**2019-2020 5th Grade - Math Unit 1 - Tech Integration**Using the web browser **Firefox** will allow any web-based resources that need Adobe flash to run.

All included apps are free (some may also offer a paid version.)

**Note: Chromebooks do run Flash programs**, you may need to enable for some sites

**BrainPop subscription is no longer provided by WCPSS some schools continue to provide subscriptions.** -

When students complete online activities they may have the option to Print. On Chromebooks, when they click, they will be prompted to Save, change destination to Google Drive and their work will be saved in their Google Drive.

Students can also take a screenshot of online work and save to Google Drive.

**Discovery Education** is provided by WCPSS and is now accessed for teachers and students through WakeID Portal

**Minecraft Education Edition -** is provided by WCPSS but can only be played on devices with Windows10. Game should already be available on these devices, if not submit a Heat Ticket, can also be played on iPads.(Minecraft is not available on Chromebooks - Students will log in with WakeID)

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| Lesson | Technology Suggestions | Ways to Integrate |
| **SAS Curriculum Pathways - (Available in WakeID Portal)**  If you search Data Depot it will provide real world data on a variety of topics. Using the choices on the left filter for K-5 to narrow the results. This information can be used in many ways in this lesson, and is a valuable resource. | | |
| Lesson 1  Getting to Know you | [Graphmaster](http://mrnussbaum.com/graphmaster-ipad.html) | Students input data and are able to view different types of graphs of their data. Also provides questions related to the data they entered |
| [Create a Graph](https://nces.ed.gov/nceskids/createagraph/) | Students choose the type of graph they want to create and input their own data |
| Lesson 2  Introducing Coordinate Grids | [Graph Points on the Coordinate Plane](https://www.mathgames.com/skill/5.106-graph-points-on-a-coordinate-plane) | Students practice graphing (x,y) in Quadrant 1 of coordinate plane. (multiple levels for practice. |
| [Coordinate Graphs as Maps](https://www.mathgames.com/skill/5.112-coordinate-graphs-as-maps) | Practice Activity with coordinate grids. |
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|  | Robots- (Dash, Spheros) | Using any programmable robots - have students write the code to have the robot travel to points on the coordinate plane. Have students analyze the line the robots travelled. |
| Lesson 3  Graphing a Drought Changes Over Time | [Mathopolis](https://www.mathsisfun.com/data/line-graphs.html) | Intro to Line Graphs Lesson, can be used for students who need more review or those who may have missed the lesson. Questions at the end provide practice interpreting line graphs. |
| Google Sheets | As a whole group activity demonstrate to students how they can insert the data into a Google Sheet, using 2 columns. Then choose insert, scroll down and choose chart. Google will create a line graph of the data.  After demonstrating to whole group, allow students to practice with data they create. |
| Lesson 4  Does North Carolina Have a Fever | Google Sheets | Allow students to put the information provided in one of the activities in the lesson into a Google Sheet. Then using the insert chart feature to create a graph of the data. Show them how they can switch from a line graph to a bar graph. Labeling the columns will create labels for the graph. Have them share with you, or post to your Google classroom.( This can be a collaboration with technology teacher) |
| Lesson 5  Weather Around the World | Media Center Specialist | Your Media Center Specialist can identify resources that students can use to find data for their chosen topic. WCPSS provides a number of digital resources such as NCWiseOwl and Discovery Education for students. |
| Google Sheets  Google Slides | Students record data in Google Sheets, create graphs, using Google Slides for presentation. |
| Lesson 6  Paper Airplanes STEM Challenge | [How to make a Paper Airplane](https://www.youtube.com/watch?v=7KPaxKUDj6I)  Video | Share video with students in Google Classroom, as a resource for those that may not already know how to create a paper airplane. (if you insert video into a Google Slide you should eliminate ads) |
| iPads, tablets, Video cameras | Have students record video of the airplane flights, so they can go back and compare what the flight of each attempt looked like. Remind them to introduce each flight with specific information. |
| Lesson 7 Investigating Numerical Patterns | Videos created from previous lesson | Students can use videos they took during previous lesson as they analyze the data in this lesson. Discuss how scientists and engineers will use videos of their design tests to help them analyze data and redesign and improve their designs. |
| Lesson 8  A Deeper Investigation of Numerical Patterns | [Math Function Machine](https://www.mathplayground.com/functionmachine.html) | Given X & Y values, student determines function. |
| [Graph Linear Functions](https://www.mathgames.com/skill/5.111-graph-linear-functions) | Given the rule, students will identify the correct graph |
| Lesson 9 Numerical Patterns in the Real World | [Graph Linear Functions](https://www.mathgames.com/skill/5.111-graph-linear-functions) | Based on the given rule students determine which graph is correct.  (They use the format 2X, so students will need to understand that is the same as 2 \* X) |
| Lesson 10  Graphing Geometric Shape Patterns |  |  |

<https://mathsframe.co.uk/en/resources/playgame/111>

<https://www.mathsisfun.com/data/line-graphs.html>