The Flash environment consists of many different tools and functions organised into panels. To make the screen a little simpler you can open, close and minimise them. If a panel is closed then you can open it by going to the Window menu.

The workspace window can be arranged in many different views. The default view is **Essentials**. Maintain this view.

The main ones you use will be the

1. **Timeline** – shows all the different layers and frames
2. **Tools** – has all the drawing and painting tools
3. **Properties** – allows you to set different options including the size of the stage
4. **Library** – used to access and store objects (images) that make up the animation
The Timeline

The timeline shows time divided into **frames** from left to right. Frame numbers are shown on the top of the timeline.

Take note of the icons at the **top and bottom of the timeline**:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>📡</td>
<td>Show/Hide all Layers</td>
</tr>
<tr>
<td>🔒</td>
<td>Lock or Unlock all Layers</td>
</tr>
<tr>
<td>📊</td>
<td>Show all layers as Outlines</td>
</tr>
<tr>
<td>🌐</td>
<td>New layer</td>
</tr>
<tr>
<td>📌</td>
<td>New Folder</td>
</tr>
<tr>
<td>🗑️</td>
<td>Delete</td>
</tr>
</tbody>
</table>

**Note:**

1. The frame rate is set at 24 fps (frames per second). If your movie is a 10 second movie then you would need $10 \times 24 = 240$ frames in your movie.
2. Each object that is to be animated needs to be on its own **layer**.
3. Name each layer as you create it. Double click on the layer and name it.
4. Flash movies are **published** as `.swf` (small web format) files suitable for viewing on the web. A flash player is needed to play flash movies.
Starting a simple movie

1. **Properties** panel:
   a. Set the size of the stage (if required)
      i. Click Edit and enter the size in pixels
      ii. For the Nemo stage set the stage to 620 x 520 pixels.
   b. Set the **frame rate** (leave as 24fps unless a different speed is required)
   c. Set the **background colour** if required.
      i. Click the white square and select the required colour from the colour palette

2. **Library** panel:
   a. Import graphics into the library
      i. Select File… Import… Import to Library
      ii. If importing a lot of images folders can be created to organise the project.

3. **Set the length** of Layer 1 and the movie:
   a. Click on Frame 1 in the timeline
   b. Shift + Right-click on the Frame that will indicated the length of the movie (24 fps x number of seconds)
      e.g.Frames for a 5 second movie. The frames should be **coloured blue**.
   c. Select Insert… Timeline… Frame
   d. Layer 1 is 120 frames long. This also sets the length of the entire movie. **All other layers will be the same number of frames.**
Frames

1. To place images, text etc. onto a scene you need to have a frame.
   a. **Note** when you start a Flash movie there is only 1 frame.
2. We want the background to be on the stage for 120 frames (5 seconds at 24fps)
3. Click on Frame 1
4. Drag the image coral2 from the library to the stage
5. Click on Frame 120.
   a. To insert a frame - **Right Click**...select **Insert frame**.
   b. The timeline should now be coloured blue from Frame 1 to Frame 120. This is **the length of the movie**.
6. Lock the layer so you can’t accidentally move the background
7. **Name** the layer Background

Notes:

1. **Keyframes** are frames where things change e.g. animation starts, objects appear etc.
2. Keyframes are shown by either an **empty O** or **filled circle ●**
3. The rectangle indicates the end of the frames being used. □
4. Diamond (♦) along a timeline indicates a change of some type has occurred at that point.
Layers

Important!!

1. Each moving image must be placed on a new layer.
2. To create a new layer:
   - Insert...Timeline...Layer OR click the Insert Layer icon below the timeline OR right-click on a layer and select Insert Layer from the short cut menu.
3. Images placed on layers higher up on the timeline layer will appear above images on lower layers.
4. The background should always be the bottom layer.

Note: As you build your animation layer by layer:

- name each layer and
- lock each layer to avoid errors

i. Insert a new layer and call it Nemo
ii. Click on Frame 1 in the Nemo layer
iii. Drag the Nemo image from the Library onto the workspace.
   a. Position Nemo where you want it to appear at the start of the animation
   b. Use the free transform tools to re-size the image.
      i. Select Modify...Transform...Free Transform
iv. At this stage there will be no movement as we have not specified a path.
Creating motion using Motion Tween

Animation programs allow animation to be created by using a process called **Tweening**. This lets the user determine the **start** and **end point** of the motion and the program fills in all the **in-between frames** of the motion.

There are several different methods that can be used to create a motion tween.

**To animate** Nemo:

i. Make sure that you have:
   a. Clicked on **Frame 1 in the Nemo layer**
   b. Dragged Nemo onto the stage in the position you want it to **appear first**.

ii. **Right-click** on the **object** to be animated (Nemo) and **select Motion Tween**

iii. Click on **end-point of motion** – the position you want the object to end at – the playhead will move to this location – if it doesn’t **move the play head to the position you want**.

iv. **Click and Drag** the object to the position it will move to (end-point).

v. A **Path** will be inserted – shown by a **dotted line**.

vi. The object will move along this path during the animation.

vii. You **may insert additional paths** between the motion tween if you want the object to move in a different direction:
   a. Click on a frame between the start and end-point of the tween (the end-point will be determined by the length of the animation i.e. the number of seconds x frames per second (24)
   b. Click and drag the object to create a new path
   c. Repeat this along the timeline at different positions.
v. **Note:** When animating an object, either drawn or imported, it must be saved as a **symbol**. The following dialog box is displayed. Click **OK** to accept.

![Dialog box for converting selection to symbol for tween](image)

The selected item cannot be tweened. You must convert this to a symbol in order to tween. Do you want to convert and create a tween?

- [ ] Don't show again.
- **OK**
- **Cancel**

vi. To convert an object (image or drawn shape) to a symbol:
   a. **Right-click on the object** and select **Convert to Symbol**
   b. Name the symbol and save it as a **Movie Clip**

![Convert to Symbol dialog](image)

- **Name:** Bubble
- **Type:** Movie Clip
- **Registration:**
  - **X:** 0
  - **Y:** 0
- **Folder:** Library Root

[Advanced button]
Adding Text

1. Add a new layer for the text elements.
2. Use the Text Tool to add the text.
   a. If you want to animate the text it may be best to write the words as separate objects.
3. You can animate the text by inserting keyframes along the timeline and then using the Free Transform tool to move the text at each keyframe.

Adding audio to a Flash movie

You place sound files into Flash by importing them into the library for the current document.

1. Select File ...Import ...Import To Library.
2. In the Import dialog box, locate and open the desired sound file.
3. You need only one copy of a sound file to use that sound multiple ways in your document.
4. Flash includes a Sounds library containing many useful sounds that can be used for effects.
5. To open the Sounds library, choose Window...Common Libraries ...Sounds.
6. To import a sound from the Sounds library to your file, drag the sound from the Sounds library to the Library panel of your FLA file. You can also drag sounds from the Sounds library to other shared libraries.
7. It is best to import mp3 sound files as they are compressed and smaller than WAV files

Note: You will need to record the audio in a program such as Audacity and export the file as an mp3 file to import into Flash.

Add a sound to the Timeline

You can add a sound to a document using the library:

1. Import the sound into the library if it has not already been imported
2. Insert a new layer and call it Sound
   a. Insert...Timeline...Layer OR use the Insert Layer icon
b. With the new sound layer selected, **drag the sound from the Library panel onto the Stage.**

c. The sound is added to the current layer.

d. It is recommended that each sound be placed on a separate layer. Each layer acts as a separate sound channel. The sounds on all layers are combined when you play the SWF file.

3. In the **Timeline**, select the first frame that contains the sound file.

4. Click on the **Properties** tab

5. Select an effect option from the Effects pop-up menu if required:
   a. **None**: Applies no effects to the sound file. Select this option to remove previously applied effects.
   b. **Left Channel/Right Channel**: Plays sound in the left or right channel only.
   c. **Fade Left To Right/Fade Right To Left**: Shifts the sound from one channel to the other
   d. **Fade In**: Gradually increases the volume of a sound over its duration
   e. **Fade Out**: Gradually decreases the volume of a sound over its duration.
   f. **Custom**: Lets you create custom in and out points of sound using the Edit Envelope.

6. To test the sound, drag the playhead over the frames containing the sound

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### Playing and exporting your movie

To test your movie:

1. Select **Control...Play**
2. Moving the playhead along the timeline will also show you how the animation will look.

To **publish your movie to view as a video file** (swf):

1. Click **File...Export...Movie**

OR

2. Click **File...Publish**
   a. Make sure that you set the location to publish the flash file in **File...Publish Settings** so you know where the files will be saved.