it forward. It is possible that you will not see the selected layer, but you can still move it.

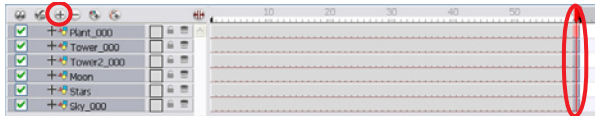



The Maintain Size tool will scale your layer as you move it forward or backward and maintain the original look which you set in the Camera view. The depth effect will be visible once you move the camera.

## Animating the Camera




Since you will animate the camera over time, you will need to extend your layers' exposure. The camera is a static element, to animate it you will need to add a trajectory layer called a Peg.

1. In the Timeline view, select the last frame of each layer.





2. Press [F5] to extend the exposure until the end.
3. In the Timeline toolbar, click on the Add Layers **+** button and in the drop-down list, select **Camera**.
4. In the Timeline view, select the Camera layer.
5. In the Timeline toolbar, click on the Add Peg  button.



You can animate the camera using the Translate  tool, Rotate  tool and Scale  tool available in the Advanced Animation toolbar.


### To animate the Camera:

1. In the Tools toolbar, enable the Animate  mode.
2. In the Advanced Animation toolbar, select the Translate  tool.
3. In the Timeline view, go to the first frame.
4. Select the Camera's Peg and reposition it in the Top view and Camera view.
5. In the Timeline view, go to the last frame.
6. Select the Camera's Peg and position it closer to the background in the Top view and Camera view.



You can animate the camera in the Camera view by using the Translate tool available in the Advanced Animation toolbar.



7. In the Playback toolbar, click on the Play  button to view your animation.



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Whether you're a novice or an expert, all users will benefit from our free articles available in the eLearning section of our website.

Visit our website and learn about subjects such as:

- ◆ Rigging
- ◆ How to Make a Camera or Object Shake
- ◆ Sunrise Sunset
- ◆ Lens Flare FX Template
- ◆ Storyboarding Without a Pencil
- ◆ Importing a Final Draft Script in Storyboard



# Chapter 11 Sound and Lip-Sync



Adding lip-sync to a project can really enhance its quality and storytelling. But animating a lip-sync can often be tricky. In Toon Boom Animate there are many useful features available to help you complete this task quickly and efficiently.

You can lip-sync the traditional way or let the system automatically create the basic detection.

You can use your own lip-sync ready cut-out character and sound file or use the ones provided to you in the sample material package.

The topics are:

- Importing a Sound
- Decoding your Sound
- Assigning the Mouth Shapes
- Swapping Mouths
- Playing Back and Exporting

The following sample material is located in the Animate Library of your operating system:

- Undone\_example\_Sample\_material > Chapter11\_Sample\_material.tpl
- **Mac**  
Applications/Toon Boom Animate 2/  
Templates/Samples/ SuperHero\_Soundtracks
- **Windows XP**  
C:\Documents and Settings\All Users\  
Documents\Toon Boom Animation\Toon Boom  
Animate 2\Templates\Samples\SuperHero\_  
Soundtracks
- **Windows Vista and 7**  
C:\Users\Public\Documents\Toon Boom  
Animation\Toon Boom Animate 2\Templates\  
Samples\SuperHero\_Soundtracks

## Importing a Sound



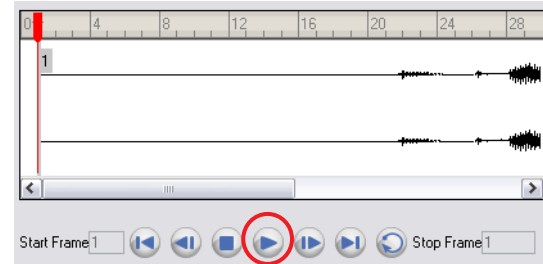
The first step in lip-synching an animation is importing the dialogue into your scene. The dialogue is a sound file which only contains your character's voice. It is important to only have the sound of the voice in this file as it will be the only sound which the lip-sync process will detect. In this example, the dialogue we will use is **cartoon\_monster-01.wav**.

1. Select **File > Import > Sound**.
2. In the Select Sound File browser, select your sound file\* and click on the OK button.



The sound layer will appear in the Timeline view and be displayed as a waveform. You can play your sound in the Timeline view and Sound Editor.

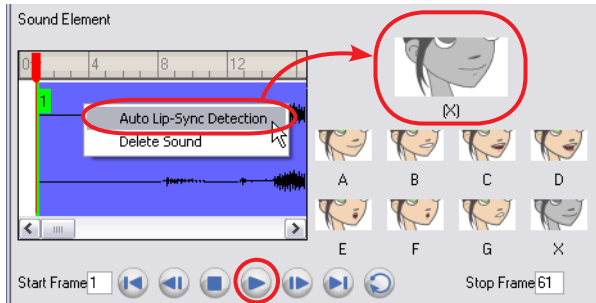
1. In the Timeline view, double-click on the sound layer to open the Sound Editor.
2. In the Sound Editor, press on the Play button to listen to your sound.



\* Refer to the previous page for the complete sample material paths.



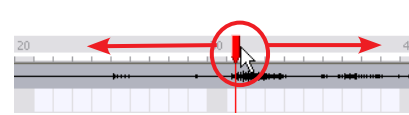
## Decoding your Sound



A great way to determine the timing of the mouth animation is to use the Auto Lip-Sync Detection feature. It automatically detects each phoneme and assigns a mouth shape to it.

1. In the Sound Editor, right-click (Windows) or [Ctrl]+Click (Mac OS X) in the Sound Element space and select **Auto Lip-Sync Detection**.
2. Press on the Play button to view the result in the preview space.

An X mouth shape appears when no sound has been detected for a frame.



You can also detect your sound or fine tune the automated detection using the Sound Scrubbing feature. This feature lets you scroll through the character's voice waveform in the Timeline view and listen to the sound one frame at a time.

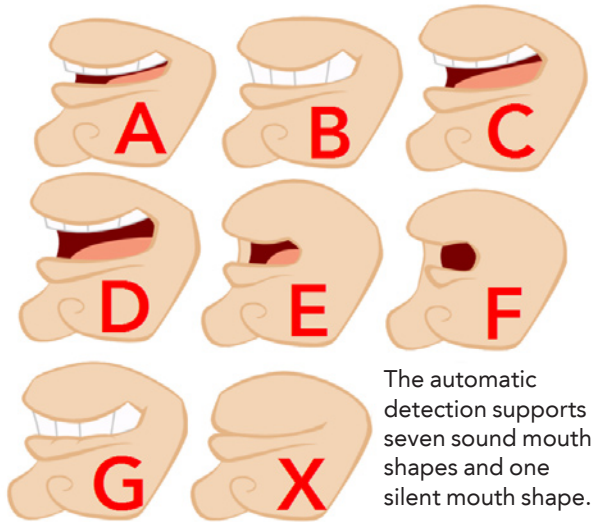
1. In the Playback toolbar, click on the Sound Scrubbing button.
2. In the Timeline view, click and drag the red marker to scroll through the scene and scrub the sound.

Read the Swapping Mouths topic to learn how to assign your mouth shapes as you decode your sound manually.



Refer to the Animate User Guide to learn more about the Auto Lip-Sync Detection and Sound Scrubbing features.

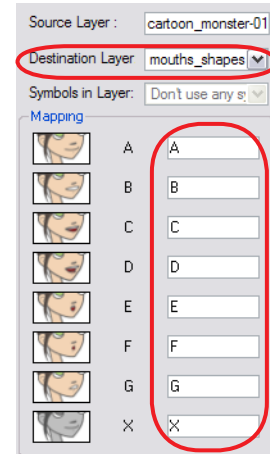
## Assigning the Mouth Shapes



The automatic detection supports seven sound mouth shapes and one silent mouth shape.

Now it is time to assign the detected mouth shape to your actual character mouth shapes layer.


1. In the Timeline view's right side, right-click (Windows) or [Ctrl]+Click (Mac OS X) on the sound layer and select **Lip-Sync > Map Lip-Sync**.
2. In the Mapping Lip-Sync dialog box, choose the layer that contains your character's mouths in the Destination Layer drop-down menu.
3. In the Mapping fields, enter the name of each of your layer's mouth shapes drawing. In this example, the actual drawing names, match the mouth shapes convention, so there is no need to change it.
4. Press on the OK button.

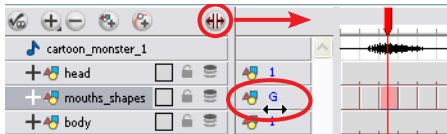


The lip-sync timing is now all set in the Timeline view, in the mouth\_shapes layer.

## Swapping Mouths

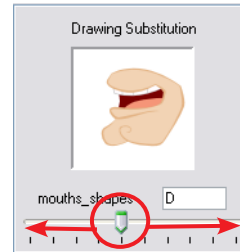
You can use the drawing swap feature to time your lip-sync from the start, or use it to quickly complete the Auto Lip-Sync Detection and Map Lip-Sync results.

1. In the Timeline view, click on the Expand  button to display the Data view.



2. In the Timeline view, select the cell containing the mouth shape you want to swap.
3. In the Data view space, place your cursor on top of the drawing name until it changes to the swapping pointer, and choose the mouth shape you want to expose.

You can also use the Drawing Substitution panel to swap drawings.



1. In the Timeline view, select the cell containing the mouth shape you want to swap.
2. In the Library view, in the Drawing Substitution space, click and drag the slider to choose the desired mouth shape. This automatically swaps the current drawing for the one displayed in the preview window. You can also use the default keyboard shortcuts [ ] or [ ]].





Refer to the Animate User Guide to learn more about swapping drawings.

## Playing Back and Exporting



Now it is time to playback the result and export the finished animation to a QuickTime movie file.

1. In the Playback toolbar, click on the Enable Sound  button. This will let you hear the sound of your scene during playback.
2. In the Playback toolbar, click on the Play  button and view your animation in the Camera view.



### To export a QuickTime movie:

1. Select **File > Export > Movie**.
2. In the Export to QuickTime movie dialog box, click on the Browse button to name the movie and select where you want to save the file.
3. Select either a specific frame range or the entire animation to export.
4. You can also set the Video and Sound options as required.
5. Click on the OK button to export your animation to a QuickTime format.



Refer to the [Animate User Guide](#) to learn more about export options and parameters.

## Chapter 12 Morphing a Flag

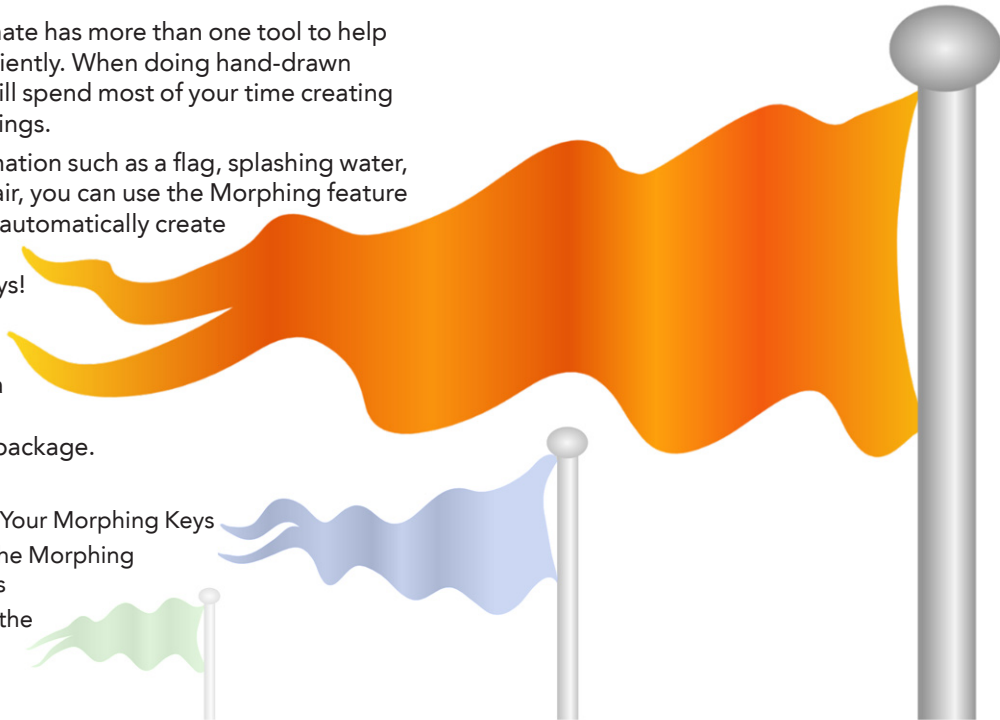
Toon Boom Animate has more than one tool to help you animate efficiently. When doing hand-drawn animation, you will spend most of your time creating in-between drawings.

For a simple animation such as a flag, splashing water, smoke or even hair, you can use the Morphing feature to let the system automatically create the drawings between your keys!

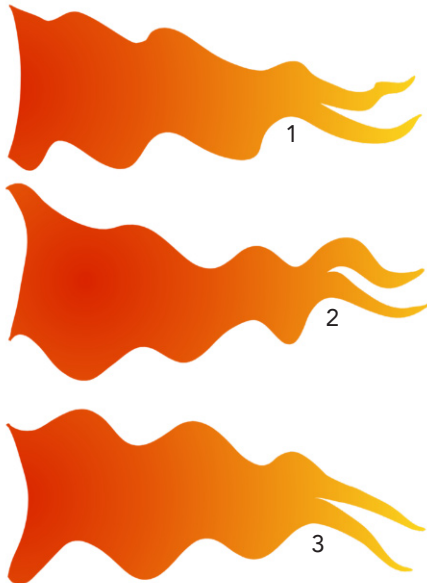
You can create your own drawings or use a project from the sample material package.

The topics are:

- Preparing Your Morphing Keys
- Creating the Morphing Sequences
- Adjusting the Ease



## Preparing Your Morphing Keys



The Morphing feature can be used to create computer generated drawings between simple shapes. Your drawings can have outlines or not. It is up to you!

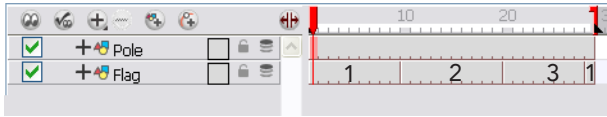
Your key drawings have to follow these basic rules:

- Drawings must be painted with the same colour swatches.
- Drawings must have the same number of zones. If a colour zone does not exist in one of the two key drawings, it will progressively appear or vanish.
- Drawings must be flattened.
- A contour line (fill) must be morphed with a contour line, and a centre line (pencil) must be morphed with a pencil line.
- You can have several colours in a morphing key.
- You cannot morph colour tints.

To create your first morphing sequence, try using simple shapes without an outline. Once you master the feature, you can experiment as much as you want.



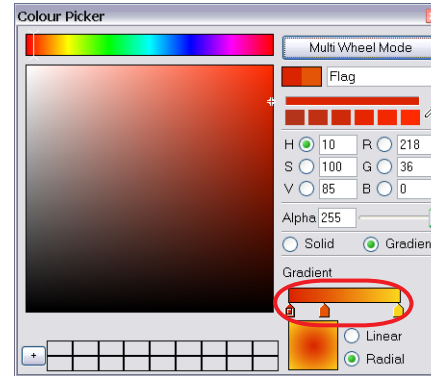
**When you animate effects such as smoke, think of using the Morphing feature to create your in-betweens. It has the advantage of being reusable and you can change the timing to create longer or shorter animations.**



To morph the flag, first draw three keyposes and set their approximate timing. Note, once your morphing sequence is done you can always increase or decrease your timing.

We added a flagpole layer. You can do the same.

1. In the Timeline view, add a drawing layer and name it "Flag".
2. In the Tools toolbar, select the Brush tool.
3. In the Colour view, select a solid colour.
4. In the Camera view, draw your first flag.
5. In the Tools toolbar, select the Paint tool and paint your flag using the same colour.
6. In the Tools toolbar, select the Select tool.
7. In the Camera view, select your entire flag.
8. In the Tools Properties view, click on the Flatten button.
9. Repeat the same steps for the two other flag drawings. Create your drawings on frames 10 and 20.



Once you are done creating your key drawings, you can transform your solid colour into a gradient to make the flag even more interesting. You can then add several gradient arrows to simulate highlights and shadows.

From the Tools toolbar, use the Edit Gradient/Texture tool to reposition your gradient zones the way you want.

10. Copy your first key drawing and paste it at frame 30.



If you set two different gradient positions on your key drawings with the Edit Gradient/Texture tool the position will be interpolated during the morphing sequence.


## Creating the Morphing Sequences



You are now ready to create your first morphing sequence!

1. In the Timeline view, select your first key drawing.
2. Right-click (Windows) or [Ctrl] + click (Mac OS) and select **Morphing > Create Morphing**.
3. Repeat the process for each key drawing.

You now have three morphing sequence.

4. In the Playback toolbar, press the Play  button to see the result.

As you probably noticed, there are in-between drawings, but they are not necessarily going the way you want. Your flag probably looks like a piece of cardboard bending instead of smoothly flapping in the wind. Also, it is most likely that you will have strange corners and points.

All that is because the system is always looking for the closest similar line, corner or curve to morph the drawing.



To fix random results like this one, you will place morphing hints along the flag's contours.

To fix a morphing sequence, you need to control its behaviour with Morphing Hint points. Hint points associate areas from the key drawings together so that the system knows how to control the drawings.

You can control different aspects of your animation. Here, we will focus on controlling the contour using Contour Hint points.

When fixing a morphing sequence, you will add points all across the screen. This is done progressively. To fix the flag, will take you three passes:

- Blocking the corners
- Animating the wind waves
- Fixing the remaining details





The Hint points tell the system how to animate your drawings. It is almost like telling your assistant animator what to do.



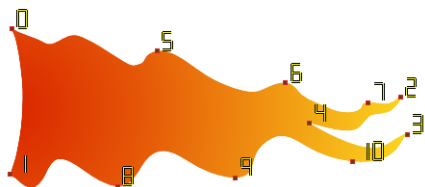


When you add points on the corners and tips, you will see that most of the shape problems are resolved. Fixing one big problem will often fix all the small ones.

1. In the Tools toolbar, select the Morphing  tool.
2. In the Timeline view, select the first key drawing.
3. In the Tool Properties, select the Contour Hint  option.
4. In the Camera view, click in the screen to add a new Contour hint.
5. Select the hint point and drag it toward the flag's contour until it snaps.
6. Position the hint on a corner to lock it in place.
7. Repeat these steps for all of the corners.
8. Press [F4] to switch to the other key drawing.



9. Select the existing hint points and snap them to the corresponding corners.



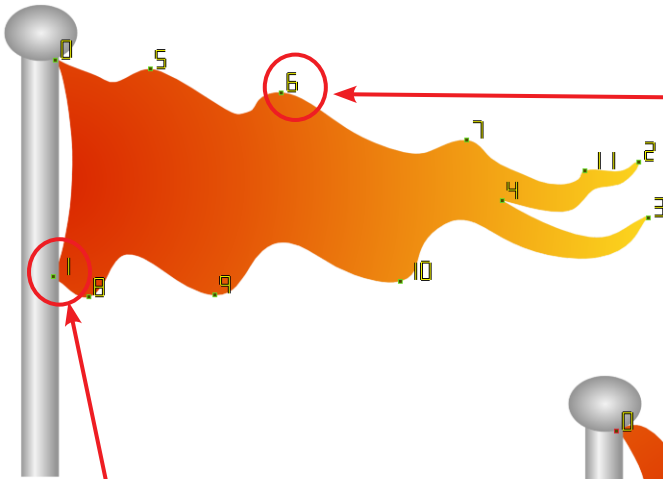
10. In the first and second key drawings, associate the wind waves so that it will slide to the right instead of up and down.

After fixing the corners and waves, there should only be a few details left to fix.

11. Set your hint points on the other morphing sequence in the same way you did for the first one.

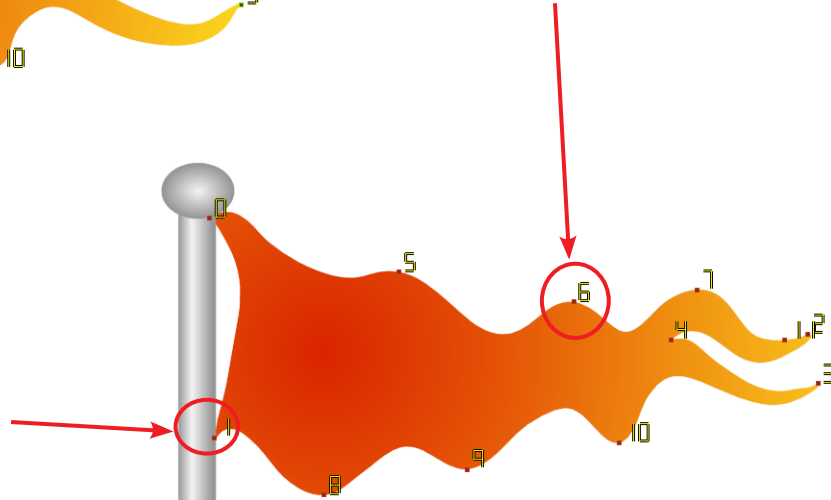


**A morphing sequence is composed of two drawings. If you have more than one morphing sequence, you will need to set hint points for each sequence. If a drawing is used in two sequence, it will have two sets of hints.**



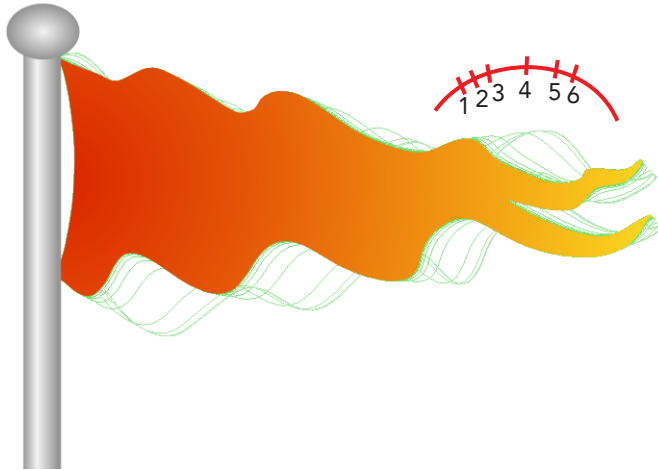
This hint point associates these two waves together. It makes the wave slide from left to right instead of going up and down as it was originally doing.

This hint point associates these two corners together and locks the flag's corner on the spot instead of having it wrap around.

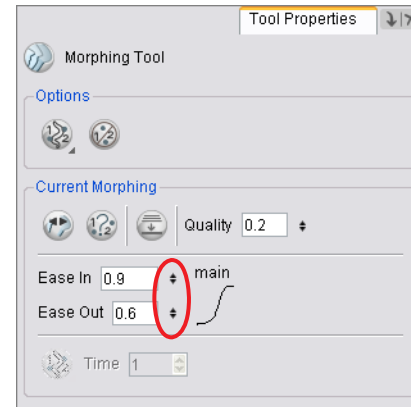



First set your hint points in the corners and intersections. Use the many types of hint points to control different aspects of your morphing sequence. Refer to the Animate User Guide to find out more.

## Adjusting the Ease



Once your morphing sequence is completed, you can adjust the ease so that your animation does not look too mechanical.



1. In the Tools toolbar, select the Morphing  tool.
2. In the Timeline view, select the first key drawing.
3. In the Tool Properties view, set the Ease In and Ease Out values by clicking on the Increase and Decrease arrows.

You are now ready to explore the Morphing capabilities!



If you are morphing a drawing with holes, such as a donut, you need to enable the Flatten option in the Morphing tool's Tool Properties view.

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Toon Boom Animation is the reference standard for paperless cartoon animation software. Our innovative products cover every stage of the industrial pre-production and production cycles.



## Chapter 13 Creating Effects (Animate Only)

In Toon Boom Animate, there are many effects you can easily use to improve the quality of a project.

In this chapter you will use two of these effects in a production-like context to enhance your scene.

You can practice these effects on material you create from scratch or you can also use the sample material:

- Undone\_example\_Sample\_material > Chapter13\_Sample\_material.tpl

The topics are:

- Painting a Starry Sky
- Making your Stars Glow
- Fading your Stars
- Lighting Up the Lampposts
- Making it Shine in the Night
- Keeping Your Distance
- Preparing to Hit the Switch
- Hitting the Switch
- Shooting Star
- Putting On a Mask
- Editing the Mask





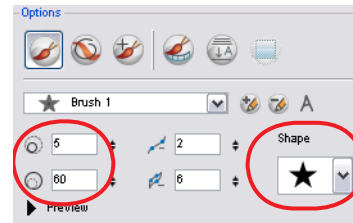
**This chapter does NOT apply to Animate Pro. Refer to the Animate Pro Getting Started Guide to learn how to create effects in Animate Pro, using the exclusive Network view.**

## Painting a Starry Sky



To build a starry night effect, we first need a layer of stars. In Animate, select a star-shaped brush, pick a star-like colour, and draw stars on a new drawing layer!

1. In the Timeline view, click on the Add Layers  button to add a Drawing layer on top of your background.
2. Name the new layer **Stars** and click on its first cell.
3. In the Tools toolbar, select the Brush  tool.
4. In the Tool Properties view, select a star shaped tip and customize the minimum and maximum size values so that you have a range of star sizes when you draw with your pen tablet.



5. In the Colour view, pick a star-like colour.
6. In the Camera view, draw your stars.





Refer to the [Animate User Guide](#) to learn more about the Tools Properties.

## Making your Stars Glow



Now that you have stars in your project, it is time to make them shine!


As you customize your effects, you can preview the final result in the Camera view.

1. In the Camera view bottom toolbar, click on the Render  mode button.
2. To update the preview, click on the Update Preview  button.



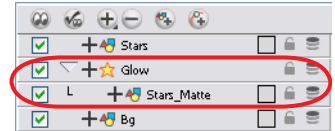
You can enable the Auto Render preview option by clicking and holding the Update preview button in the Camera view bottom toolbar and selecting Auto Render.

### To make your stars glow:

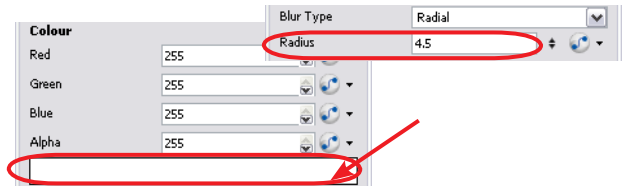
1. In the Timeline view, right-click (Windows) or [Ctrl]+Click (Mac OS X) on the Stars layer and select Duplicate Selected Elements.
2. Rename the new layer **Stars\_Matte**.
3. Click on the Add Layers  button and select

#### Effect > Glow.

4. Click and drag the Star\_Matte layer on the Glow effect layer.



5. In the Timeline view, double-click on the Glow layer to display the Layer Properties dialog box.




6. Set the Blur Radius value.
7. Pick a colour and alpha value. Double-click on the colour swatch to display the Colour Picker.

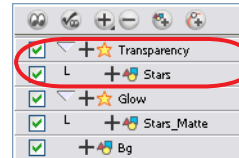
## Fading your Stars



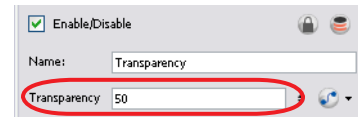
Now that your sky is glowing with stars, you might want to soften them a bit. Try adding a Transparency effect on your Star layer.


1. In the Timeline view, click on the Add Layers  button and select **Effect > Transparency**.

2. In the Timeline view, click and drag the Stars layer on the Transparency effect layer to connect it.



3. In the Timeline view, double-click on the Transparency layer to modify the transparency value of your layer.



4. Display the result in the Camera view using the Render  mode.

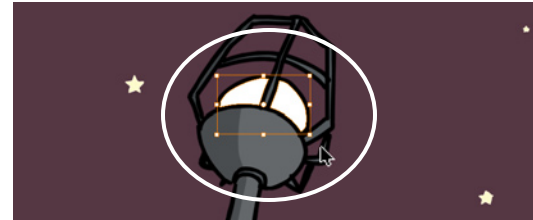








## Lighting Up the Lampposts



Lighting up the lampposts is as easy as making the stars shine. But first, you have to create a lamp layer from the background layer.



1. In the Timeline view, select the Bg layer's first cell.
2. In the Tools toolbar, select the Select  tool.
3. In the Camera view, make sure that you are in Open GL  mode and select the light bulb zones of the two lampposts. Press [Shift]+Click as you select the zones to create a multi-selection.
4. Press the default keyboard shortcut [F9] (Windows) or [⌘]+[F9] (Mac OS X) to Create Drawing Selection.
5. Name your new layer **light\_matte**.
6. In the Timeline view toolbar, use the Add Layers  button to create a new glow effect layer.
7. In the Timeline view, connect the light\_matte layer under the glow layer and customize the effect.
8. Verify the result in the Camera view, using the Render  mode.

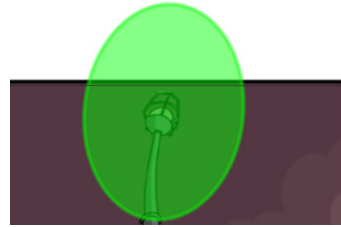






You can make a multi-selection using the [Shift] key while clicking on your objects in the Camera and Drawing view using the Select tool.

## Making it Shine in the Night



Adding a halo around the lampposts and a highlight on the statue is an easy and effective way to enhance the glow effect and integrate all of the elements in the scene.

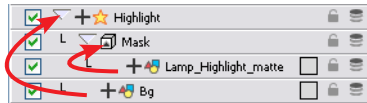



1. In the Timeline view toolbar, use the Add Layers  button to create a new drawing layer.
2. Name this new layer **Lamp\_Highlight\_matte**.
3. In the Timeline view, select the first cell of the new layer.
4. In the Tools toolbar, select the Ellipse  tool.
5. In the Tool Properties view, enable the Auto Fill  mode.
6. In the Colour view, select any colour.
7. In the Camera view, trace a large ellipse around the lamp area. This shape will become your halo.
8. In the Timeline view, click on the Add Layers  button and select **Effect > Highlight**.




Refer to the [Animate User Guide](#) to learn more about the different effects available in Toon Boom Animate.


The Highlight layer, unlike the Glow effect, will only affect particular layers. This means you need to connect the mask as well as the layer it will affect. In this case, it will be the Bg layer.




1. In the Timeline view, click and drag the Lamp\_Highlight\_matte layer on to the Mask of the Highlight effect layer and click and drag the bg layer onto the Highlight.
2. As with the Glow effects, in the Timeline view, double-click on the Highlight layer to customize it.
3. In the Camera view, verify the result using the Render  mode.

The statue highlight effect will follow similar steps.

1. In the Timeline view toolbar, use the Add Layers  button to create a new drawing layer.
2. Name this new layer **Statue\_Highlight\_matte**.
3. In the Timeline view, select the first cell of the new layer.


4. In the Tools toolbar, select the Brush  tool.

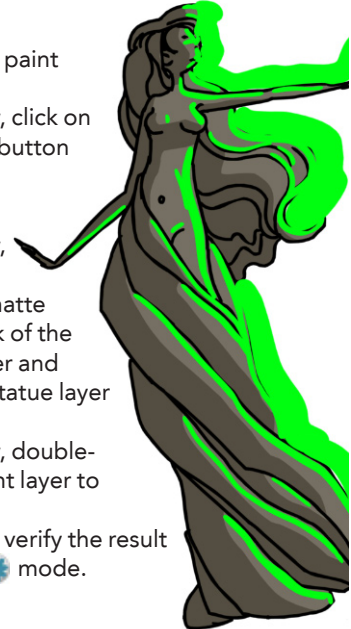
5. In the Camera view, paint the highlight zones.

6. In the Timeline view, click on the Add Layers  button and select **Effect > Highlight**.

7. In the Timeline view, click and drag the Statue\_Highlight\_matte layer on to the Mask of the Highlight effect layer and click and drag the Statue layer onto the Highlight.

8. In the Timeline view, double-click on the Highlight layer to customize it.

9. In the Camera view, verify the result using the Render  mode.




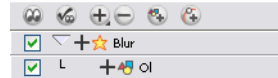
When painting a highlight zone, you do not need to worry about other layers as the highlight effect will only affect the layer you decide to connect into it.

## Keeping Your Distance

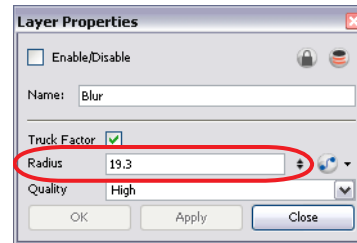



A good way to increase a depth illusion is by having an overlay which is out-of-focus. In this example we will be hiding behind a broken structure.

1. In the Timeline view toolbar, click on the Add Layers  button and select **Effect > Blur**.
2. In the Timeline view, click and drag the OI layer onto the Blur effect layer.



3. In the Timeline view, double click on the Blur layer to customize the Radius value of the effect.

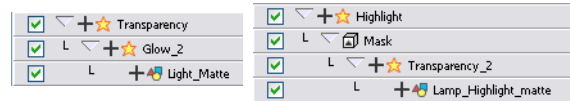



4. In the Camera view, verify the result using the Render  mode.

## Preparing to Hit the Switch



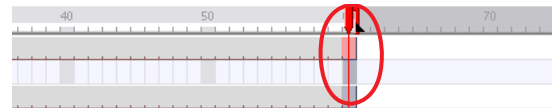
All these effects can be animated over time. For this example, we will progressively light up the lampposts making their glow, halo and the statue's highlight gradually appear. Now, let us prepare this nice effect.



1. In the Timeline view, use the Add Layers  button to add three Transparency effect layers.
2. In the Timeline view, connect the lamppost's Glow layer into one of the Transparency layers.
3. Connect the matte shape layers of the two Highlight effects into the two remaining Transparency layers.

With these Transparency layers you will create a fade in effect, making the scene go from lights out to lights on. Now we need to extend the scene so that we can animate the effects.

1. In the Timeline view, make a multi-selection of all of your layers' last cell of the scene using [Shift]+Click.
2. Press [F5] to extend the exposure.



Refer to the [Animate User Guide](#) to learn more about keyframes and functions.


## Hitting the Switch




Now is the time to create a function and enter the keyframes that will animate the Transparency effects and gradually light up your scene.

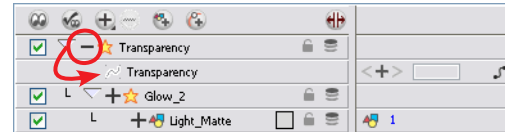



**You can create a hold at the start and end of your scene by adding two more keyframes on your timeline. One of equal value to the first one of your scene and another one of equal value of the one at the end.**

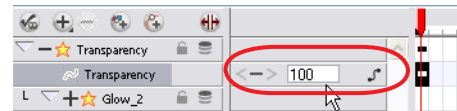
1. In the Timeline view, click on the Expand  button to display the Data view.



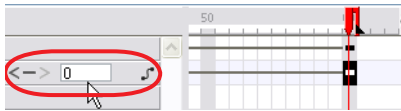
2. In the Timeline view, click on the Transparency layer Expand  button to display the Transparency's function.



3. Make sure that your timeline marker is on the first cell, click on the Add Keyframe  button and enter the first Transparency value. This keyframe should be set to 100 so that the lights are out.





4. Move the timeline marker to the last frame of your scene and press the Add Keyframe **+** button and enter the last transparency value. This value should be set to 0 (zero) to light up the scene completely.



5. Repeat Step 1 to Step 4 for the other two Transparency layers.

Follow these simple steps to preview your animated effect.

1. In the Playback toolbar, click on the Render and Play  button.  
Your frames will be calculated and the Play view will pop up.
2. In the Play view, press on the Play  button and enjoy your scene!



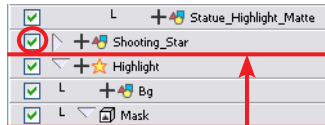
Refer to the [Animate User Guide](#) to learn more about the Play view and previewing your scene as well as exporting your scene.

## Shooting Star





Now, to make things more interesting, let's add a shooting star flying across the heavens. Use the collapsed layer Shooting\_Star which we have provided.

- ▶ In the Timeline view, enable the Shooting\_Star layer and drag it between the bg and the statue layers.



**To animate the shooting star:**

1. In the Tools toolbar, click on the Animate  button and then click on the Transform  Tool button.
2. In the Timeline view, click on the first cell of the Shooting\_Star layer.
3. In the Camera view, click and drag the shooting star to its first position on the extreme left, outside of the camera frame.
4. In the Timeline view, click on the last cell of the Shooting\_Star layer.
5. In the Camera view, click and drag the shooting star across the screen, ending at it's final position.



The system will automatically create the motion between the two keyframe positions.



The shooting star now moves at a constant speed along the straight line from point A to point B. To add a curve and a velocity effect, follow these steps.






#### To add a curve to the animation:

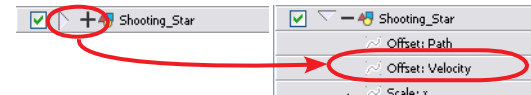
1. In the Timeline view, select the Shooting\_Star layer.
2. Select **View > Show > Control** to display the trajectory.
3. In the Camera view, position your cursor over the trajectory and press [P] to add a control point.
4. In the Camera view, click and drag the new control point to create a curve.



5. In the Coordinate and Control Point view, adjust the Tension and Continuity values to adjust your trajectory's curve.

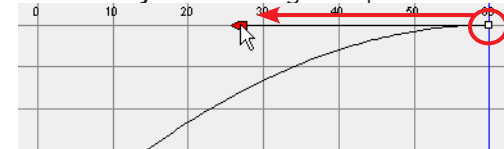
#### To add a velocity effect.

1. In the Timeline view, click on the Expand  button to display the Data view.
2. In the Timeline view, click on the Expand Arrow  and Expand  buttons of the Shooting\_Star layer to display its functions.



3. In the Timeline view, double-click on the Offset Velocity function of the shooting star layer.

The **Velocity Editor** dialog box opens.



4. In the Velocity Editor dialog box, click on the last keyframe and drag the handle toward the centre to create a velocity curve.



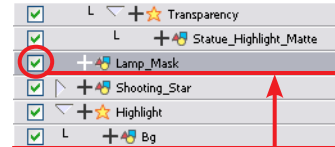
By default, the preferences are set to Motion Keyframes, this means that the system will automatically create the motion between the two keyframes of the shooting star.


## Putting On a Mask

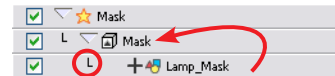


Now the shooting star is all set, only one thing is left to do. Since the lampposts are part of the bg layer, the star cannot pass behind them. For this reason, we will add a mask layer and drawing that will hide the shooting star when it passes in front of the lampposts, giving the illusion of passing behind. For this lesson, a matte drawing of the lampposts is provided for you.

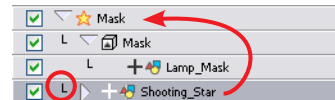
1. In the Timeline view, enable the Lamp\_Mask layer and drag it on top of the Shooting\_Star layer.



2. In the Timeline view toolbar, click on the Add Layers  button and select **Mask**.
3. In the Timeline view, drag the Lamp\_Mask layer onto the Mask's matte layer to connect it to it.



4. In the Timeline view, connect your Shooting\_Star layer under the Mask top layer.



The shooting star will now cross the screen behind the two lampposts!



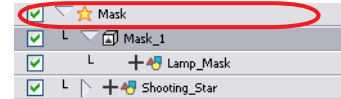
Refer to the [Animate User Guide](#) to learn more about Trajectories, Control Points and the Velocity Editor.

## Editing the Mask



Once a matte drawing layer is connected to a mask effect the drawing will become invisible in the Camera view, as it will automatically be applied as a mask. If you need to edit your matte drawing after you create your connections in the Timeline view, you can easily make your drawing visible without breaking the connections.

1. In the Timeline view, select the Mask Effect layer.



2. Select **View > Show > Control**.  
This will automatically render your drawing visible in the Camera view. It will be displayed on top of all other layers, making the editing easy to do.



3. In the Tools toolbar, select the drawing tools you need.
4. In the Camera view, edit your matte drawing.
5. Select **View > Show > Control** to hide the matte drawing and return to the normal display of your scene.



Refer to the [Animate User Guide](#) to learn more about Mask and Effects.

toonboom.com/showcase/

# It's cartoon animation showtime!

We have the best customers in the world. You can check for yourself.

Our **web showcase** screens the best of their cartoon production and much more, from professional tips and tricks to case studies.

Get some popcorn, get comfortable and press that fullscreen button.

The screenshot displays the Toon Boom Showcase website interface. At the top left is the Toon Boom logo, and at the top right is the word 'SHOWCASE' with a play button icon. The central video player shows a scene from 'The Simpsons' where Bart Simpson, Lisa Simpson, and Marge Simpson are sitting at a table with food, dressed in Halloween costumes. The background is decorated with pumpkins and a skeleton. Below the video player is a progress bar and control buttons. To the right of the video player is a 'NOW SHOWING' sidebar with a scroll arrow. It contains four video thumbnails with titles and durations: 'Trick or Trick' (2:28), 'Hide and Seek' (1:23), 'Santa Dance' (0:25), and 'Cat Chase' (0:10). At the bottom of the interface is a 'FEATURED ARTIST' section.



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