Scene 2, Flash

- Export art from Illustrator to Flash.
- Animate scene 2 in Flash, frames 1 through 24

Spend a little time studying the wolf.fla file. Scrub the timeline on scene 2 and think about which parts of the face and body are moving. Notice how he has the various body parts broken down into layers. This allows him to animate each body part individually. To facilitate this process, we need to spread the body parts out a little in Illustrator, not a lot, just enough to make it easier to lasso them in Flash as we create our symbols.

**STEP ONE:** We only need one wig, so hide one, then lift the other one up off the head so it's easier to draw a lasso around the eyes and eyebrows.

**STEP TWO:** Also shove the nose down a bit so it clears the eyes, we need to be able to drag a lasso around the nose without touching anything else.

**STEP THREE:** Same with the mouths, if you have it touching the ears or something, move it so there is clearance.

**STEP FOUR:** On the arms raised figure, lift the head off the torso, and check the eyes, nose and mouth to make sure you have lasso clearance. You'll need it when we get to flash.

**STEP FIVE:** Hide all the extra layers such as screen shots and backgrounds. You should just have what I show here.

**STEP SIX:** Choose file>export>Macromedia Flash (*.SWF) and name it scene2art.swf Put it in the due_next_week folder

In the export dialog box, make sure that

- **Preserve Editability** is checked
- curve quality is set to: 10
- **300 pixels** per inch.
Copy artwork from scene 1

STEP ONE: Open your Flash file containing the finished scene 1 animation. **Save As** into the due_next_week folder.

STEP TWO: put the playhead at the **end of scene 1** and hide & lock all the layers except for the middle ground, mountains, sky and tv frame.

STEP THREE: drag through the timeline on the **last keyframe** of middle ground, mountains and sky layers Right click on the selected keyframes and choose **Copy Frames**.

STEP FOUR: Go to scene two and hide the storyboard layer. Add a new layer called **artwork**.

STEP FIVE: right click on the first keyframe of the new layer and choose **paste frames**

STEP SIX: The boy, along with the background should come in cleanly.
Converting art to symbols

**STEP ONE:** click on frame 2 of the artwork layer and press F7, this will insert a blank keyframe so that none of the pasted in symbols from scene 1 exists beyond the first frame.

**STEP TWO:** Click back on frame 1 and zoom out so you can see the whole stage, maybe 15 percent view, then select all the artwork and enlarge it until the only thing that will fit in the TV frame is two fingers of his hand, and the top of his head.

**STEP THREE:** make sure nothing is selected, then choose insert>new symbol choose graphic for type of symbol and name it shoulders

**STEP FOUR:** Choose file>import to stage and select the scene2art.swf file that we exported from Illustrator.

**STEP FIVE:** select all the artwork on the stage and drag the shoulders over the center cross hairs mark on the stage. By shoulders I mean the shoulders with the arms raised.

**STEP SIX:** zoom in on the face with the closed eyes.

**STEP SEVEN:** Choose the lasso tool and lasso the squinting eyes, then press F8 to convert them to a graphic symbol called squint eyes.
Symbolizing continued

STEP ONE: lasso the smiling, toothy mouth below the squinting eyes and convert it to a symbol named **smile scn 2**.

STEP TWO: Now that the squinting eyes and the mouth are symbols in the library, **delete** them from the stage of this shoulders symbol.

STEP THREE: lasso the remaining face art work from the squinty eyed face and delete it from the stage, the other face has a better (taller) shape.

**NOTE:** leave the face with the open mouth artwork, we will symbolize it next.

STEP FOUR: Lasso and **symbolize the open eyes**, including the **eyelashes**, then delete the symbol from the stage.

STEP FIVE: lasso and symbolize the **open mouth**, naming it **scn 2 open mouth**, then delete the symbol from the stage.

STEP SIX: Drag the wig back into position on the head, then lasso the **entire head**, and symbolize it as **scn2head**.

**NOTE:** I dragged the head up above the neck so I could more easily select just the head.
Bringing the torso into the timeline

**STEP ONE:** lasso and symbolize the remaining torso (arms down torso), naming it *scn2torso*.

**STEP TWO:** delete the *head* and the *scn2torso symbols* from the stage. This should leave you with just the shoulders and tea shirt artwork remaining on the stage. Everything else has been converted to symbols and stored in the library.

**STEP THREE:** Make sure that the remaining artwork (tea shirt and raised arms) is **centered** on the *cross hairs* which mark the center of the stage of the shoulders symbol.

**STEP FOUR:** pat yourself on the back and save the file, if you haven't already. Now that we have all the symbols made, let's start the fun stuff: making them move.

**STEP FIVE:** go back to scene 2. Rename the *artwork* layer as *body*.

**STEP SIX:** Click on the blank keyframe at frame 2 of the *body* layer

**STEP SEVEN:** Drag the shoulder symbol onto that keyframe from the library and position it as shown on the stage.
Building the face from symbols

**STEP ONE:** add three new layers above the body layer named, from the top: *mouth, eyes* and *head*.

**STEP TWO:** insert *keyframes* on the *second frame* of the three new layers.

**STEP THREE:** from the library, drag the head, eyes and mouth onto their respective layers.

**STEP FOUR:** open the *wolf.fla* file. Hide all the layers except the head layer. Open the transform palette and click on the second keyframe on the head layer. Write down the numbers in the transform palette. The head symbol has been stretched sideways, and squashed vertically.

Notice that the head has also been rotated so that the ears are level. The head does not display at zero rotation and normal width and height until frame 19, but we will worry about that later.

**STEP FIVE:** Go back to your file and enter the numbers you noted down from the transform palette for the *head* symbol at frame 2 of the *wolf.fla* file.

- width: 108%
- height: 87%
- rotate: 6 (or whatever it takes to make the ears level)

**STEP SIX:** Now lets deal with the eyes and the mouth. The eyes stay at 100 % on frame 2, but the mouth needs some transformation.

**STEP SEVEN:** click on the mouth with the *transform tool* and enter these values:
- width: 93%
- height: 111%

**Squash & Stretch:** Picture yourself holding a balloon: if you squish a balloon in on the sides with your hands, it expands vertically. In cartooning, to keep the figures looking organic, you need to treat each symbol like a balloon. If you squish it one direction, the displaced volume has to escape the other direction. In animation, this concept is called squash and stretch.
The hunch before the shout

**STEP ONE:** insert keyframes and motion tween out to frame 6 of the top 4 layers (not including the tv frame layer)

**STEP TWO:** go to the wolf.fla file and hide all the layers except the body layer. Scrub the timeline from frame 2 to frame 6. Notice the torso squashes horizontally, but as it squashes, (just like our balloon analogy) the volume of the body has to go somewhere, so it stretches vertically.

**STEP THREE:** go back to your file and click on keyframe 6 of the body layer, enter these numbers in the transform palette:
width: 90%
height: 115%

**STEP FOUR:** go back to the wolf file, turn on visibility for the body and the head (only) and scrub the timeline. Notice how the head squashes vertically a little, but mostly it moves as a unit down, in the y direction by about 20 pixels, between keyframes 2 and 6.

**STEP FIVE:** go back to your file and transform the head at keyframe 6:
width: 110
height: 84
y value: down about 20 pixels, or simply nudge it until it looks good. The shoulders are going up, but the head should be moving down.

**STEP SIX:** Also on keyframe 6, nudge the mouth and eyes down to keep pace with the face, which should be dropping about 20 pixels...approximately

**STEP SEVEN:** transform eyes keyframe 6: 102, 96

**STEP EIGHT:** transform mouth: 100, 100

**NOTE:** Feel free to tinker with these numbers. Scrub the timeline and observe your figure's motion, he should look like he's about to sneeze. His face scrunches up, his shoulders raise...it should look very natural, organic, as they say in the cartoon business.

**STEP NINE:** Put your playhead at frame 7. Insert blank keyframes (F7) on the mouth, eyes and body layers, but NOT the head. At frame 7, all the artwork changes except for the head, we can keep using that.
Switching facial features

**STEP ONE:** insert a keyframe at frame 7 of the *head* layer, and transform the head back to 100% both ways. Also tilt the top of the head to the left so it has zero rotation in the transform box.

**STEP TWO:** From the library, drag the new artwork in onto it's respective layers: body, open eyes and open mouth. Line everything up as close as you can, referring back to the wolf movie as needed. All 4 body parts are at 100% on keyframe 7.

**STEP THREE:** Add keyframes and motion tween out to frame 11.

**STEP FOUR:** at keyframe 11 transform the *head: 98,102*
As it transforms, the head also moves up a little in the y direction. You'll need to hide all the layers but the head in the wolf file to see this subtle change.

**STEP FIVE:** keyframe 11, *body: 93, 109,*
the body also moves down in the y direction

**STEP SIX:** eyes: 98, 102
the eyes also move up in the y direction to stay above the nose which is moving up with the face.

**STEP SEVEN:** mouth 100, 124

**STEP EIGHT:** At this point I noticed that I didn't have the tree behind my figure. To bring it in, I had to make a duplicate of the middle ground symbol, and remove the boy from it. Then I put that symbol under my boy starting on keyframe 2 of a new layer

**STEP NINE:** Add keyframes and motion tween out to frame 16 of all 4 boy layers.

**STEP TEN:** Drag through the keyframes at 16 to select that artwork and tap twice on the up key on your keyboard. This make the boy looks like he is standing up on his tiptoes as he shouts "wolf!"
Reusing the artwork across the timeline

**STEP ONE:** Click on keyframe 7 of the body layer, then click on the body to select the teashirt. Press Ctrl+C.

**STEP TWO:** On the body layer, insert a blank keyframe (F7) at frame 19, then choose edit>paste in place. This should paste in the tea shirt in the exact location on the stage where it was copied in frame 7.

**STEP THREE:** Repeat this process for the head layer: click on frame 7, choose copy, click on frame 19, press F7, then edit>paste in place.

**STEP FOUR:** Add motion tween on both layers between frames 15 and 19.

**STEP FIVE:** Add keyframes and motion tween out to frame 18 of the eyes and mouth layer.

**STEP SIX:** On keyframe 18 of the mouth layer enter these transform values: 100, 97.

**STEP SEVEN:** On keyframe 18 of the eyes layer enter these transform values: 102, 94.

**NOTE:** on both of the last steps, you will need to nudge the eyes and mouth down in the y direction to match the face position, which is lowering over the same timeline period.

**STEP EIGHT:** Drag through frame 19 of the eyes and mouth layer and insert a blank keyframe (F7). The reason for inserting a blank keyframe there on both layers is that both the eyes and mouth have to switch to a new graphic symbol at that point on the timeline.

**STEP NINE:** Click on frame 2 of the mouth layer. Press Ctrl+C to copy. Click on the blank keyframe at 19 and press Ctrl+shift+V (paste in place).

**STEP TEN:** Repeat step 9 for the eyes layer.

**STEP ELEVEN:** Rotate both the mouth and eyes a negative (-8) and (-15) respectively. You are trying to make his face scrunch up as his expression relaxes from the wolf shout. Adjust positions and rotations as necessary in relationship to the face. If you scrub the wolf timeline, it’s all there.
Squash and stretch the blink

**STEP ONE:** right click on keyframe 7 of the eyes layer and choose **copy** frames

**STEP TWO:** right click on frame 21 of the eyes layer and choose **paste** frames. It comes in with a broken motion tween (dotted line) but we'll fix that next.

**STEP THREE:** transform the **eyes** on keyframe 21: W 108, H 92

**STEP FOUR:** transform the **eyes** on keyframe 23: 98, 102

**STEP FIVE:** On the mouth layer, add keyframes and motion tween out to frame 22, then transform the mouth at keyframe 22 to: 99, 93

**STEP SIX:** Trim the timeline off at frame 24. Make sure you have the sound of the wolf shout (wolf01) on the timeline.

**STEP SEVEN:** scrub the timeline slowly and observe your work. Compare it to the wolf timeline.