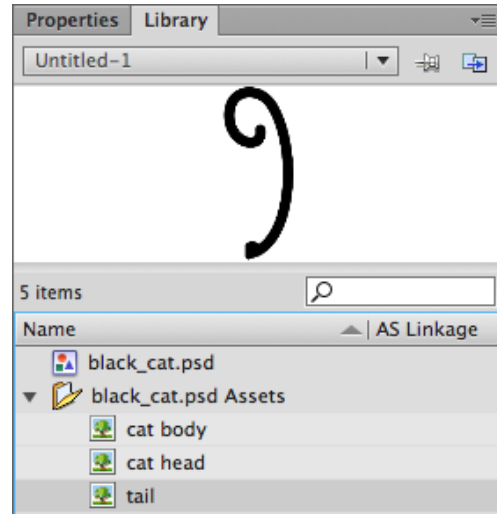
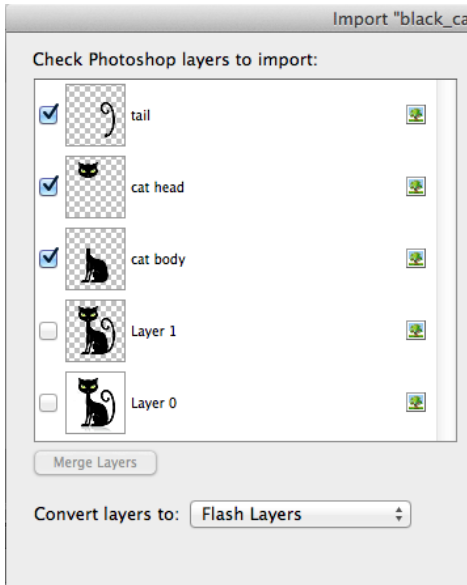


# CAT ANIMATION: REGISTRATION POINT & ROTATION

## I. Create a new Flash Document in ActionScript 2.0

## II. Import the cat Photoshop file

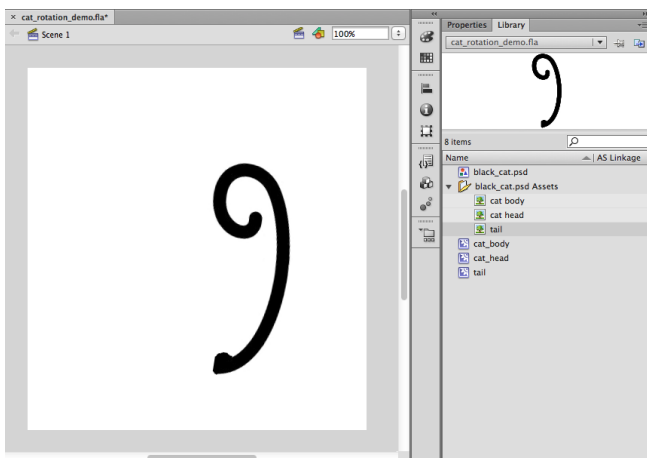
1. File -> import -> black\_cat.psd
2. Check the boxes next to the following layers to import them: cat body, cat head, tail.
3. Select "Convert to Flash layers" at the bottom of the pop up box.
4. Click on the libraries tab, then click on the triangle next to the folder labeled "black\_Cat.psd Assets" to view all the images.



## III. Resize your flash document.

1. Click on the "properties" tab.
2. Locate "size" and click on the "edit" button.
3. Change the size to 450x480 px.

## IV. Create a new layer for each part of the cat.



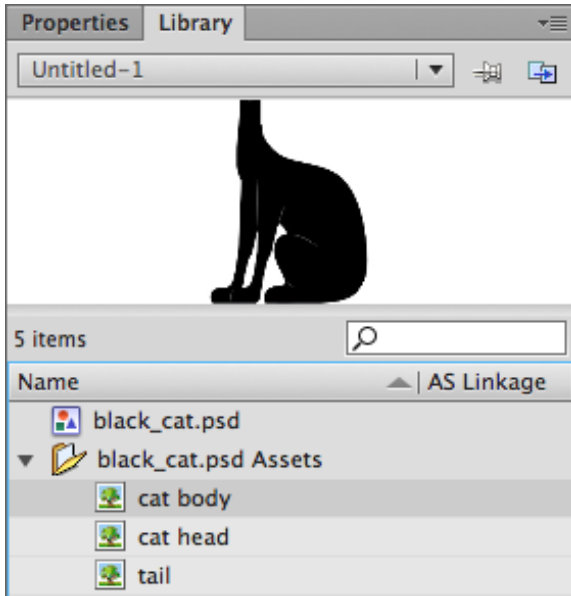
1. In your timeline, double-click on "layer 1." Rename it "tail."
2. Click on the "library" tab. Select "tail" and drag it onto the stage.

3. **Convert the tail to a movie clip.**

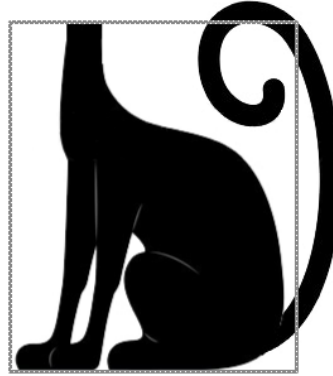
Right click (or control+click) on the tail icon, select "convert to symbol -> movie clip, and name the movie clip "tail."

4. Click on the "new layer" button at the bottom left of the screen to create a new layer. Name this layer "cat body."

5. Click on the "library" tab. Select "cat body" and drag it onto the stage on the "cat body" layer.



6. Place it in a spot so the cat's body looks like it is attached to the tail.

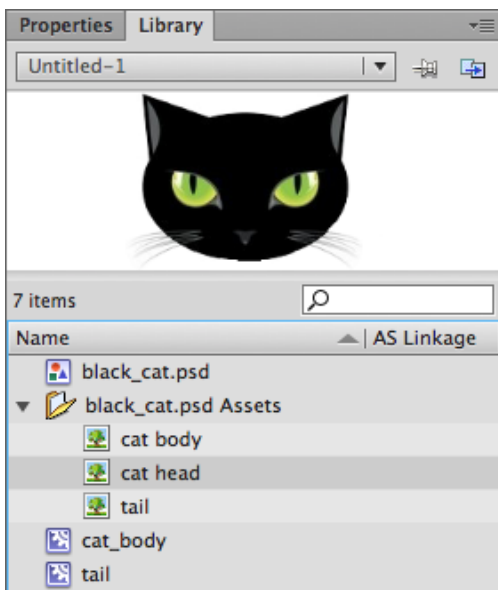


7. **Convert the cat's body to a movie clip.**

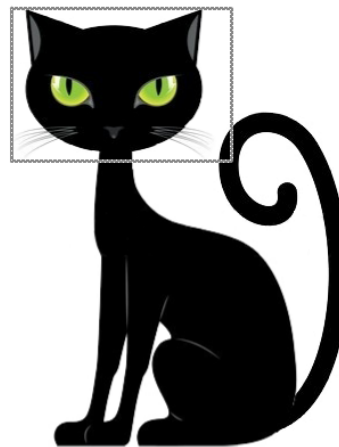
Right click (or control+click) on the tail icon, select "convert to symbol -> movie clip, and name the movie clip "cat\_body."

8. Click on the "new layer" button at the bottom left of the screen to create a new layer. Name this layer "cat head."

9. Click on the "library" tab. Select "cat head" and drag it onto the stage on the "cat head" layer.



10. Place it in a spot so the cat's head looks like it is attached to the rest of its body parts.

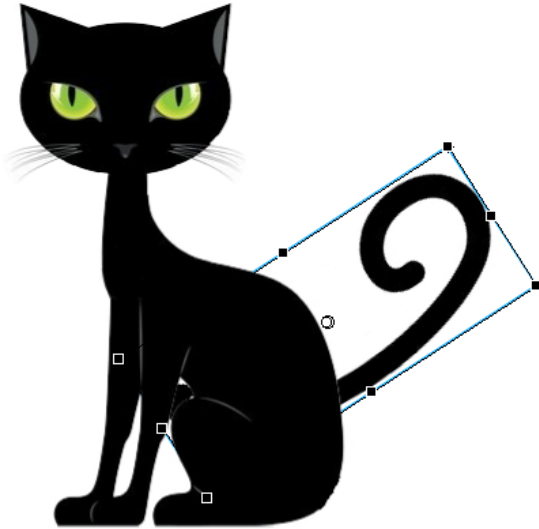


11. **Convert the cat's head to a movie clip.**

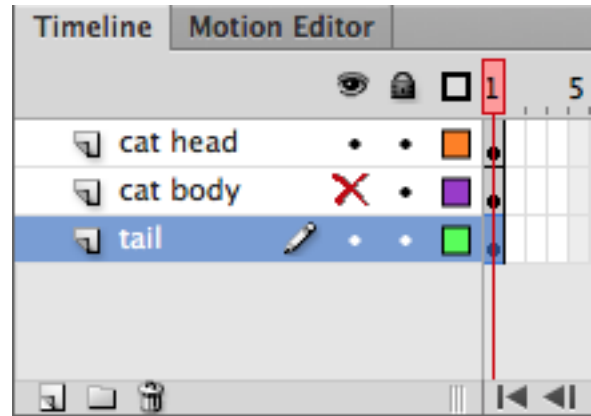
Right click (or control+click) on the tail icon, select "convert to symbol -> movie clip, and name the movie clip "cat\_head."

## V. Change the registration points of the body parts so your animation will look more realistic.

Currently the registration points are set to the center of each image. If we try to rotate the cat's tail with the registration points set this way, the resulting movement will look very strange.



1. Make the "cat body" layer invisible by clicking the dot below the eye. This will help us better see what we are doing.



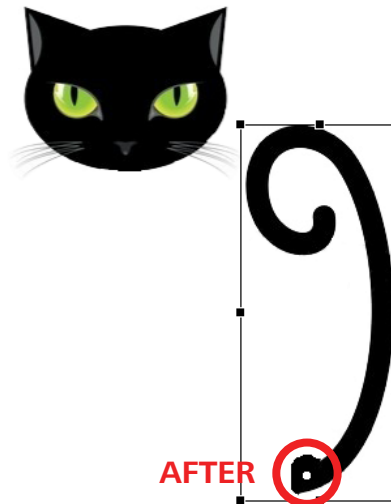
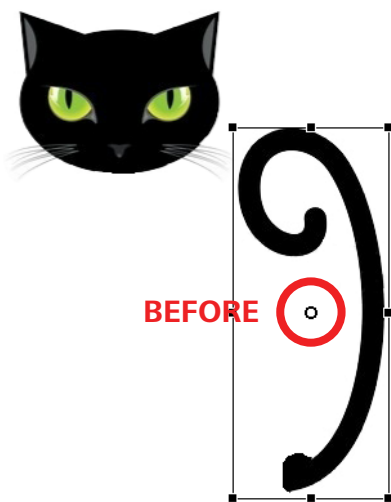
2. Select the transform tool



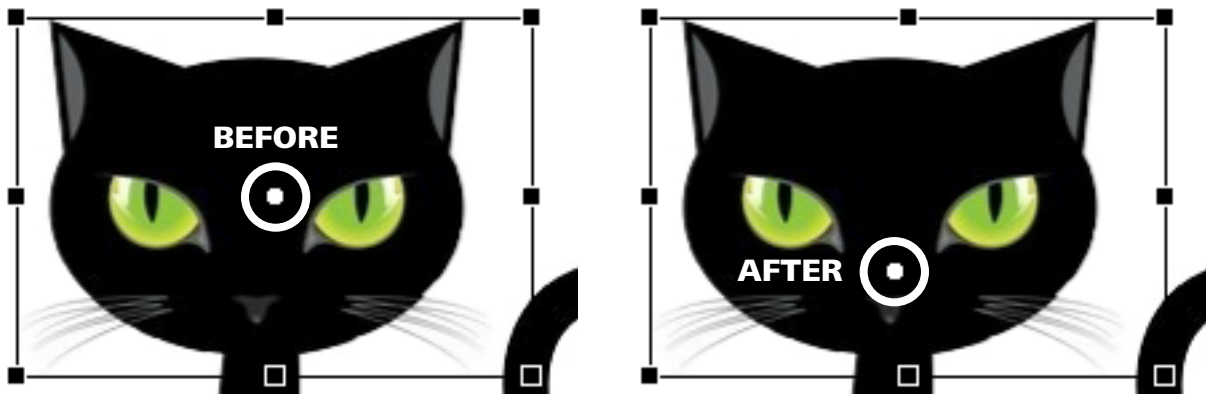
3. Click on the cat's tail on the stage.

The registration point looks like a small circle, and is currently set in the center of this image.

4. Click on this circle, and drag it to the base of the cat's tail.



4. Make the "cat body" layer visible by clicking the dot below the eye.
5. Click on the "cat head" layer. Move the registration point so it is directly above the cat's nose.



## VI. Add keyframes along your timeline so you will be able to animate your cat.

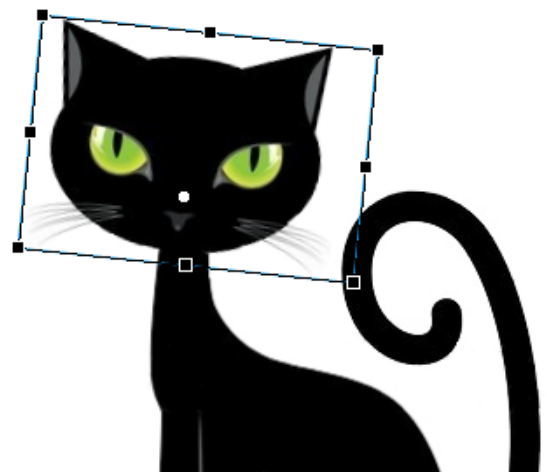
1. On the "cat body" layer, click on frame 25. Right click (or control+click) and select "insert frame." (not keyframe)  
*You will not do anything with the "cat body" layer for the rest of this tutorial.*
2. On the "cat head" layer, click on frame 7. Right click (or control+click) and select "insert keyframe."
3. Click on frame 18. Right click (or control+click) and select "insert keyframe."
4. Click on frame 25. Right click (or control+click) and select "insert frame." (not keyframe)
5. On the "tail" layer, click on frame 6. Right click (or control+click) and select "insert keyframe."
6. Click on frame 15. Right click (or control+click) and select "insert keyframe."
7. Click on frame 25. Right click (or control+click) and select "insert keyframe."

At this point, your timeline should look like this:



## VII. Rotate the cat's head and tail at select keyframes.

1. On the "cat head" layer, click on keyframe 7.
2. Click on the transform tool.
3. Bring your cursor just outside the upper right corner of the box around the cat head image, and click and rotate the image slightly.
4. Next, click on frame 12.  
Right click (or control+click) and select "insert keyframe."  
*This will keep the cat's head rotated at this angle for multiple frames.*
5. On the "tail" layer, click on keyframe 6.
6. Click on the transform tool.
7. Bring your cursor just outside the upper right corner of the box around the cat tail image, and click and rotate the image slightly.

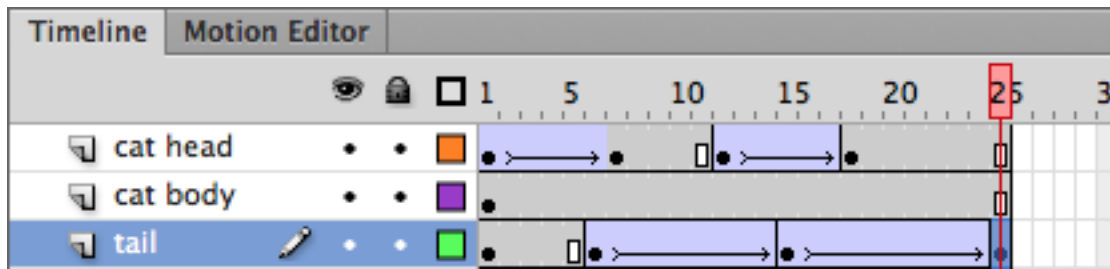


## VIII. Insert tweens to animate the movement of the head and tail.

1. On the "cat head" layer, click on any frame between frame 1 and frame 7.
2. Right click (or control+click) and select "insert classic tween." An arrow should now connect the two key frames.
3. Click on any frame between frame 12 and frame 18.
4. Right click (or control+click) and select "insert classic tween." Your timeline should now look like this:

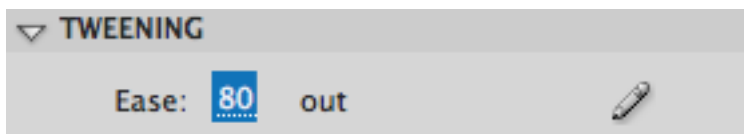


5. On the "tail" layer, click on any frame between frame 6 and frame 15.
6. Right click (or control+click) and select "insert classic tween." An arrow should now connect the two key frames.
7. Click on any frame between frame 15 and frame 25.
8. Right click (or control+click) and select "insert classic tween." Your timeline should now look like this:

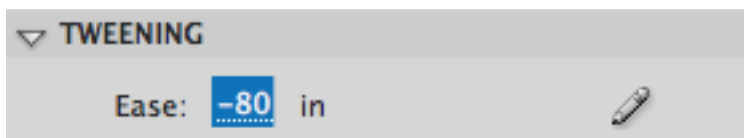


## IX. Add easing to make your action look more realistic

1. On the "cat head" layer, click on any frame between frame 1 and frame 7.
2. In the properties inspector, locate the "ease" settings, and type "80" to ease the action out.



3. Click on any frame between frame 12 and frame 18.
4. In the properties inspector, locate the "ease" settings, and type "-80" to ease the action in.



5. On the "tail" layer, click on any frame between frame 6 and frame 15.
6. In the properties inspector, locate the "ease" settings, and type "80" to ease the action out.
7. Click on any frame between frame 15 and frame 25.
8. In the properties inspector, locate the "ease" settings, and type "-80" to ease the action in.

## X. Save your flash file and export your movie.

File -> Save

File -> Export -> Export Movie