



ADOBE ANIMATE 2020

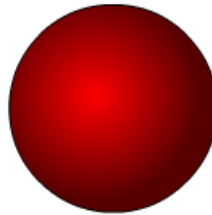
4 – More Motion

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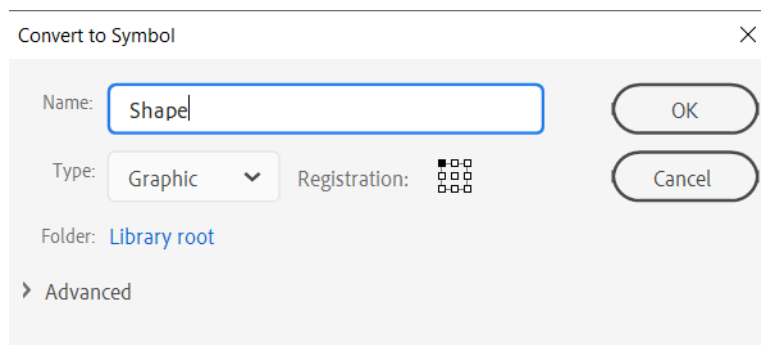
Exercise 1. Motion Guides

When you are creating motion tweens, usually the object you are animating will move in a straight line from one point to another. If you want to control the way your object gets from the starting point to the finishing point, you can use a motion guide. In older versions of **Flash** this was done using motion guides which are still needed if you are using a Classic Tween. We'll start with a simple animation to demonstrate before using motion guides in something more complex.

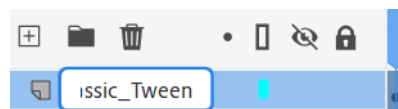
1. Create a new Animate file.
2. Create an object on the stage.



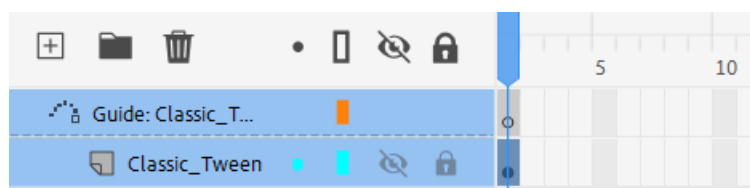
3. Select the object and convert it in to a **Graphic symbol** by selecting **New Symbol** from the **Insert** menu or by pressing **F8**.




4. On the **Layers Panel**, rename by **double clicking** the layer name.

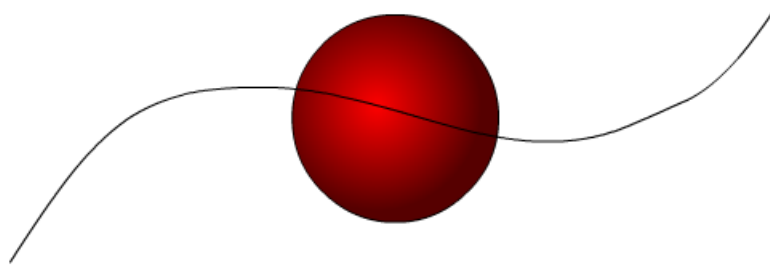
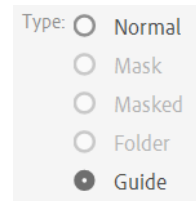


5. Enter *Classic_Tween* as the new layer name (you can't have spaces in a layer name but you can use an underscore). You only have one layer at the moment but naming layers is a good habit to get in to for when you have more than one.
6. **Right click** on the **Classic_Tween** layer and choose **Add Classic Motion Guide**.

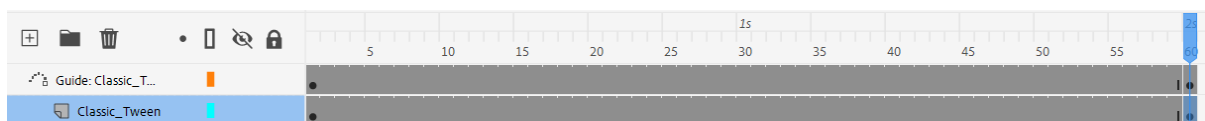



A new layer will be added above the animation layer. A guide layer is a special type of layer that you can use to guide motion on a normal layer.

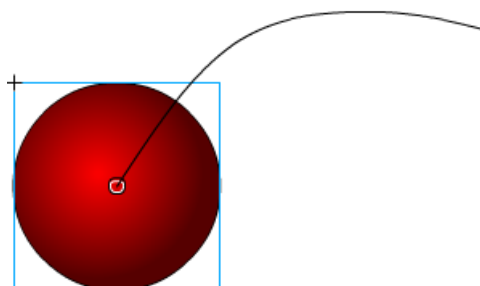
7. **Right click** on each layer and select **Properties**. You will see that the **guide** layer will have **guide** selected in the properties while the **Classic Tween** layer will have **Guided** selected in the properties.
8. Make sure the **Guide layer** is selected. This is the layer we will use for drawing a motion guide.
9. Select the **Pencil Tool**. 
10. Draw a wavy pencil line across the stage (It might help to set your **Pencil Mode** to **Smooth**).



11. Click on Frame **60** in the timeline. Remember that a standard animation is set to play at 30 frames per second so Frame 60 would be 2 seconds in to the animation.
12. From the Insert menu select **Timeline** and then **Keyframe** (You can also **right click** on the frame and choose **Insert Keyframe** or you can press **F6** on your keyboard).
13. Make sure both the guide layer and the normal layer have a key frame on Frame 60.



14. Click on Frame 1 in the timeline.
15. Select the **Selection Tool**  and drag the object so that the dot in its centre is on the beginning of your guide line.



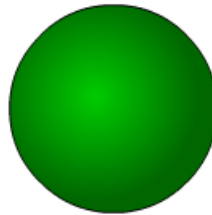
16. Click on frame 60 in the timeline.
17. Drag the object so that the dot in its centre is on the other end of the line.
18. **Right click** between Frame 1 and 60 on the *Classic_Tween* layer and select **Create Classic Tween**.
19. Press **Ctrl Enter** to test the animation in your web browser. The guide will not be visible but the object should travel along the guideline as it animates.

Now we'll try doing the same type of animation using the new motion tweens.

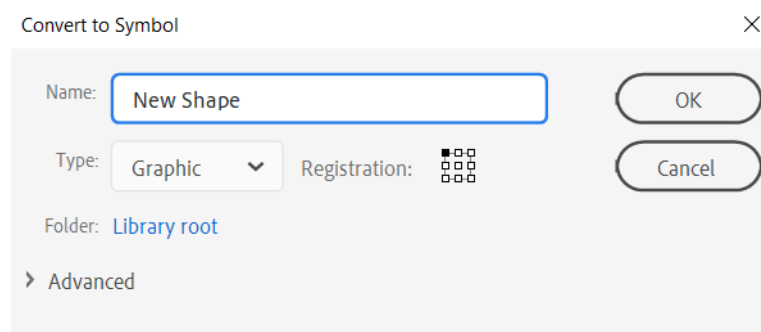
20. We'll create a new layer but we don't want it to be affected by the guide layer we just created. Click the *Guide* layer to make sure that our new layer is above it rather than below it.
21. Create a new layer and rename it as *New_Tween*.



22. With Frame 1 selected on the new layer, draw a new object in a different part of the stage.



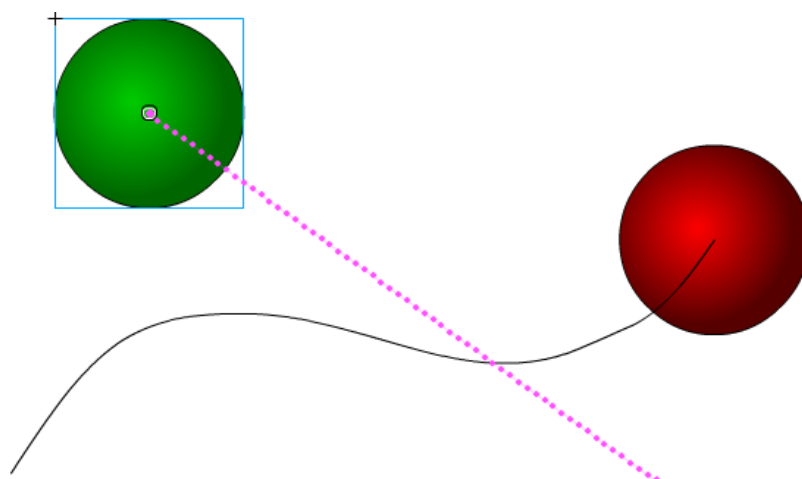
23. Select the shape (including stroke and fill) and turn it in to a symbol with a different name.




24. **Right-click** anywhere along the timeline for the **New_Tween** layer and select **Create Motion Tween**.

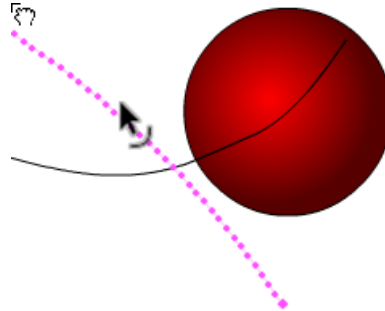
The timeline for that layer will be filled with a solid colour.

25. Click on the last frame and move the object to a new position on the stage. A dotted line will show the path from the starting point to the end point.

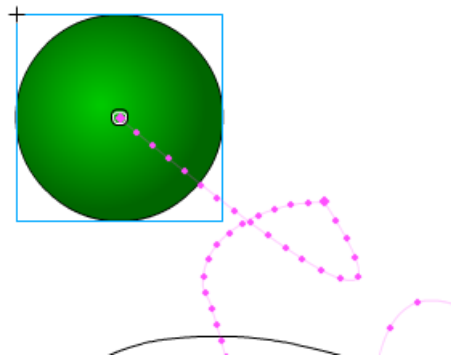


A small diamond shape appears on the last frame of the timeline . This is a **Property Key Frame**. It marks a position within the **Motion Tween** where changes can be made, such as position, size, colour etc.

26. Move your mouse over the dotted line and drag to turn it in to a curved shape.



If you want the path to be made up of more than one segment, add Property Key Frames the same way you would add a normal Key Frame (E.g. **F6**). This enables you to create a more complex path made of several curves.



27. Press **Ctrl Enter** to preview your animation completed with the completed tweens.

Exercise 2. Creating an Object from Symbols

In an earlier exercise you created a **Graphic Symbol**, allowing you to use the same shape repeatedly in an animation. A **Movie Clip Symbol** allows you to create a symbol that includes advanced animation within the symbol. The ability to have animation within animation adds new possibilities, allowing you to do things that wouldn't be possible otherwise. Movie clip symbols also allow options that aren't available with a regular graphic symbol.

Tip When you are creating a new file you have options to view Animate tutorials. Look through the **Tutorials On The Web** category to find a tutorial called **Types of Symbols**. This gives a good overview of the differences between **Graphic** and **Movie Clip** symbols.



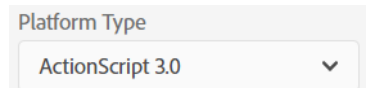
Types of symbols

The two most common symbol types in Adobe Animate are Graphic symbols and MovieClip symbols. They are alike in many ways – but there are stark differences as well.

Opens in browser · 3m

In the following exercise we will create a movie clip that contains walking movements for a character. In the example we are drawing a policeman but you might like to draw your own character. We will then be able to make that figure walk around the stage.

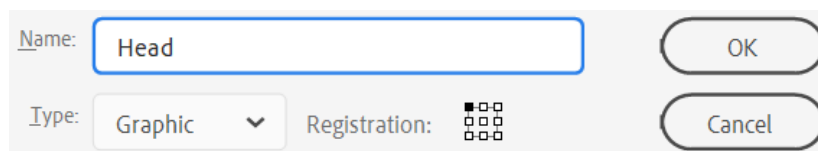
1. Press **Ctrl N** to create a new blank Animate file.
2. In the new project options, ensure **Platform Type** is set to **Javascript 3**.
3. Select the standard size preset and click **Create**.
4. Create the following object for the character's head on your stage using the drawing tools you have learned (or a better looking one if you're more artistic).



If you have trouble, see the end of this chapter for a step by step example on creating the head part (if you're viewing these exercises on your computer [click here](#) to go to that page now).



5. Select all parts of the object.
6. From the **Modify** menu select **Convert to Symbol (F8)**.
7. Create a **Graphic symbol** named **Head**.

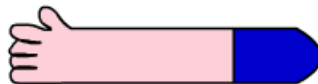



8. Before continuing, save your animation as *Policeman* or another suitable filename.
9. Create a new object like the following example.



10. Select all parts of the body and create a **Graphic symbol** named **Body**.

11. Create a new object which looks like the one shown below.



Tip If you want your colours for parts such as skin and shirt to match the colours in the parts you have already drawn, you can use the **eyedropper** tool  to click on those parts you have already drawn when you are selecting colours.

12. Select all parts of the new object and create a new **Graphic symbol** called **Arm**.

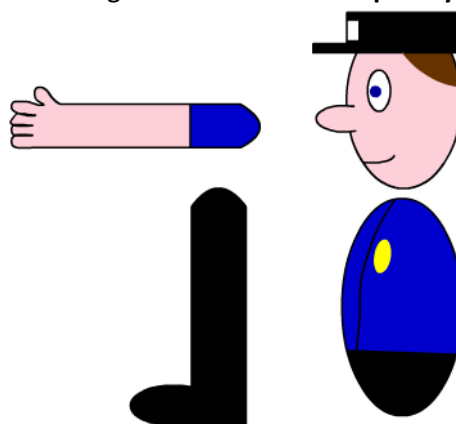
Note If you wanted individual parts of the policeman to be animated, such as the eyes blinking or mouth moving, you would need to create them as separate objects. For the time being we're limiting the number of objects to keep it a bit more simple.

We will be able to use this symbol later for both the left arm and the right arm. Before we do that though, we will create a third symbol to use for the legs.

13. Now create a leg that looks like the following example.



Select all parts of the leg and make a new **Graphic symbol** called **Leg**.



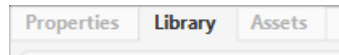
You should now have the shapes you need to put together your animated character.

14. Save your work before continuing.

Exercise 3. Creating a Movie Clip Symbol

Delete all of the objects from the stage. They will still be in the library so we can retrieve them from there later when needed.

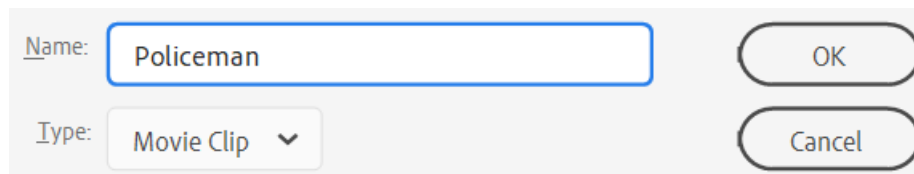
1. Click the **Library** tab along the top of the **Properties** panel.



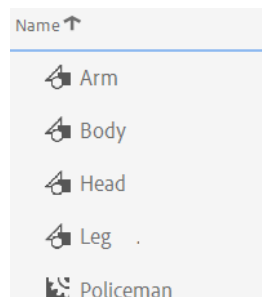
2. Click the **New Symbol** button at the bottom of the **Library Panel**.



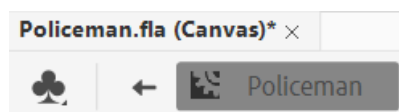
3. Enter **Policeman** (or something suitable for your character) for the name of the new symbol and make sure type is set to **Movie Clip**.



You will notice in the **Library** panel that the **Movie clip** symbol has an icon next to it that is different from the **Graphic** symbols.



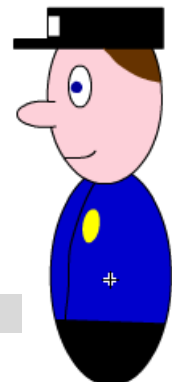
Since we've created a blank symbol we will now be in the symbol edit mode. You can tell that you are editing a symbol as the symbol name will appear below the file tab at the top.



4. Drag the **Body** symbol from the library in to the middle of the editing area.
5. Drag the **Head** symbol in to the editing area so that it is suitably connected to the body.

We will now create an animation using the symbols we have already made. This animation will be part of the movie clip symbol. Unlike a graphic symbol, a movie clip symbol has its own timeline that is independent from the main timeline.

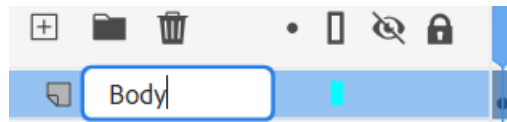
Tip Don't forget to save often.




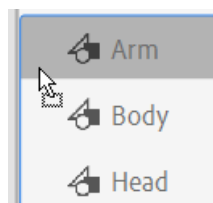
Exercise 4. Adding Symbols to a Movie Clip


Make sure you are still editing the movie clip symbol.

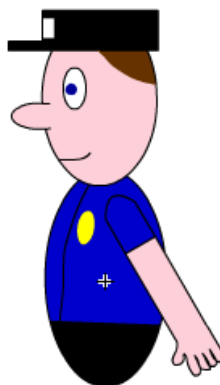
1. Rename the layer in the layers panel as **Body**. Remember you can rename a layer by double clicking on its name. We will keep both the head and body on this layer as they will not be moving separately.



2. Create a new layer by clicking on the **Insert Layer** icon  at the top of the layers panel.
3. Rename the new layer *Left_arm*.
4. From the **Library** panel, drag the *Arm* symbol on to the stage.

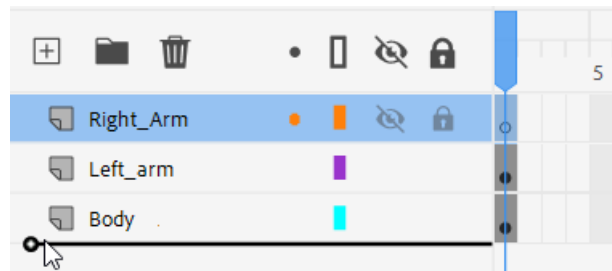



5. Use the **Free Transform** tool  to rotate, resize and position the arm so that it appears like the example below.

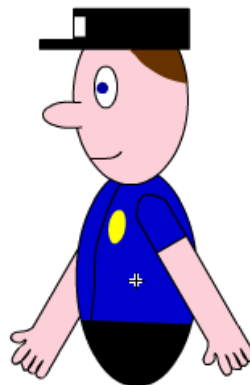


6. Create a new layer by clicking on the **Insert Layer** icon  at the top of the layers panel.
7. Rename the new layer *Right_Arm*.

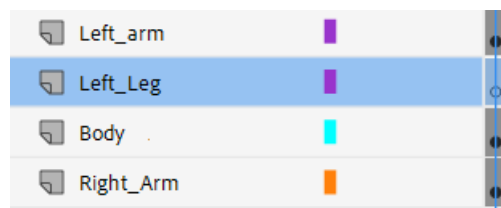
8. Drag the *Right_Arm* layer so that it is beneath the *Body* layer. This will make the right arm in our animation appear behind the body.



9. Make sure the *Right_Arm* layer is still selected and drag another instance of the *Arm* symbol from the **Library** panel on to the stage.
10. Use the **Free Transform** tool  to rotate, resize and position the arm so that it appears like the example below.



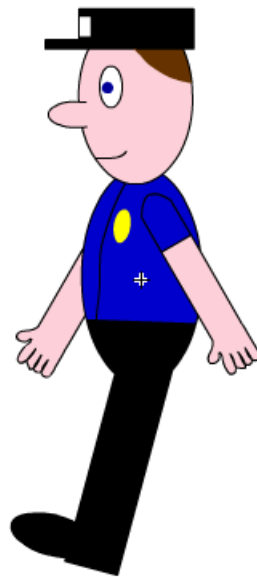
11. Create a new layer called *Left_Leg*.
12. Make sure the *Left_Leg* layer is above the *Body* layer and below the *Left_Arm* layer.



Tip When you add new layer it will appear above the layer you have selected. This means you could select the *Body* layer first, to make sure the new layer appears just above it.

13. Drag an instance of the *Leg* symbol from the Library on to the stage.

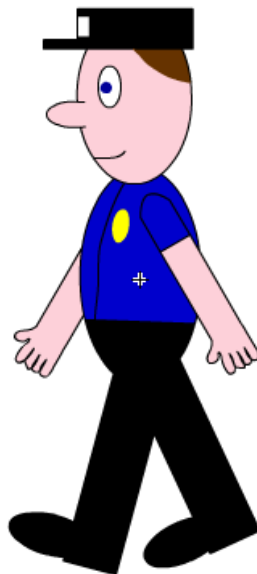
14. Position the leg so that it looks like the example below.



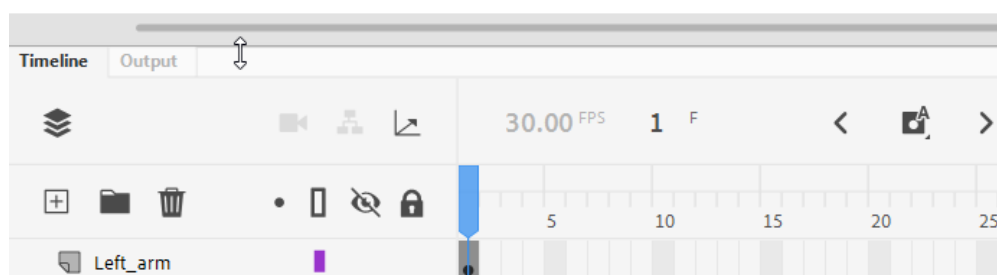
15. Create a new layer called *Right_Leg* and place it below the *Body* layer and above the *Right_Arm* layer.

16. Add a new instance of the *Leg* symbol from the Library.

17. Position the right leg so that it looks like the example below.




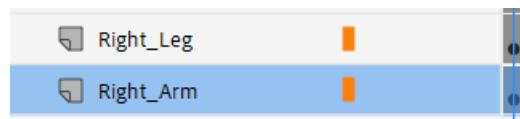
Tip When you are working with multiple layers it can help to **resize** the **layers panel** so that you can see more layers at once.



Exercise 5. Checking Layers

One common mistake that can be made with animation is not putting objects on the correct layer. When people run in to problems, it is often because they have placed more than one object on the same layer which makes it difficult to get your animation working the way you want it to. There are a few ways of checking that things are on the correct layer. One way is to simply click on objects.

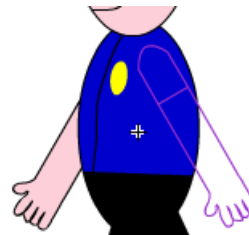
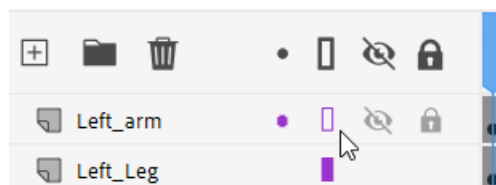
1. Using the **Selection** tool  (remember you can hold **Ctrl** to temporarily activate it if you have another tool active), click on the right arm of your Policeman. If it has been placed on the correct layer, the name of the layer should be highlighted in the Layers panel.
2. Check the Layers panel to make sure the *Right_Arm* layer is highlighted.



3. Click on each part of the policeman to make sure each part is on the correct layer.
4. If there are any problems, make the necessary changes now by removing or adding symbols on layers as needed. It's easier to get it right before we start any animation.

Another way you can check the layers is by clicking the coloured squares next to each layer.

5. Click on the coloured square next to the *Left_Arm* layer. Any objects on that layer will now be shown with only an outline appearing in the same colour as the square.



6. Click the same square to show the arm normally again.
7. Check other layers the same way by clicking on their outline colour boxes.

Exercise 6. Creating the Animation

We will create an animation which makes it look like the arms and legs are moving in a walking motion.


1. Select the *Body* layer in the Layers panel. This is the only layer that won't be moving but it will still need to be visible for the duration of the animation.
2. Select frame **30** on the timeline (make sure it is still on the Body layer).

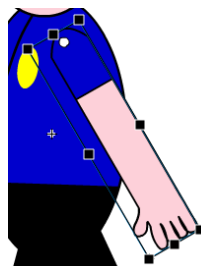
At 30 frames per second this frame will be 1 second in to the animation.

3. Right click on the frame and choose **Insert Frame** or press **F5**.

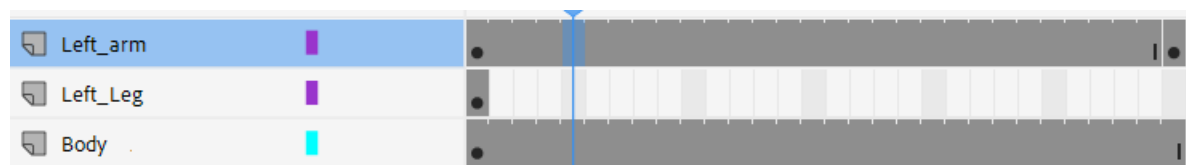
Since this layer won't be animated it doesn't need to be a Keyframe. It only needs to be visible up to frame **30**. All of the frames from **1** to **30** should now be filled in on that layer. Don't worry if your other layers appear to have vanished as they currently only appear in frame 1. We haven't added additional frames for the other layers yet but we are just about to.



4. Select the *Left_Arm* layer in the Layers panel and make sure frame 1 is selected on the timeline.
5. Select the **Free Transform** Tool .
6. The white circle in the middle of the transform area determines the **pivot point** if the shape is rotated. Move it to the point where the arm joins the shoulder as shown below. If the dot snaps on to positions you don't want it to then you might find it helpful to zoom in (**Ctrl +**).



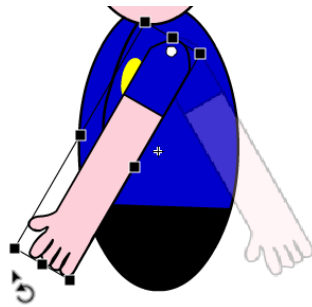
7. Select frame **30** in the timeline on the same layer. Since this one will be animated it will need a **Keyframe** instead of a regular frame.
8. Right click on the layer and select **Insert Keyframe** (or press **F6** on your keyboard). You will notice that the Keyframe on this layer looks slightly different from the regular frame on the Body layer.



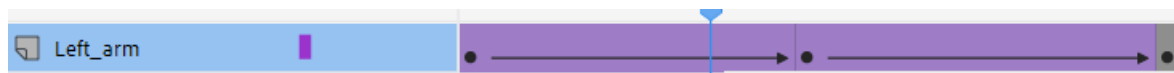
Note If you add a Keyframe and the frame has a hollow dot instead of a black dot, it is because there are no objects on that layer.

9. With the Left Arm layer still selected add a **Key frame** at frame **15** in the timeline.
10. With frame **15** still selected, use the free transform tool to change the position of the arm so that it looks like the example below. Do this by putting your mouse outside the shape and dragging to rotate. Because you changed the **pivot point**, the arm will pivot around that point as you transform it.

Tip setting other layers to outline view can help when you are modifying a layer. Especially with pivot points.



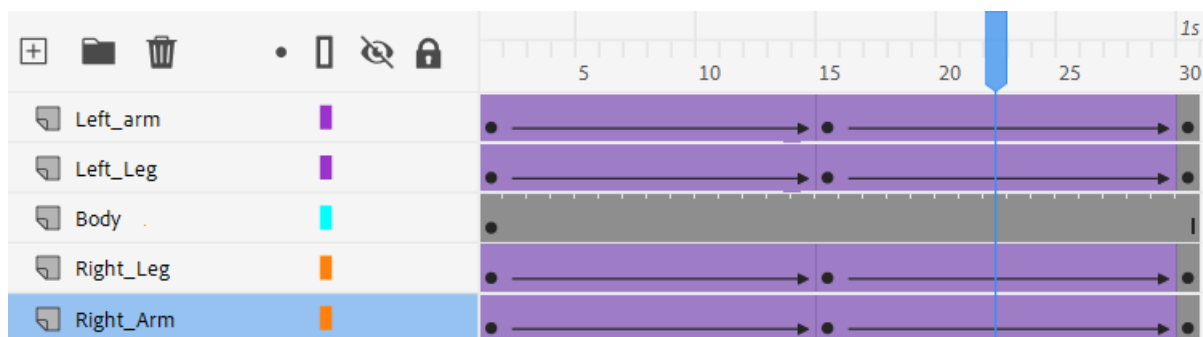
11. **Right click** between frame 1 and 15 and choose **Create Classic Tween**.
12. Add another classic tween between Frame 15 and 30.



13. Select the first frame (**Shift**, - or shift comma are a shortcut to move to the first frame).
14. Press **Enter** to play your movie (or select Play from the Control menu). Your right arm and both legs will only be visible during the first frame, but you should see the body for the whole animation, as well as seeing the left arm moving in a swinging motion during the animation.
15. Repeat steps 4 to 12 so that your right arm animates with a swinging motion like the left arm.
16. Repeat steps 4 to 12 so that your right leg animates with a swinging motion.
17. Repeat steps 4 to 12 so that your left leg animates with a swinging motion.

Tip Since the policeman is on a slight angle, you can make him look a little more natural by placing the right leg and arm slightly further to the front.

18. **Save** the changes to your file.



Exercise 7. Creating a Background

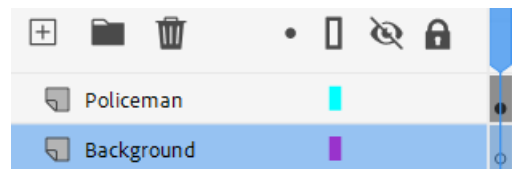
Now that we've finished animating our movie clip symbol, it's time to make use of it in an animation.

1. Exit symbol editing and return to your project's main scene by clicking on the exit symbol icon at the top.



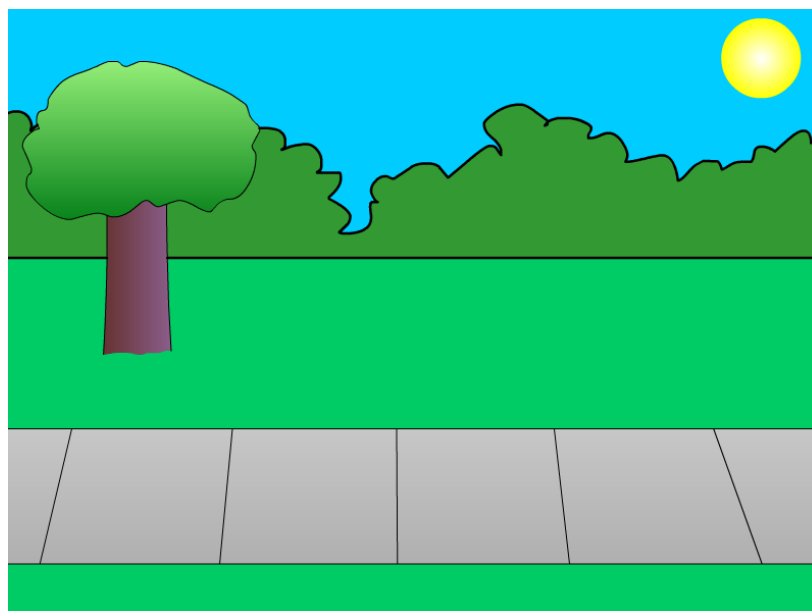
Once you are back in to editing your scene you will notice that there is now only one layer and only one frame in the timeline. All of the layers and frames that you have just been editing are all part of the Policeman Movie Clip Symbol, not the main movie. You can return to editing your symbol by double clicking it from the **Library** panel but from now we will edit the main scene.

2. Rename the existing layer as *Policeman* (or use another name if you have a different character).
3. Drag the Policeman movie clip symbol from the Library panel and move it to a position outside the right edge of the stage.
4. Create a new layer called *Background* and move it below the Policeman layer.



5. Make sure the background layer is still selected. Use your shape and drawing tools to create a background for your scene. You can use the one below as an example or create your own.

Tip Drawing beyond the edges of the stage is fine. When you export your final animation, it will only show the parts within the border of the stage. For drawing some parts of your background such as the tree in the example below, it can help to draw them off to the side of the stage first and then move them to where you want them to go.

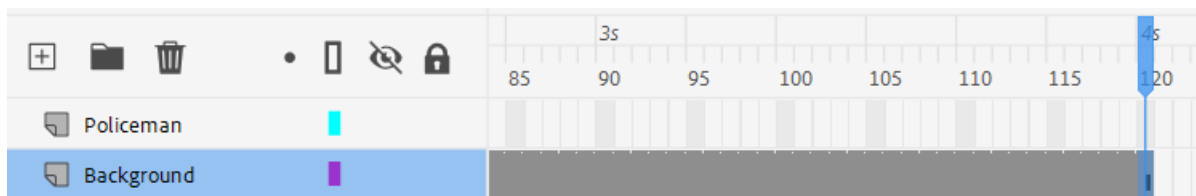


Exercise 8. Using a Movie Clip Symbol

One of the key features of a **movie clip symbol** like the one we have created is that it has its own timeline that is independent from your main stage's timeline. That means that the walking animation we have created within our movie clip symbol won't be dependent on frames we have created in the timeline of the stage.

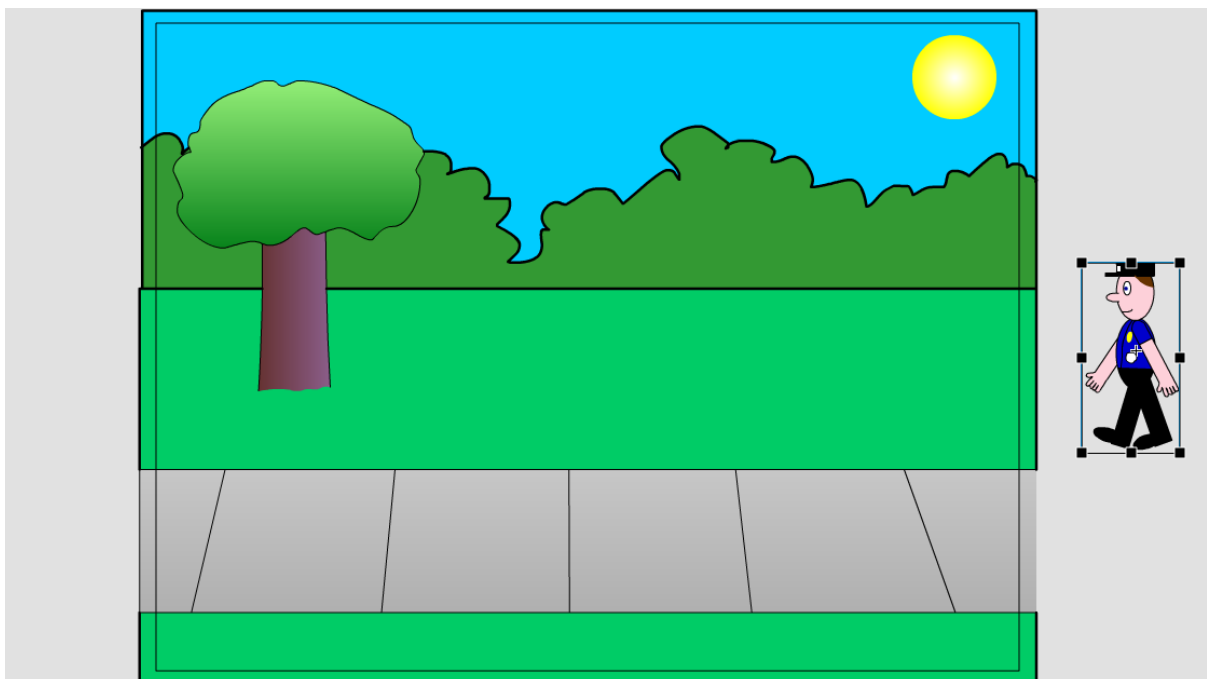
Now it's time to add our animated character. First we need to make sure our background is visible for the whole duration of the animation so we will need to add frames for the background layer.

1. Our animation will last for 4 seconds (120 frames), so **right click** on frame 120 of the background layer and select **Insert Frame**.



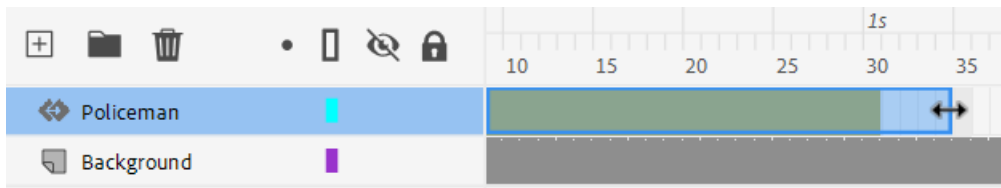
Our animation will involve a single motion tween. We want our character to walk across the stage following a curved path. We will make him a different size at the end point so it looks as though he is growing (getting closer) as he moves.

2. Select *Frame 1* on the *Policeman* layer. Notice that this frame has a hollow dot to show that there is currently nothing on that layer in frame 1.
3. Resize and position the policeman so that he is positioned like the example below (still off to the side of the stage).

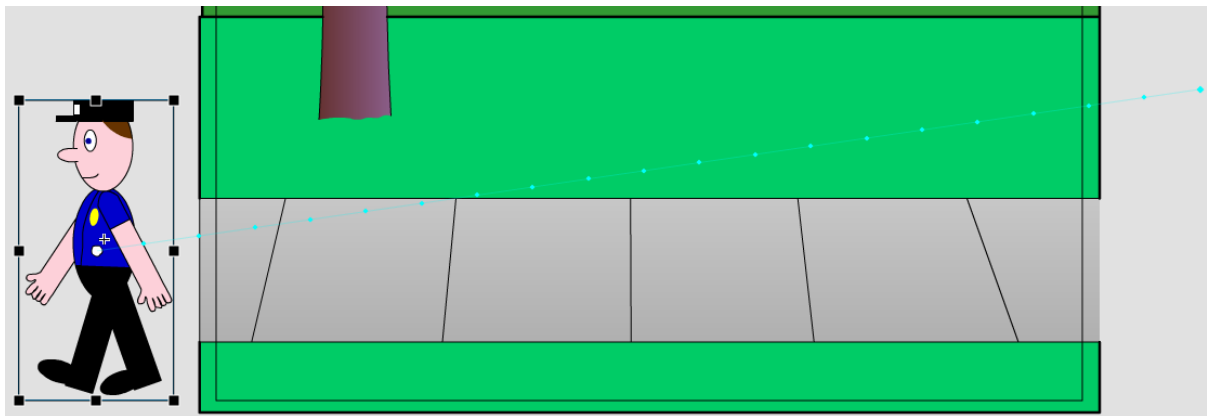


Tip When you are resizing with the **transform** tool, use the corner and hold down **shift** to make sure the height and width stay in proportion to each other.


4. **Right click** on frame 1 and select **Create Motion Tween**. This will create 1 second's worth of motion tween but we will extend that to 4.
5. Move your mouse to the edge of the tween and resize it until it reaches frame 120.

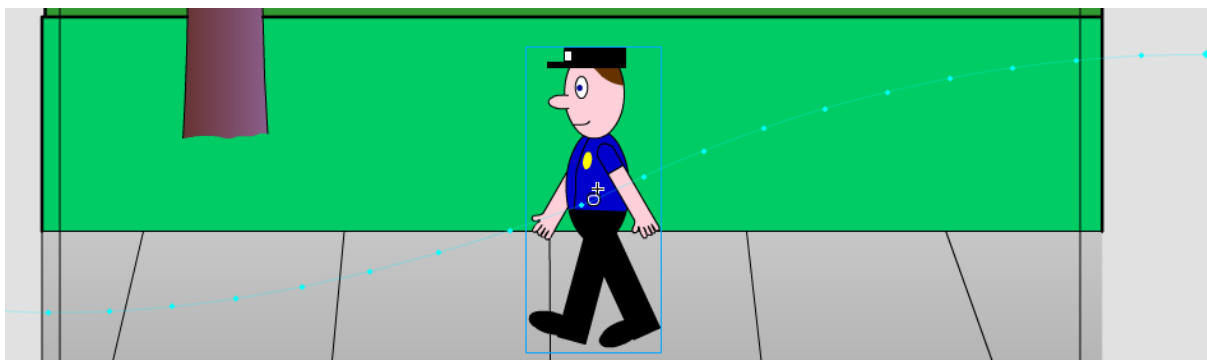


6. With frame 120 selected, move and resize the policeman so that he is slightly larger, slightly lower and on the other side of the stage as shown.



Note the dotted line indicating the path from the policeman's starting point, to the finishing point. A property key frame has been created in frame 120 as indicated by the small dot on that frame.

7. Click on one of the frames in the middle. Create a new key frame in the usual way or by moving the policeman on the stage (moving an object while you are on a part of the timeline inside a tween will create a key frame in that location). The key frame is shown on the dotted path line as a slightly larger dot.
8. With the Selection Tool  drag the dotted line to make it in to a curved shape. Do the same for the section of the line on the other side of your new key frame.

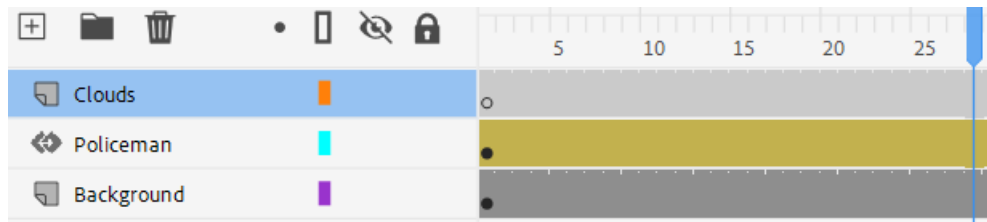


9. Press **Ctrl Enter** to test your movie. The arm and leg motion that was part of the Movie Clip Symbol will work as the symbol is used on your stage. Since it's a symbol, you could drag more instances from your library and have a whole group of policeman marching across your stage with perfect precision.

Exercise 9. Movie Clips that Don't Move?

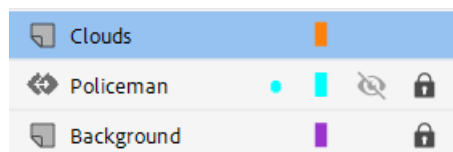
You can use movie clips for symbols that won't include any animation but why would you want to? Well for one thing, a movie clip symbol can do things a Graphic symbol can't, like use some of the built in effects. We'll use one such effect in the following steps to add some 3d clouds to our animation.

1. Add a new layer called *Clouds* to your animation. Make sure the new layer is on top of all the other layers.



2. Make sure Frame 1 is selected and using the tools available, draw a cloud on the new layer.

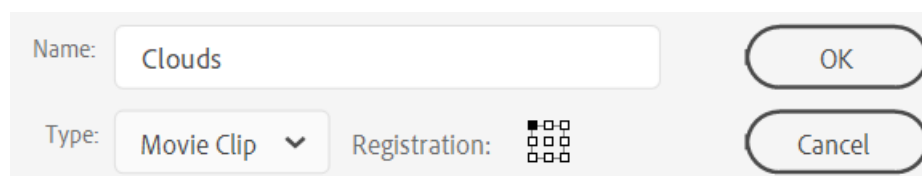
Tip If you use the Fill tool to fill the cloud with a colour after drawing its outline, it might help to temporarily lock or hide the other layers so Animate doesn't think you're trying to use the fill on those layers.



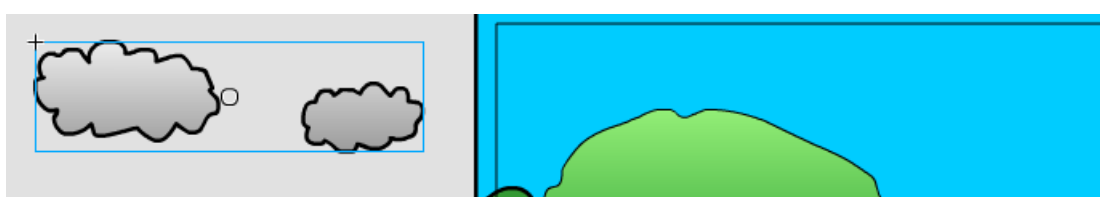
3. Draw a second cloud near the first one.
4. Select both clouds. We will make both clouds in to a single object so that they can move together.



5. Create a new **Movie Clip Symbol** called *clouds*.



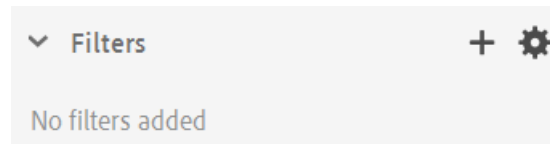
6. We will animate the clouds so that they move across the sky in the top of the movie. Position the clouds off the left side of the stage.



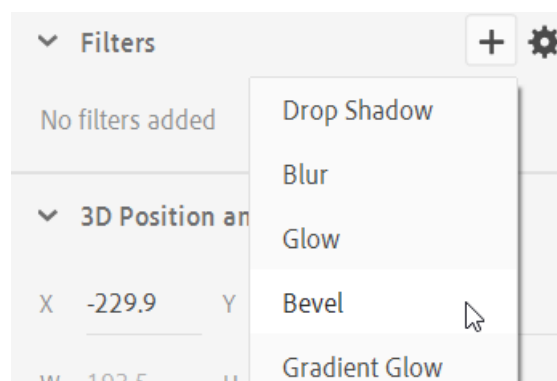
7. Add a **Motion Tween** to the Clouds layer like we did with the policeman so that the clouds move from one side of the stage to the other. Make sure the tween extends to frame 120.

The last thing we'll do is use a filter to change the look of the Clouds symbol. This wouldn't be possible if we had made the clouds in to a regular Graphic symbol.

8. Make sure the *Clouds* symbol on the stage is selected at *frame 1* on the timeline.
9. Make sure the **Filters** section is showing at the bottom of the **Properties Panel**.



10. Click the **Add Filter** button at the bottom of the Properties Panel.
11. Select **Bevel** from the menu that appears.



Note when you create a new Animate project you can choose whether the **Platform type** is **ActionScript 3.0** or **HTML5 Canvas**. The HTML5 option is good if you want your completed animation to be used in a web page. Some filters however, such as Bevel, might not be available in an HTML5 project.

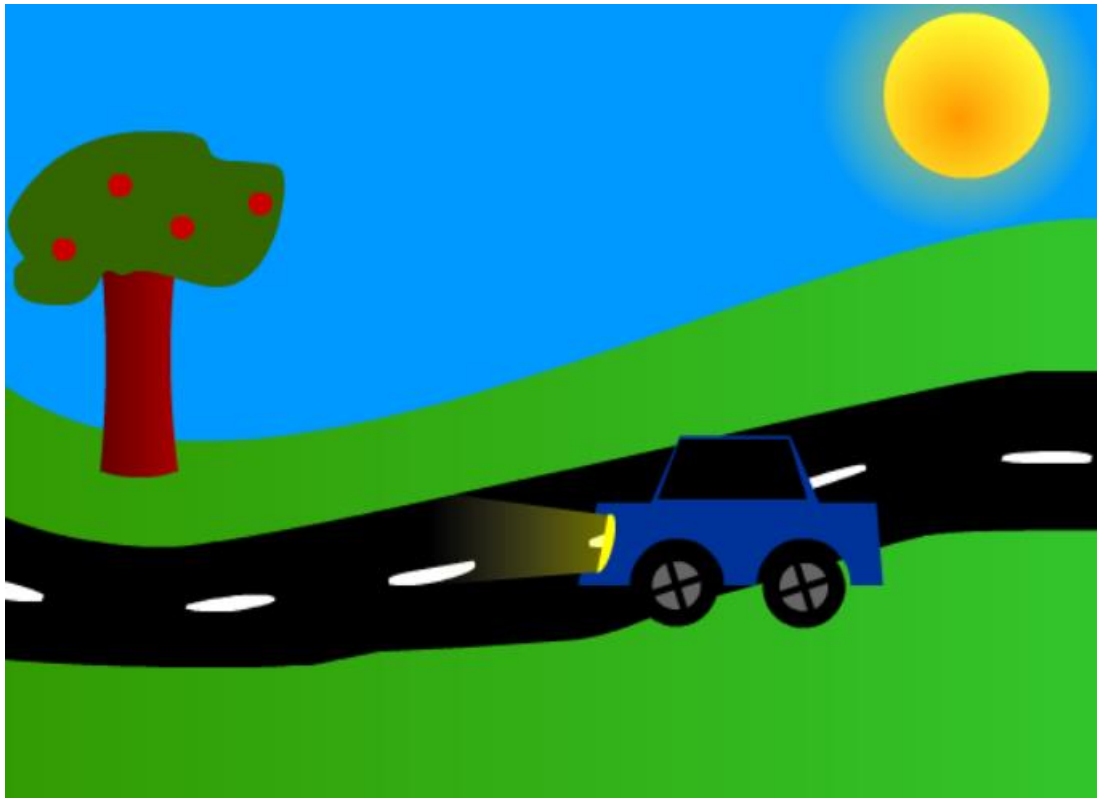
12. From the options beneath the filter, set the quality to **High**.
13. Try some of the other options until you like the look of your clouds.
14. Test your animation (**Ctrl Enter**) to see how the clouds look.
15. Save the animation when you're satisfied with the changes.

Tip You could also make the clouds semitransparent by changing the **Colour** option of the symbol (in the Properties Panel) to **Alpha** and adjusting the transparent amount.



Animation Challenge


Use what you have learned to create an animation like the one below. The car should be travelling along the road along a curved path and the wheels should be rotating (so the car will need to be a Movie Clip Symbol with rotating wheels inside that symbol).

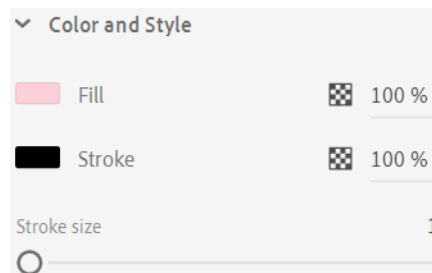


Policeman Body Tips

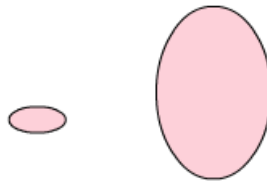
Note When you follow these instructions, your policeman might not look identical to the one in the exercises since we're not following any exact measurements. You will probably find most of these steps a lot easier if you zoom in (**Ctrl +**) since some parts of the face (such as the eye) will be quite small.

We'll start with drawing the head.


1. Select the **Oval** tool. 
2. Select a thin black line style for the stroke (outline) with a skin colour for the fill. The colour options in the **Properties** panel to the side of your stage should look similar to the ones below.



3. Draw an oval shape for the head and another smaller oval for the nose as shown below.




We're going to use the eraser tool to remove the right side of the nose before attaching it to the face.



4. Select the **Eraser** tool. 
5. Use the eraser to remove the end part of the nose on the same side as the face.
6. Use the **Select** tool to move the nose on to the face (you hold down **Ctrl** to temporarily activate the move tool so you don't have to click the icon). Remember to make sure you **double click** to select the stroke as well as the fill.

Tip While the nose is still selected, you can press the arrows on your keyboard to move it by small amounts. This can help fine tune your positioning.



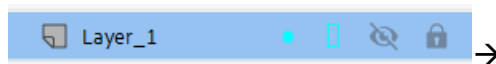
7. Select the Oval tool again. Keep the thin black outline but this time select a solid white fill colour


Tip You can also press the default icon on the Toolbar  or press **D** on your keyboard any time you want to set your colours to white fill and black stroke.

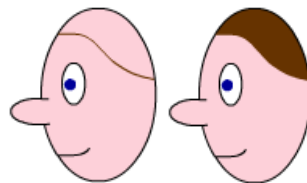
8. Draw a small oval for the eye (If you're worried you might not get it the right shape or size the first time, draw it off to the side before moving in on to the face. Then if you're not happy with it, you can simply delete it and try again).
9. Select the **Brush** tool. 
10. Select a suitable brush size and set the fill colour to the colour you want the middle of the eye to be.
11. Use the brush to paint a small dot inside the eye.
12. Select the Pencil tool . You should still have a thin black line in the stroke settings.
13. For drawing the mouth, make sure the pencil mode at the bottom of the toolbar is set to Smooth.
14. Draw a small line for the mouth.
15. With the pencil tool still selected, change the stroke colour to the colour you want the hair to be.
16. Draw a hairline on the head.




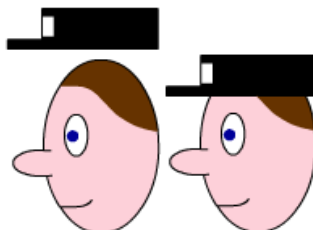
Before you fill the area it is important that there are no gaps between the line you just drew and the edges of the oval. One way you can check is to turn on the layer outline and zoom in to see any gap.



17. Select the **Fill** tool. 
18. Set the fill colour to the same colour as the hairline and click inside the hairline area to fill with the hair colour.



19. Select the **Rectangle** tool. 
20. Set both the **Stroke** and **Fill** colours to **black**.
21. Draw one rectangle for the hat, with another thinner rectangle making up the front of the hat. You might want to draw it above the head first and then move it in to place afterward.
22. Add the badge on the hat (in this example it's been done with the rectangle tools, though it could be done with other tools).



23. Move the hat in to place.

Head and hat complete! Now use the same for the body and the other parts of the animation.