Lesson: Personal Number Line

Teacher: Amy Biscombe
Level: 6-12
Subject: Any

Overview:
- This lesson introduces the concepts to create a **personal number line** based on how a student’s year of birth compares to other personal or historical events.
- The **definition** of a **number line** is a **straight line** with a "zero" point in the middle, with positive and negative **numbers** listed on either side of zero and going on indefinitely.

Duration:
- One week (working in class using **Personal Number Line Assignment**) and Alice software.

Objectives and Goals:
- Use personal number lines to organize events based on the year of birth (individual student).
- The students will learn to create an Alice world representing their own number line (chronologically, not to scale).
- Students will work individually in order to complete the personal number line on paper and in groups on their Alice worlds.

Essential Question:
- How can you create a number line to show an event, based on a specific year?

Background and Discussion (5-10 min):
- Provide photos of different people and historical events
  - Have students sort and place in chronological order.
- Use discussion to lead into an introduction of my personal events

Direct Instruction and Guided Practice (1 hour):
- Use my Alice world to demonstrate personal events – teacher example with family

**Directions: Students will design the personal number line on paper before applying into Alice**
- Your date of birth will serve as “zero” on your number line.
- You must identify and accurately place on your number line:
  - Three to Five personally and/or historically significant events that occurred **before** your date of birth.
  - Three to Five personally and/or historically significant events that occurred **after** your date of birth.
- Your number line must be on paper tape (provided), and Alice
- On paper tape: you must illustrate, decorate and color your number line.
- Your spacing/scale-numbering will be reasonable, consistent and easily identifiable.
- Make your number line neat, interesting and legible.
- You will explain to your classmates your number line.
- Your number line may be selected for display in the classroom.
- This assignment is worth **a quiz grade and a Project grade**.
- If you need more paper tape, ask me for more.
- If you have a question about this assignment, ask me before it is due.
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Guided Practice/tutorial (1 hour):

- Demonstrate how the Alice program “Tutorial: Head Shots” will look and run.

Name: Headshots in Alice
Level: Intermediate
Time: 1 Hour
Date: July 2008 (Updated June 2014)

Prerequisites: Any Getting Started Tutorial
Description: A tutorial that shows how to insert faces into Alice in the form of pictures on billboards. Topics covered include billboards, camera movement, and 'invisible'.

- Have each student open and play the program “Tutorial: Head Shots”

Assessment
- Walk around the classroom as students use their own personal photos.

Closure (10 min):
- Discuss the use of the Alice program and guidelines to create the animated personal time line
- Show the Alice code that displays teacher example of Personal Number Line

Independent Practice (Classwork/Homework):
- Have students complete “Your own personal number line world” in Alice

Required Materials and Equipment:
- Students will need paper, pencil, paper tape and calculator
- Computer(s) with Alice software

Extension from Duke University workshop Invisible Head Exercises

Create a greeting card in Alice that wishes someone happy birthday. Put their head in as well as the heads of two celebrities you want them to celebrate their birthday with.

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Personal Number Line Assignment

This assignment is due: ________________

Directions:

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  - Three to Five personally and/or historically significant events that occurred after your date of birth.
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- This assignment is worth a quiz grade and a Project grade.
- If you need more paper tape, ask me for more.
- If you have a question about this assignment, ask me before it is due.

Name: ___________________________________ Date: _______________ Period: _____

Personal Number Line Assignment

<table>
<thead>
<tr>
<th>Assessment Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth is clearly marked</td>
</tr>
<tr>
<td>Three to Five events before date of birth marked</td>
</tr>
<tr>
<td>Three to Five events after date of birth marked</td>
</tr>
<tr>
<td>Spacing, scale and numbering reasonable, consistent and easily identifiable</td>
</tr>
<tr>
<td>Neatness and clarity</td>
</tr>
<tr>
<td>Creativity, decoration, illustrations, photographs</td>
</tr>
<tr>
<td>Classroom presentation</td>
</tr>
<tr>
<td>Assignment on time with Name/Date/Period on number line</td>
</tr>
</tbody>
</table>

(One point will be deducted each day it is late)

TOTAL

Grade:_______ (15)

Comments: