Art Integration Paper
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The art form I am utilizing in this paper is that of Stop-Motion Animation. I have been using this art form for several years, mostly on my own to create entertaining and creative short films. I have primarily used the iPhone application – Stop Motion Studio (CATEATER, LLC), which is intuitive, powerful and it seamlessly integrates with iMovie (Apple) and other video editing software. Stop-Motion Animation in its simplest form involves setting up a scene and taking a series of photographs where slight movements are made to the scene in between each photograph. The photographs are then played in sequence with short time gaps between each one, and the illusion of movement is presented to the viewer.

I am a science teacher, and the value that Stop-Motion Animation presents to my subject area is that it forces students to slow down when analyzing a process. There are many instances where I need my students to look at a complex process involving multiple moving parts. I need them to make sense of the roles of each part as well as the connections between each part. An example of this is the digestive system, where different types of food molecules (carbohydrates, fats and proteins) are each processed differently as they proceed down the digestive tract. Another example of this is the launch of an R-7 Soviet space rocket, where different parts of the rocket detach and ignite as it lifts up into the sky. Stop-Motion Animation forces students to take a process and capture it in slow motion. At each stage students have the opportunity to double check their notes, ask questions and even critique their own animation. If necessary, they can delete photographs and redo them to ensure that their animation is done correctly.

I realized the power of Stop-Motion animation during a recent class where I allowed students to use any art form they desired to show understanding of

some element of the US-Soviet space race. One group used the Stop Motion Studio application to re-enact the landing of the Apollo lunar module on the moon. I had already shown students how this process works using online videos and pre-built Lego models of each part of the spaceship. It was clear to me from the start that these students still did not understand the process, but the Stop-Motion Studio application allowed them to record it in small steps. They constantly ran it by me to check for accuracy. Fixing errors was easy and the final product was an excellent re-enactment of the moon landing. Add some music and voila! An excellent piece of art that helped students learn science!

I now see multiple opportunities to use Stop Motion Animation in my classes. From simulation of the rock cycle, to tracking the movement of a projectile through the air, to modeling digestive, nervous, cellular and other biological systems. Manipulation of the time between each photograph could also allow for a mathematical component to be introduced, which makes for more interdisciplinary possibilities. The advantages of this art form are significant. It is easy to master, easy to fix problems, it eliminates the fear factor or self-consciousness from regular filming and it is fun to play with. I look forward to using this art form more often in the future.

Apple. (2018). iMovie (2.2.6) [Mobile application software]. Retrieved from https://itunes.apple.com/us/app/imovie/id377298193?mt=8.
CATEATER, LLC. (2019). Stop Motion Studio (9.3) [Mobile application software]. Retrieved from https://itunes.apple.com/us/app/stop-motion-studio/id441651297?mt=8.