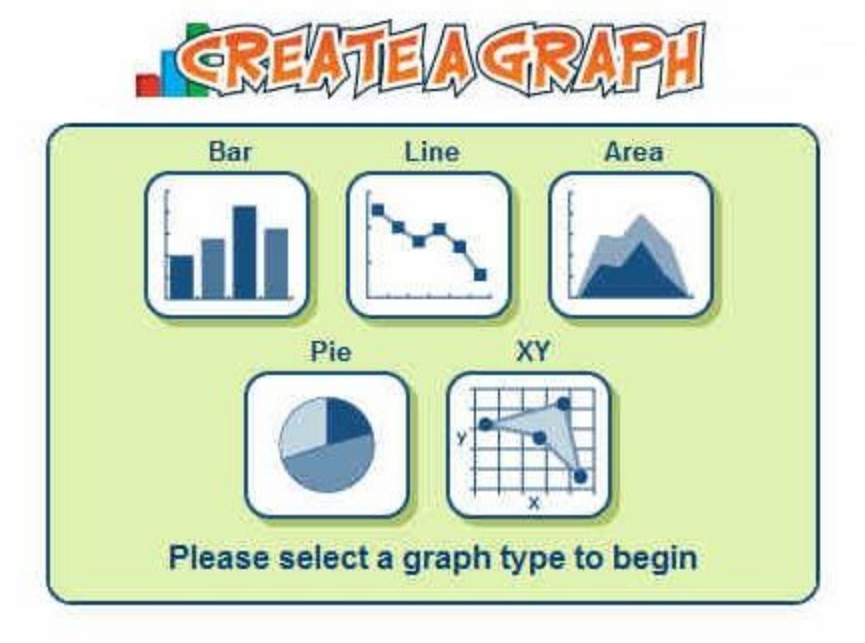
Math App Review

Optional Assignment
Math Connections in the STEM Classroom
Denise Post



Standards:

CCSS.MATH.CONTENT.3.MD.B.3
Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories.
CCSS.MATH.CONTENT.5.G.A.1
Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).

The Math App that I have chosen to review is the NCES (National Center for Education Statistics) Create A Graph. This resource can be found at: https://nces.ed.gov/nceskids/createagraph/ and can be used on any device with an internet browser. I find it works best on a laptop or desktop computer. I have used this resource with students in 3rd grade as we start collecting data from our experiments, but I feel that with

enough guidance, it could be used starting in even 1st grade with the teacher modeling the use of the app with the class following along. I would transition to using a more robust program like Google Sheets with students starting in 4th grade, but this is a great tool to introduce graphing using technology.

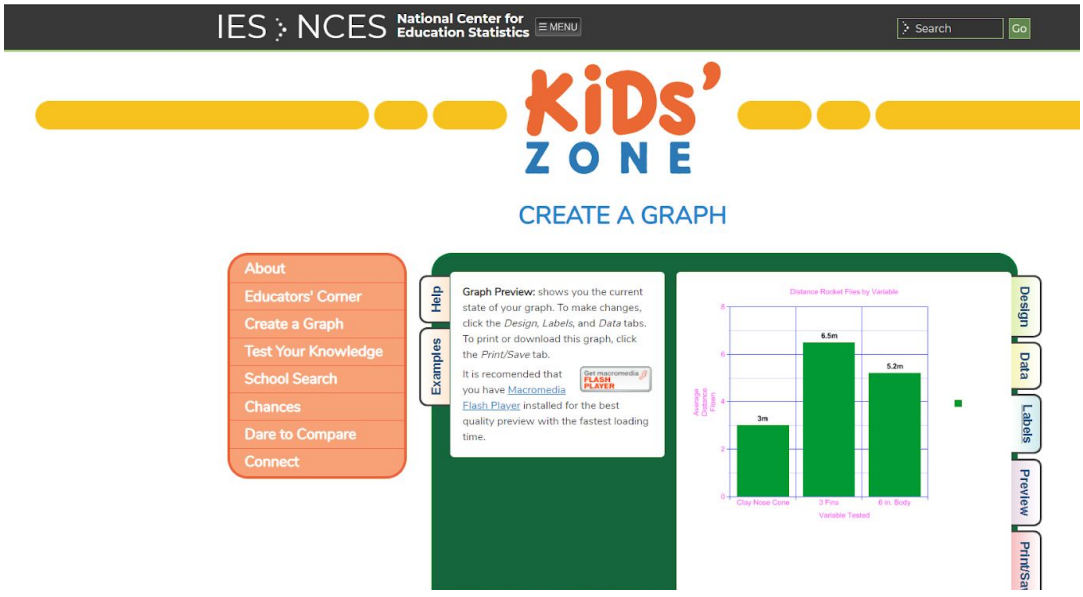
To use the app, students will choose the type of graph they wish to create. The graph choices include bar, pie, line, area, and XY. Within each type they can choose features such as colors, shading, orientation, etc. Next they will select a Data tab in which they give titles to the X and Y Axis', define the data set, label the items, and can include minimum and maximum values. The Label tab allows students to determine things like the position and font of the labels as well as include prefixes (i.e. $) and suffixes (i.e. kg). Using the Preview tab, students can consistently check the results of the choices they make on the other tabs to see if the graph is turning out the way they think it should look. Once students have created their graph and are ready to turn it in, they have the option to either print it out or download it to share virtually with the teacher.

What I really like about this program is that each tab has definitions and helpful tips for students who need more support. In addition to this, the resource guides the student's decisions using a tab system. This feature makes it easy for younger students to understand.

I use this app to enhance student understanding of the connection between the X and Y axis and the dependent and independent variables in a scientific investigation. The independent variable belongs on the x-axis (horizontal line) of the graph and the dependent variable belongs on the y-axis (vertical line).

This app can be used in any subject area that requires a graph. Obviously it is useful for math and science, but I can easily see it used in a social studies classroom too.

One of the things I don't like about the program is that it uses Flash Player which is a script that my district is phasing out. So, I will need to find a new program, or hope that the NCES will upgrade this resource so that I can continue to use it.



References:

National Center for Education Statistics (NCES) Kids' Zone Home Page, part of the U.S. Department of Education. (n.d.). Retrieved July 18, 2020, from https://nces.ed.gov/nceskids/createagraph/default.aspx?ID=c035502dd687480a8ef056cb416cb790