

USE ART TO CREATE ANIMATED STORY PROBLEMS

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ANIMATE YOUR PROBLEMS

USE STOP ACTION MOVIES TO IMPROVE
YOUR MATH INSTRUCTION!

Animate Your Problems

HOW TO CREATE YOUR ANIMATED STORY PROBLEM

Have your students create or choose a story problem or word problem with a minimal number of actions or moving parts. I often show my students problems from math books that include a drawing, this gives my second graders an idea to reference from. My favorite books to show are Math for Spring, Math for Fall, Math for Winter, Math for Summer, by Evan Moor Corporation. Each book is appropriately 12 by 18 in size, on each page is one story problem with a black and white drawing at the top of the page. After students see one or two of these problems they can easily create their own.

Let's break down a sample problem:

Spencer bought a box of chocolates for his mother on Mother's Day. There were eight pieces of candy in the box. How many pieces of candy did Spencer give his mother?

1. The students will need to decide if they are going to show mom eating the chocolates or just the chocolate box.. So my group of boys decided to show mom's hand reaching in the box for a piece of candy.
2. They then created a storyboard of the movie. Using a 12 by 18 inch piece of paper, they fold the paper into eight rectangles. They then draw the steps of the movie. The first box is the title, the next box in the problem, then the drawings of the action, the last slide in the end slide or credits.
3. The next step is to assign jobs:
 - Spencer is going to make the mother's hand.
 - Tyler is making eight chocolates.
 - Isaac is making the box to hold the chocolates and a lid.

When Spencer finished the hand he helped Tyler with the chocolates. All the pieces are created using scrap construction paper. The background is created using a full sheet 12 by 18 piece of paper. Many scrap items are used to create our math movies, pipe cleaners or chenille stems, for the chocolates in our movie, we used paper cups designed to use in an art class to hold paint. Tyler cut the tops off to create a chocolate wrapper.

4. Now it's time to take the photo's.

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We use a Sony Cyber shot, we also use a webcam. A photo is taken of each movement. Think of a flip book, the more photos the more definition in the movement. You need to tape the background to the table, in our chocolate movie, the box was glued to the background. The lid was hinged to the background. The hand and the chocolates were not glued to the background. However the ring was glued to the hand. The chocolates were glued to their wrappers. I stand on a stool and take the photos from above the collage background. We also have a webcam attached to a tripod, the students can place the background on the table under the webcam and take the shots themselves.

- First photo was the box with the lid closed.
- Next photo was the box and finger tips.
- Then the photo was the box with hand on chocolate.

Once the photos are completed, you can place your photos into Windows Movie Maker or Mac users could use I movie. Below you will find how to create the movie in Movie Maker.

HOW TO COMPLETE THE MOVIE IN WINDOWS MOVIE MAKER:

Create a folder in the My Documents folder on your computer's hard drive. In movie maker it is important to remember to keep all files together, music, photos, and narration, all in the same folder.

1. Name a collection in Movie Maker, ex. Group 1, this is like a folder on your computer. You can gather all your materials into that one collection. But when you save, make sure the movie, the photos, the music and the narration are in the same folder on your hard drive.
2. Once the photos are taken download them into the folder you have created on your hard drive using your USB cable. **Then the most important step: Go to tools, options, advanced settings and change the time of each slide to .05 seconds.** Now import the photos into the Movie Maker collection you titled Group 1.
3. Creating a title screen: Click on Task. Choose "Make titles or credits" from the Edit Movie section of the Movie Task. Type in the top box your main title, this will print large, then type in the second box any material you would like in a smaller type. Then choose your font, background color, and animation. You can always change the style, font, color of the screen and the animation later by right clicking on the slide and editing the slide. Click done, add title to movie. Save your project by clicking the save button on the toolbar.
4. Create the Problem slide: Click on Task choose "Make titles or credits" then choose "title after the selected clip" then type in the math problem.

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5. Now highlight the photos in the collection above the storyboard and drag them into the storyboard on the bottom of the screen. You may need to copy several photos to show a repeating action.
6. Add music to the movie. Import music from your folder on the hard drive into your collection. Remember the copyright laws, there are several web sites where educators can download free music clips.
7. Adding the credits and resources: click the scrubber (the little blue square attached to the line on the timeline) and position it after the last item in the video track on the timeline. Click “Make titles or credits” from the edit movie section of the task menu. Choose Add a title after selected clip in the timeline. Type the answer to the problem . Click done, add title to movie. Click “Make titles and credits” form the edit movie section of the task menu. Choose “Credits at the end” add the names of the students and information you want to include.
8. Finishing the Movie: click the task button on the tool bar. Expand the finish movie menu in the movie tasks pane. Choose Save to my computer from the finish movie section of the movie tasks. Choose Save to my computer. Enter a name for the movies. Click next. Choose more choice and choose other settings. Select video for LAN(1.0 Mbps.) this setting works well for rendering a movie for playback on a computer. Click finish. Your finished movie file will have a .WMV extension.
9. Optional way to finish a movie. Click on the tool bar at the top of the screen, file, then click make a movie, this will direct me to either, a CD, my computer, or e-mail, etc. You can copy this finished movie file to a CD to Distribute to others, or you can e-mail it to them by choosing that on the task button.

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