

## **ST1.4 STEM research through technology**

- Preschool - Preschool students use the Smartboard to promote learning related to STEM through songs, activities and online books.
- Kindergarten: Kindergarten watches 'Mystery Doug' each week as we investigate different 'real world' STEM topics. We also utilize Zearn, Code.org, and Defined STEM.
- First Grade: The first grade students have access to Osmo, Zearn, Code, and Defined STEM.
- Second Grade: Second grade students participate in online programs such as code.org, and utilize Kiddle.co as a safe search engine for research. Students also engage in SmartBoard learning activities through Reading Street and SmartExchange.
- Third Grade: Students use technology resources to conduct research and demonstrate creative and critical thinking. For example, third grade students use computers to research famous inventors for a wax museum style performance. Students also have created slideshow presentations to communicate their research. Students must think critically about what information is important to include and creatively to create a presentation that is both accurate and interesting to an audience.
- Fourth Grade: 4th grade students are encouraged to use technology for conducting research, demonstrating creative and critical thinking and communication and collaboration. 4th grade students use many of the google products to conduct research, communicate and work collaboratively. Students communicate their PDSA data using google slide. They have created google slide presentations to communicate their understanding of vocabulary to presenting future career opportunities. We use Define STEM as well as other websites to conduct research on different real world topics. Lastly, students use video, google slide, and other web based technologies to communicate their results and findings.
- Fifth Grade: Code.org allows students to work collaboratively or alone to create a computer-based program giving insight into the world of Computer Science. By using Chromebooks students participate in Zearn which promotes mathematical thinking in a game-based manner.
- Sixth Grade: Technology is integrated across the grade level curriculum. Students conduct research in groups and on an individual basis to explore and solve problems. Students present research and evaluate and provide feedback.
- Seventh Grade - Students use technology in all core classes. Technologies that students use are; chromebooks, laptops, Ipads, and Smartboards. This allows students to access, Google and Microsoft programs for students to use interactive labs, coding, research, writing, and presentations. Students use technology independently and collaboratively depending on what the goal is for the assignment or project. Students use technology to access online Science curriculum and virtual labs and field trips.
- Eighth Grade - Algebra class uses programming on TI-84, team-based to automate calculations such as the quadratic equations. Use of computers to research background information, make connections with content and incorporate research into final product. Use online research for practice problems solving and use different technologies to communicate solutions including doc cam, SmartBoard. All students use chromebooks to access Discovery Education to learn and review content. All students use chromebooks to do research projects and to demonstrate understanding in groups using Gizmos.
- Special Areas - Clute's Game: Team members are given tools to navigate from one side of the gym to the other. Students must plan, demonstrate creative and critical thinking, communicate, and work collaboratively to accomplish the mission.
- Ren 6/7/8: All students utilize Google Docs, Sheets, Slides, and Forms on a daily basis within all content areas. Students continually employ these technology resources in their everyday learning.