

Re-purposing Technology Lesson Plan

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TE 831

Lesson title: Creating Interactive Timelines Using Dipity

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Subject Area: Mathematics

Technology Used: Dipity Interactive Timeline- <http://www.dipity.com>

Length of Lesson: 60 minutes (Lesson 2 of 3 where students are collecting major life events and organizing them into a timeline)

Suggested Grade Level: Second Grade

Lesson Objectives: The student will be able to...

- determine importance to select 5-8 events in their own lives
- sequence events in order of earliest to latest using Dipity website
- relate a timeline to a number line

Student NETS Standards Alignment:

- Student NETS 1b. Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students Create original works as a means of personal or group expression.
- Student NETS 4b. Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students plan and manage activities to develop a solution or complete a project.

Materials:

- Computers with the Dipity website (I will also have to create accounts for each student)
- Each student's planned events from the previous lesson
- Pictures (if provided by parents) or illustrations of students' events for students to upload
- Projector to show examples

Lesson Procedure:

Before (10 minutes): I will begin with a lesson connection and hook. “Okay class, we have been working on taking a look at our own lives and thinking about important events that have happened to us. Today we are going to learn about how this (holds up a picture of a number line) might be able to help us organize our ideas. How would this help us?”

I will call on students to predict how a “number line” might help them organize their important life events. Eventually they should come up with the conclusion that they need to put them in order from earliest to latest (just like number lines start with the smallest number and go on to the largest). The teacher will go on to explain that a number line having to do with dates is called a timeline (because it measures time, not just counting numbers).

I will then show them a series of timelines. To relate to their everyday world I will show them the timeline of Justin Beiber’s music career thus far (this is also an interactive timeline) and two timelines of iPod development over the course of the last decade. Furthermore, I can show them an appropriate page on Facebook and discuss how each member has his or her own timeline.





During (40 minutes): “Now, ladies and gentlemen, we will use a website on the computers to help us make our very own timelines.” I will walk students through how to use the website and upload pictures. I will also tell them to include a short description on each of their events and reference our writing expectations of capitals and ending marks while they do this. I will demonstrate this through having an example for them of my timeline: <http://www.dipity.com/jfrancis2986/Jessicas-Life/>.

Mid-workshop Share: “Students I want you to stop for a moment and have you look up here at where my timeline is. Do you notice this tool on the left side of our screen with a plus and minus sign? Watch what happens when I push the minus sign...”
As I zoom out, the students should notice that the events get closer together and the interval of years on the x-axis changes. I can also show them how when the timeline is zoomed out to 10 year increments, one can estimate where the event it depending on how close it is to one mark or another. For example: my event “I broke my arm” is just a little bit closer to 2000 then 1990 to I can estimate that it happened in the year 1996. This can

be tied into that students' knowledge of rounding numbers to the nearest ten!

I will walk around the room to see if students are entering their information correctly. Some questions I can ask either individually or in whole group discussion are the following:

- Why does that event come first?
- What does it mean when you have a little space in between the first two events and then a large space between your second and third event?
- Which event comes last and why?
- What will happen to the timeline if you zoom out?
- What will happen to the space between events if you zoom in?
- Why doesn't your timeline start at 0 like a number line?

Students should work until they have completed their timeline of at least five important life events. I will continue to circulate the room to assist them with any technology needs or questions they have.

After (10 minutes): After students are done inputting the information into their interactive timelines, we will meet in a central meeting place again (just like the beginning of the lesson).

“Alright students, now that you've completed each of your timelines, you will have an opportunity to view your classmate's work too! You each need to walk around the room to the timelines that are up on the computer, view the timeline, and think to yourself some of the important questions we discussed today. Then, you will need to leave a comment on that students' timeline about the work they did. What are some similarities and differences from your timeline to theirs? Does when they were born differ from you (and how does that affect their timeline)?

Students will take a gallery walk of other students' timeline and leave comments. I will continue to encourage them to think critically during this time.

* I think it will be important for students to go back to their timelines for one more lesson on how one can add videos, maps, and websites to make it more interactive.

Additional Resources:

Lesson Sources

Herrman, John. “7 Years of iPod: What You Paid and What You Got” from <http://gizmodo.com/5047665/7-years-of-ipod-what-you-paid-and-what-you-got>

Rice, "Differences on iPod Nanos" from <http://mobiledevice.blog.com/2012/09/24/differences-on-different-generation-ipod-nanos/>

"TIMELINE: The life and times of Justin Bieber" CBC News, from <http://www.cbc.ca/news2/interactives/timeline-justin-bieber/>

Picture Sources (I did not have access to early pictures of me at this time so I had to use examples from the Internet. Each of these are also credited within my Dipity timeline):

ADHD Can Hurt from <http://www.njfamily.com/NJ-Family/January-2012/ADHD-Can-Hurt/> Retrieved June 8, 2014

Cute Born Baby from <http://kidztrainer.com/wallpapers/Born-Baby>. Retrieved June 8, 2014

Happy Birthday Surbhi from http://www.india-forums.com/forum_posts.asp?TID=3029321 Retrieved June 8, 2014

Linden Graduation
http://www.mlive.com/news/flint/index.ssf/2012/06/linden_high_school_class_of_20.html
| Retrieved June 8, 2014

Reflection

The technology I decided to work with was Dipity, a website where students can create their very own interactive timeline. I decided to choose this for a multitude of reasons. First of all, in November of next year my first and second grade unit has decided to have students do a project where they are constructing a timeline of their lives. I wanted to get another option for students to use rather than just paper and pencil. Furthermore, I wanted to tie in my students' creativeness and continual hunger to build and construct things of their own (like Minecraft, the favorite videogame of my classroom). Lastly, because of the zoom in and out feature to change the scale, I will have the opportunity to discuss estimation and rounding. I could also show them a real world example of skip counting as it relates to scale: if it is a ten-year increment, we count by tens.

I definitely had TPACK in the back of mind as I myself was "playing" with Dipity in order to see how it could fit into a lesson for my students. The students will experience the same element of playing to figure out the program and to solve problems when something is not working. I also think TPACK's framework of connecting content knowledge, pedagogy knowledge, and technological knowledge together is shown through this lesson. The content knowledge of relating timelines to number lines, using different scales, and discussing estimation and rounding is at the forefront of the lesson's mathematics objectives. Understanding how students learn from building and discovering (as they do in apps and videogames), I knew that constructing a timeline with relevant information would be pedagogically sound. Lastly, the technology that I incorporated ties

these other two ideas in while giving students room to experiment, but without limiting their content knowledge. My lesson also follows TIK theory quite closely. Each student is provided with a computer to play with the technology and build his or her product. This aligns with the 1:1 ratio of student to technology that TIK recommends. It is vital that every student get the chance to experience the technology and reach the fullest out of all learning activities. This framework also closes the gap for students who do not have access to technology in their home life.

The affordances are definitely plentiful. As students create their timelines, they will be intrinsically motivated to do their very best work. I have many reluctant writers who would dread writing three sentences on five events in their lives in class. However, by giving this as an expectation through technology, it makes the task not seem as daunting and students do more than they thought was previously capable because they are not focused on just the writing component. Furthermore, it allows students to begin productive, yet thoughtful commentary on their classmates' work through the "comment" option. This could definitely be a first step in creating students who are successful at participating in wikis and blogs further on in their education. On the other hand, there are some downfalls in using this technological tool. For instance, I would have to (or have support from families to) create an account for each student who would use this tool. This is a great example of how technology is helpful and useful, but is not necessarily set up to be "education friendly". It would be helpful if Dipity had an option for teachers to get a class account (like Glogster) so students can all be linked together. I suppose that a teacher could have everyone under one account and each student could create a separate timeline under that account, but I am not sure if that would work. Also, although I

devised this lesson with second grade students in mind, the options of what one can add (websites, maps, photographs, videos) can be a little more complex. That is why I noted at the bottom of my lesson that the following day would be devoted to add more media to each student's timeline and using Dipity to its fullest extent.

I can also see this technology being used as a type of reporting based on a biography project. Older students (grades 3-5) could research information on a famous person in history and construct a timeline based on that person's life events. It would also be very interesting for students to see how much time is in between their famous person of choice and themselves. Even middle school and high school students could use this technology to map out the important dates in a war or an important event in history, like the Holocaust or Civil Rights Movement. I can also see this technology being used to inform parents of the pacing guide of curriculum. It would be informative to continually update an interactive timeline of content areas covered in class. The teacher could also attach websites or videos that go along with a specific concept for the students to continue working on at home. The only disadvantage to this use would be that teachers couldn't upload a document to Dipity (which would be beneficial when thinking about homework sheets and newsletters). It would, however, be available for comments in case parents had questions or something to add.

This lesson supports my professional development and teaching practice because it pushes me to think about teaching in a new way. Often times, I get caught up in just trying to "deliver" the information. However, through exploring multiple technologies and seeing how they easily relate to what I am already teaching proves that it is not that difficult to promote more inquiry and discovery in my lessons. Students are much more

engaged and motivated to seek out more than if I was just talking to them about timelines and how they are used. However, I am struggling at this time to find technologies that are applicable to first and second graders but do not just yield a product for showing what they know. I am propelled to find technologies that I could use to have students observe, track a trend, and create meaningful discussion throughout learning. I look forward to this in the future as I continue venturing out into the world of repurposing technology for my lessons!