



Professional Development MATERIALS



MORPHING STUDENT PHOTOS

Morph™ Pro 2.5 has found a new home with *HyperStudio® 4* allowing you to create fun, project-based visual transformations between any two images. Cross-fade effects include caricatures, warping and the ever-popular “Morph.” In this step-by-step tutorial, we use a student’s portrait photos to create a memorable digital video chronicling their growth over time. The application of the skills learned here are suited to portfolio development and for creating digital year book content for grades three and above.

“One of the best things in recent memory was the resurrection of Morph™ and its merger with HyperStudio. Morph is metaphor made real. Words can visually transform into the image they represent. Letters can morph into their phonetical offspring. Student scientists can become their parents, or their parents can become them. Kids can become the animals they study. In a visual age, the conjoining of two images is a power that students and teachers will explore in wonderful ways. I cannot wait to see their results!”

Hall Davidson
Director of Education Services
KOCE-TV (PBS)
Huntington Beach, CA



BEFORE YOU BEGIN

1. GET HYPERSTUDIO 4

Morph Pro 2.5 is not available separately from HyperStudio. The Morph Pro installer is only found on the HyperStudio 4 CD under HyperStudio’s *Custom Install* option or within the Morph folder located on HyperStudio CD. For Macintosh users, after installing Morph, please increase the RAM allocation to 12 megabytes. To do this, click once on the application icon to highlight it. Then, from the desktop menu bar select, *File > Get Info > Memory* and enter 12,000 in the *Preferred Size* field. Close the window when finished.

2. DOWNLOAD THE TUTORIAL CONTENT

This tutorial references use of a template and collection of student photos prepared in advance. These files may be downloaded in compressed form from the HyperStudio website. *WinZip™* or *Aladdin™ Expander 5.0* or higher is required to decompress the download. After downloading and decompressing, move the resulting folder into your existing Morph folder.

For Macintosh: <ftp://www.hyperstudio.com/pub/media/morph/MorphTemplate.sea.bin> [1.3 MB]
For Windows: <ftp://www.hyperstudio.com/pub/media/morph/MorphTemplate.zip> [440 KB]

PHOTO PREPARATION

In the following tutorial, we will be using pre-prepared digitized photos. When you create your own Morph movies, the images used should all be the **same dimensions** and **same color depth**.

Successful results are easily achieved when continuity exists between the start and end images of each Morph sequence. Good scanning skills with a few HyperStudio tricks will simplify the procedure of making all the images uniform in dimension and color depth.

I. CONTENT ACQUISITION TIPS

This can work at any stage of completion throughout a year long portfolio project at any grade level. Start six weeks before the project completion date by sending a note home with each student giving specific instructions to the parents. A template is provided on page six. Keep all photo memorabilia organized in manila folders or sturdy envelopes with the student name clearly readable and correctly spelled.

II. SCANNING TIPS

Name the scans with the complete name and correct spelling of each student. Use professional portrait photography images if available. Use a monitor setting of 800 x 600 pixels at 16 bit/High Color settings. The scanner resolution settings should be set to:

72 dpi (dots per inch)

16 bit color depth (High Color or thousands of colors)

Image size no larger than 600 pixels tall at a 3 x 4 aspect ratio.

Movie Aspect Ratios

180 x 240

240 x 320

300 x 400

450 x 600



It is easier to shrink digital images than to grow them. Increase the image dimensions especially when scanning small photos. Try magnifying 200% to 300% or double or triple the dots per inch.

III. HYPERSTUDIO 4 TIPS

HyperStudio is remarkably helpful as an image cropping tool for use with Morph Pro.

Starting from the Tip of the Day:

1. Create a New Stack at the desired Movie Dimension size. (*Options > About this Stack*)
2. Select *File > Import Background* and choose *Yes* when asked if you want to resize.
3. Create a New Card.
4. Repeat Step 2 and 3 for each of the five images.
5. Move to the first card.
6. Select *File > Export Screen* (CTRL E) and save the image using the format "student name.01."
7. Repeat Step 6 for each card in the stack. Append ".02" to the second image, ".03" to the third, etc.

That's it! You now have five same-sized images at 16 bit color ready for use in Morph. Windows® users should convert .BMP format to .JPG using MS-Paint. Choose Start > Programs > Accessories > Paint and then File > Open; locate and open the file. Then, File > Save As... ; select JPEG from the dialog popdown menu and click OK.

OPEN THE MORPH TEMPLATE

1. Launch Morph™ Pro 2.5.
2. Select *File > Open* and locate and open the file named *MorphTem.mrf*.
On Macintosh, The file name is *Morph Template*.
3. Select *File > Save As...* and enter a new name for the Morph (e.g. KidMorph).
4. Close any untitled Morph windows.
5. Expand the Morph window by clicking the top inside left window control icon.
6. Click and drag on the title bar and move it to the top left side of your monitor.

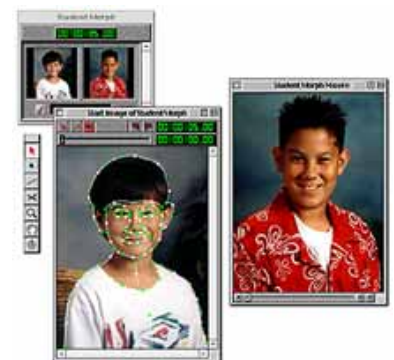
The Morph Template window contains four *Sequences* made up of paired images. The sequences are presented in vertically aligned beveled boxes. To create a series of Morphs, each sequence (e.g. segment) must have its own start and end image. Therefore, sequence one is image 1 to image 2; sequence two is image 2 to image 3; sequence three is image 3 to image 4 and so on.

In Morph, you click to add reference points on the start image and adjust them to their relative position on the end image. The template saves time because an optimal number of points and connecting lines were created in advance. The sixty-five points arranged per the “PointGuide” image file achieved very satisfactory results. The template end image is a representative child portrait. The rest of the images used in the template are for reference only. Since we will be replacing all of the images with real photos, the only sequence we really need to start with is the first one.

7. Click on the last sequence in the Morph window to highlight it.
8. Select *Edit > Clear*.
9. Repeat Step 7 and 8 for all but the first sequence.
10. Select *File > Save*.



Morph Portrait Template



You will only need to realign the points in the start image once!



Replace the existing images.

REPLACE THE REPRESENTATIVE IMAGES

1. Click on the first image sequence to highlight it.
2. Select *Sequence > Load Start...* or *Read Start Image...*
3. From the file selection dialog, locate and open kid1.jpg or kid1.pct.
4. Select *Sequence > Load End...* or *Read End Image...*
5. From the file selection dialog, locate and open kid2.jpg or kid2.pct.
6. Select *File > Save*.

REALIGN THE POINTS

1. Select *Windows > Start Image*.
2. Select *Windows > End Image*.
3. Move the Morph tool panel in between the two large image windows.
4. Select the *Arrow* tool on the tool panel (or press the A key).
5. Click on the Start Image window.
6. Click and drag the green points in the start image to their correct position.
7. Click and drag the white points to adjust the lines to match the contours of the start image.
8. Click on the End Image window.
9. Click and drag the green points in the end image to their correct position.
10. Click and drag the white points to adjust the lines to match the contours of the end image.
11. Select *File > Save*.

Tool Panel



CREATE THE SECOND SEQUENCE

1. Click on the second sequence in the Morph window, select *Edit > Copy*.
2. Select *Edit > Paste*.
3. Select *Sequence > Exchange*.
4. Select *Sequence > Load End...* and locate and open the file named Kid3.jpg or on Macintosh, Kid3.pct.
5. Select *Windows > End Image*.
6. Click and drag the green points in the end image into their correct position.
7. Click and drag the white points to adjust the lines to match the contours of the end image. *There is no need to adjust points in the start image!*
8. Select *File > Save*.



Sequence no. 2 Added

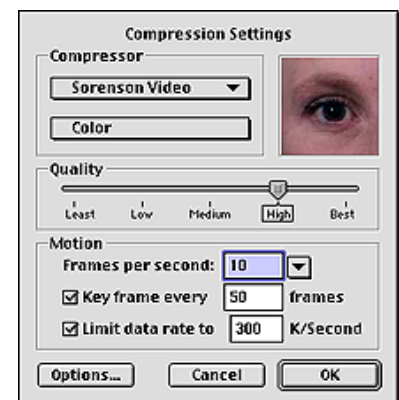
CREATE THE THIRD AND SUBSEQUENT SEQUENCES

1. Click on the second sequence in the Morph window, select *Edit > Copy*.
2. Select *Edit > Paste*. On Windows you can use *Sequence > Duplication Sequence*.
3. Click on the new (third) sequence to highlight it.
4. Select *Sequence > Exchange*.
5. Select *Sequence > Load End...* and locate and open the file named Kid4.jpg or Kid4.pct.
6. Select *Windows > End Image*.
7. Click and drag the green points in the end image into their correct position.
8. Click and drag the white points to adjust the lines to match the contours of the end image.
9. Select *File > Save*.

Repeat this procedure for additional sequences. In our completed Mac KidMorph, we added a fifth sequence from Kid5 back to Kid1. To shorten this exercise, use the Kid1, 3 and 5 images or simply move onto the next step.

CREATE THE MOVIE

1. Select *Sequence > Cross Fade > Morphing*.
2. Select *Sequence > Timing > Ease In/Out*.
3. Select *File > Save*.
4. Select *File > Export Movie*.
5. Enter a name for the movie and click *Save*.
6. Match your movie compression settings to the screenshots seen here.
7. Click *OK* to generate the movie.



Macintosh Movie
Compression Settings Dialog



Windows Movie Compression Settings Dialog

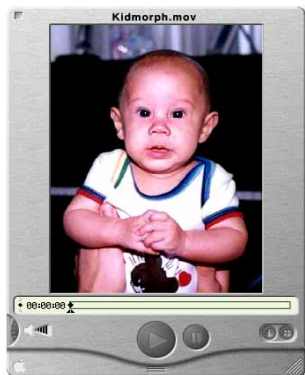
Five sequences of five seconds each will generate out a 25 second movie. Ten frames per second equals 50 frames per sequence. The greater the frame number, the smoother the movie, but it takes longer to generate. General settings for typical applications are 15 frames per second, with a key frame of 50, Cinepak or Sorenson compression, and High or Best quality at 16 or 24 bit color.

PLAY YOUR MORPH MOVIE

Locate the generated movie (Kid Morph.mov or Kidmorph.avi) and double-click the file to open it. On Windows, Morph generates movies in AVI format and many others. On Macintosh, QuickTime format is used. Fortunately, QuickTime 3.0 or higher supports playback of AVI movies on both Macintosh and Windows.

PLAY YOUR MOVIE IN HYPERSTUDIO

1. In a new or existing stack, create a button and choose the “Play a movie or video...” action.
2. Navigate to where the movie is located and double-click the filename to open it.
3. Position the movie on your card where desired.
4. Click away from the selection but within the card to set the movie’s position.
5. Click OK. (Change any Movie Settings as desired first).
6. Return to browse mode and click the button to play your movie.



QuickTime Player

MODIFYING YOUR MORPH MOVIES








Adding sound or music to your Morph movies adds further interest. In HyperStudio, simply attach a sound to the same button that plays the movie. If you are a QuickTime Pro user or have other video editing software, you can not only add sound, but text captions to your movie. An additional tip for more advanced users is to add 10 or 15 copies of the end image at the end of each sequence. This gives the eye more time to absorb the end image (destination) before morphing to the next image in the sequence. To download additional Morph examples, visit the FTP server starting at: <ftp://www.hyperstudio.com/pub/media/movies/>

TIME SAVING MORPH TIPS

Creating and adjusting points take time and patience. A template with pre-built points and connecting lines takes some upfront time, but having students create too many points to adjust could jeopardize completion deadlines. The copy/exchange technique explained earlier is another big time saver.

- Avoid adjusting the white points (connecting lines) until the green points are positioned.
- Use the Magnify tool (press M) to zoom in when needed. Hold the Option Key on Mac when using the Magnify tool to toggle between zooming in and zooming out. Use CTRL + or - on Windows.
- Move a region of points by clicking and dragging a selection around them. Click and drag on a highlighted point to move all selected points.
- Move disparate points by shift-clicking on individual points to make multiple selections. Click and drag on a highlighted point to move all selected points.
- Stability issues have been reported with more recent versions of the Windows operating system. Windows users will want to use JPEG format and make a back-up copy of each sequence along the way. Single sequence morphs can be created with less trouble and then 'hooked' together with QuickTime Pro or other digital video editing software. Use eight character file names with the extension .mrf. The Macintosh version of Morph is very stable and has no such restrictions. Morph files themselves are not cross-platform, but the movies they generate are! Cinepak is the most friendly cross-platform compression scheme to use.

Learn the tool panel shortcuts!

A = Arrow	
P = Point	
L = Line	
S = Scissors	
M = Magnify	
H = Move	
R = Rotate Point	

PARENT LETTER TEMPLATE

This letter template is provided as an example only. You will want to modify it to suit your particular project needs. Experience suggests including content acquisition and the student's care and handling of their photos into the project assessment model.

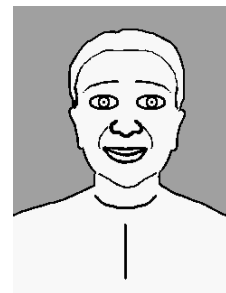
Date

Dear Parent,

Your child's graduation digital portfolio project is an important part of their learning experience. For you, it's a memorable keepsake of your child's growth and development. We are asking your assistance in ensuring a successful outcome.

Needed:

- One (1) infant portrait photo
Four (4) School Portrait Photos from 1st, 3rd, 5th, and 8th grade
(Ages 0-3, 6, 9, 11, 13)
- One (1) infant portrait photo
Four (4) School Portrait Photos from 1st, 4th, 8th, and 12th grade
(Ages 0-3, 6, 10, 13, 17)



Portrait Style

The larger the size of the photo, the better. Color preferred but not mandatory.

If professional school photos are not available, 3 x 5 inch or 4 x 6 inch portrait style photos can be used.

The photos are needed by or before ____|____|____. Care and return of the photos will be the student's responsibility. The photos will be returned no later than the project completion date of ____|____|____.

Thank you very much for your help!

Sincerely,

Your Child's Teacher
