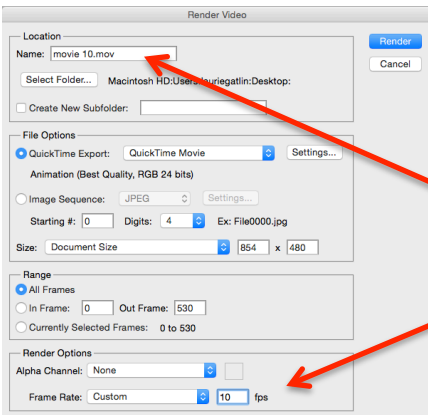


Group project instructions

(How we made a collaborative roscope music video).

Step one: find a video. I used one I found on YouTube, of a man painting a painting. I edited it until it was 1 minute, 30 seconds long. The original video was about 12 minutes, so it was a matter of going through and finding interesting sections so we had a variety of scenes to draw over. I did this in iMovie. When I was finished editing the video, I exported it to the desktop. Alternatively, you could have students create a video using the video feature on their phones, making sure they remember to shoot it in a landscape orientation for best results.



Step two: change the frame rate. To do this, I imported the video file into Photoshop, and then exported it changing the frame rate from the standard 30 fps to 10 fps. This cuts the work down by 2/3, and allows us to actually see more of each frame. After exporting the video (renamed with the number 10 in it so I remember which movie to share), I saved it in a file folder.

Step three: I looked at the total number of frames for the video after it had been reduced to 10fps. My total was 530 – so there were 530 individual frames we needed to draw on. I divided the total number of frames by the number of students I had in class, so I knew how many frames each student needed to draw in order to do their fair share. In my case, I had 15 students, so it was 35 frames each. I had 5 frames left over, so I gave those to students I knew were fast workers. So in the end, I had 10 students with 35 frames to draw, and 5 students with 36 frames to draw, for a total of 530 frames.

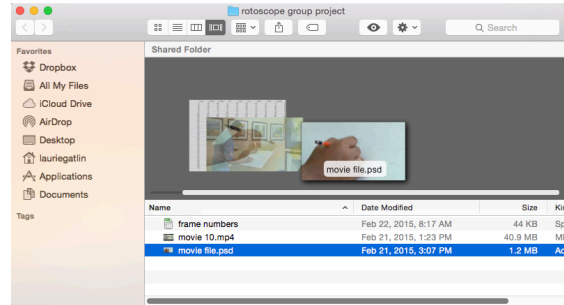
Step four: randomize! I wanted students to have their frames scattered throughout the video so it was a true patchwork, and so I used an online randomizer to scramble my list. I used this one:

<https://www.random.org>

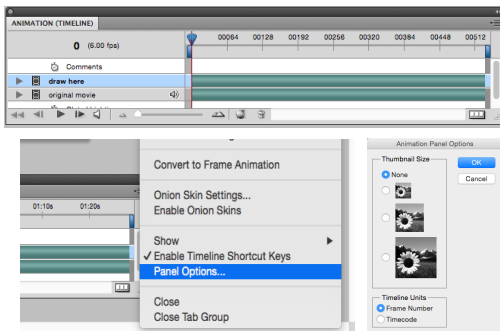
I just copy/pasted the list as I went across my list of students – the first 35 to the first student, the second 35 to the next. I made a master list, and then printed off the list and gave paper copies to the students so they could cross them off as they went through the list. I also saved my master list in the file folder in case they lost their paper copy.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Camille	Daisy	Katelyn	George	Kim	Celest	Christe	Heidi	Jazmin	Amanda	Amanda	Christine	Ivan	Nic
2	3	90	86	2	95	63	69	9	8	74	39	76	88	65
3	90	36	98	66	13	58	45	31	6	78	55	93	82	9
4	49	46	32	85	77	28	71	79	48	56	97	7	22	57
5	44	51	92	2	16	84	17	41	35	59	67	4	47	89
6	34	11	26	43	87	20	38	62	12	40	81	24	30	21
7	91	29	3	100	1	73	23	18	96	5	72	25	94	54
8	102	413	108	117	175	99	30	68	70	15	37	75	27	52
9	150	423	109	186	37	122	156	192	188	126	174	128	145	128
10	126	165	155	133	170	184	134	200	186	105	148	123	151	163
11	114	139	103	152	115	141	190	117	109	146	183	176	162	179
12	553	171	360	167	118	132	104	199	159	119	184	182	172	143
13	197	173	106	142	196	113	185	101	195	187	128	177	188	164
14	111	168	181	125	190	110	131	120	130	189	178	161	180	135
15	140	127	229	154	107	157	296	240	323	440	509	487	524	428
16	147	121	223	228	295	209	361	226	340	426	512	450	520	461
17	356	260	395	283	287	258	218	207	326	407	501	430	522	418
18	360	219	387	309	250	213	255	286	307	486	511	456	513	455
19	319	225	390	358	230	227	300	284	386	494	515	460	518	500
20	325	329	330	313	256	231	289	291	363	491	529	425	526	483
21	495	409	431	337	343	394	463	516	419	506	489	389	205	312
22	437	458	429	331	330	521	320	496	505	374	233	391	433	510
23	346	386	386	508	503	299	386	489	398	333	229	339	418	584
24	216	346	416	519	523	274	399	474	216	381	712	336	412	527
25	266	316	466	507	525	262	375	462	281	343	435	427	279	396
26	210	398	410	227	351	247	382	447	243	308	481	452	239	279
27	248	310	468	251	327	259	347	459	208	380	443	482	264	339
28	317	368	417	281	353	298	359	498	175	321	408	452	288	364
29	202	317	402	242	382	372	304	472	293	384	475	404	206	388
30	251	302	401	294	342	220	372	420	222	371	422	415	211	306
31	477	290	369	344	432	203	373	403	284	392	484	488	280	311
32	497	301	315	332	476	269	303	469	271	369	471	393	434	270
33	352	234	385	221	148	470	401	421	292	341	492	334	465	254
34	397	265	337	490	367	454	467	321	249	445	449	365	444	273
35	238	244	485	251	377	471	457	214	241	376	441	391	424	378
36	278	234	457	227	245	452	324	428	248	424	493	354	227	338

Step five: get the files ready. I imported the movie into Photoshop in the Motion workspace. I added a blank video layer (Layer>Video Layer>add blank video layer), renamed the bottom layer “original movie” and the new blank layer “draw here,” and put a lock on the movie layer so they wouldn’t accidentally draw on the movie. Finally, I saved the Photoshop file as Movie Project, and put it in the file folder. So now, in my file folder, I have the movie (which has 10 in the title), the Movie Project file (which is a .psd), and the list of numbers. I compressed this folder and shared it with my students.



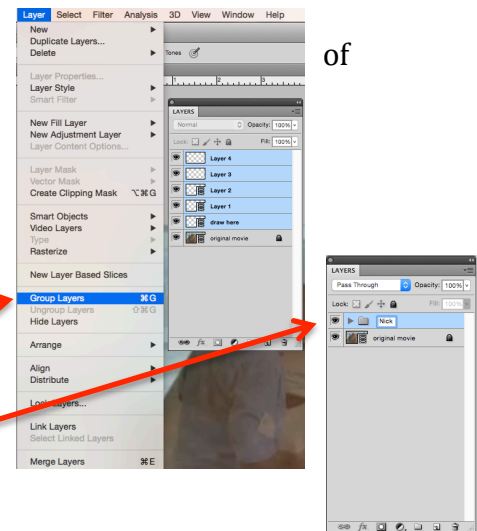
Step six: I had all my students open the zip folder by clicking on it, then opening the file folder, and locating the Movie Project file. They opened this file in Photoshop.



I walked through how to change the timeline to the frame rate option by going to the Timeline menu, choosing Panel Options, and choosing Frame rate. I asked them to close all the windows except Layers and Swatches so they had less clutter on the screen.

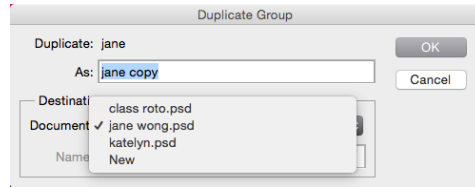
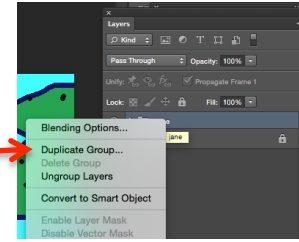
Step seven: I demonstrated how to look at different brushes and how to draw on the “draw here” layer. I asked them to go to the first frame listed on their list, and we practiced how to expand the timeline and advance forward and backward single frames. At this point, they were ready to draw their frames, with my reminder to hit save after each frame so they didn’t lose any work.

Step eight: When everyone was done with drawing all their frames, I had them save their Movie Project file, then rename it with their name. Some students added additional blank layers as they worked, so some of them had as many as 35 layers. If they had more than one layer that they drew on, I asked them to group the layers by going to the layers panel, choosing all the layers except the original movie layer and then going to Layers>Group. That way, I would have only one group to move to our class file. I had them rename the group with their name, then save the file. Each student saved their file to a flash drive and I compiled them all on my



computer, in my group project folder.

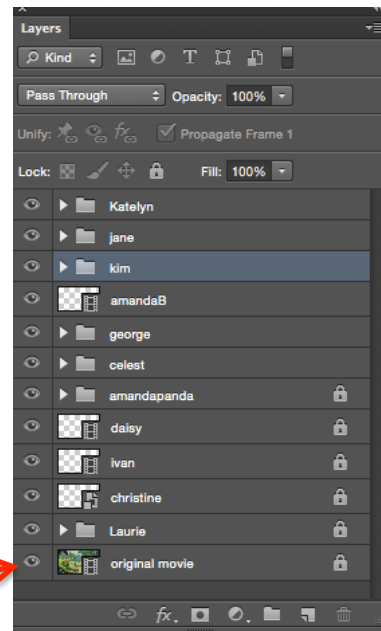
Step nine: To compile the files into a single movie, open movie project files from two students. Go to one student's project, and in the layer window, choose the layer (or group) that the student drew on. Right click (or ctrl-click) and choose "duplicate layer" or "duplicate group" depending on whether you are moving over a layer or a group of layers. A dialogue box opens up, and you can choose the other student file from the list. This will copy the layer or group to the first file. I saved this as "class roto."



I then opened up another student's file, and repeated the duplication of drawn on layer into the class roto file. Eventually, I had all the students files moved into a single file.

We decided to keep the original movie file in the project because it gave it some depth. You can turn off the "eye" on the original movie layer to see how it looks without the movie.

You could also add a white layer underneath all the student layers to see how that looks. To do that, choose your bottom layer, then go to Layer>Blank layer. This is not a moving layer, but a static layer. You can use the paint bucket to pour white (or any other color) on the layer and it will serve as a background. Just be sure it's on the bottom of the stack, just above your original movie layer.



Step ten: Now you're ready to export your movie! Go to File>Export>Render Video, and you're done with the rotoscoping part! You can import your movie into iMovie to add music, titles and credits.

