elevate science

Students as Digital Citizens

Power Up Your Instruction!

Students as Digital Citizens

Technology is integrated into students' lives in school and in society, and their world is expanded through laptops and mobile devices. While using electronic tools, students investigate new topics, communicate extensively, produce projects, and share their work with others. Through the study of science, students investigate and practice science and engineering and participate as citizens in their local, global, and digital worlds. Students are empowered to make informed decisions, communicate conclusions, contribute to society, and participate as citizen scientists.

A digital citizen is any person who participates in society using information and communication technologies, for example by blogging, commenting, or even just looking up information. Students of the digital community must know and understand what to expect, to both protect themselves and to find the accurate information they need. Teachers play an important role in preparing students to be good digital citizens, that is, to use the Internet and digital tools responsibly, effectively, and safely.

Open-source electronic resource (OER) web sites provide free resources such as digital activities and assessments. You can find OER materials for classroom use and professional learning on:

OER Commons
(https://www.oercommons.org/)

The Learning Registry
(http://learningregistry.org/)

My Digital Chalkboard
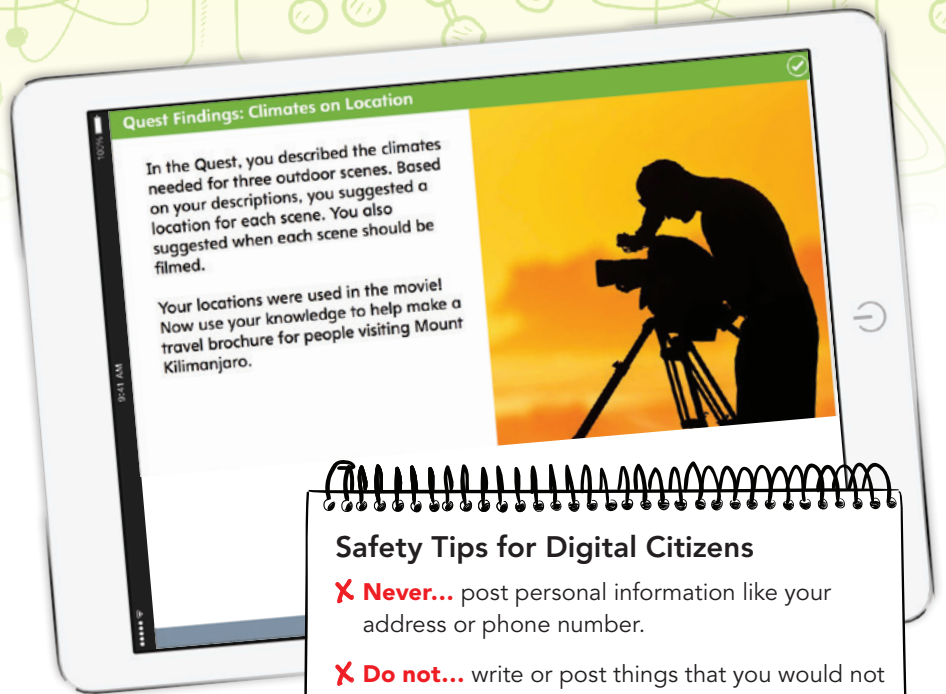(https://www.mydigitalchalkboard.org/)

Digital Learning in Science

Countless digital resources are available for enriching your classroom. Online tools for graphing, video editing, podcasting, storyboarding, and coding can be useful across multiple grades. Online interactive science simulations, virtual labs, and models add depth to student understanding of concepts and of phenomena that cannot be observed directly. Satellite imagery and data displays provide a beyond-birds-eye view of Earth. Scientists use social media to interact with classrooms, sharing their experiences and discoveries during field work on land, in the ocean, and in space.
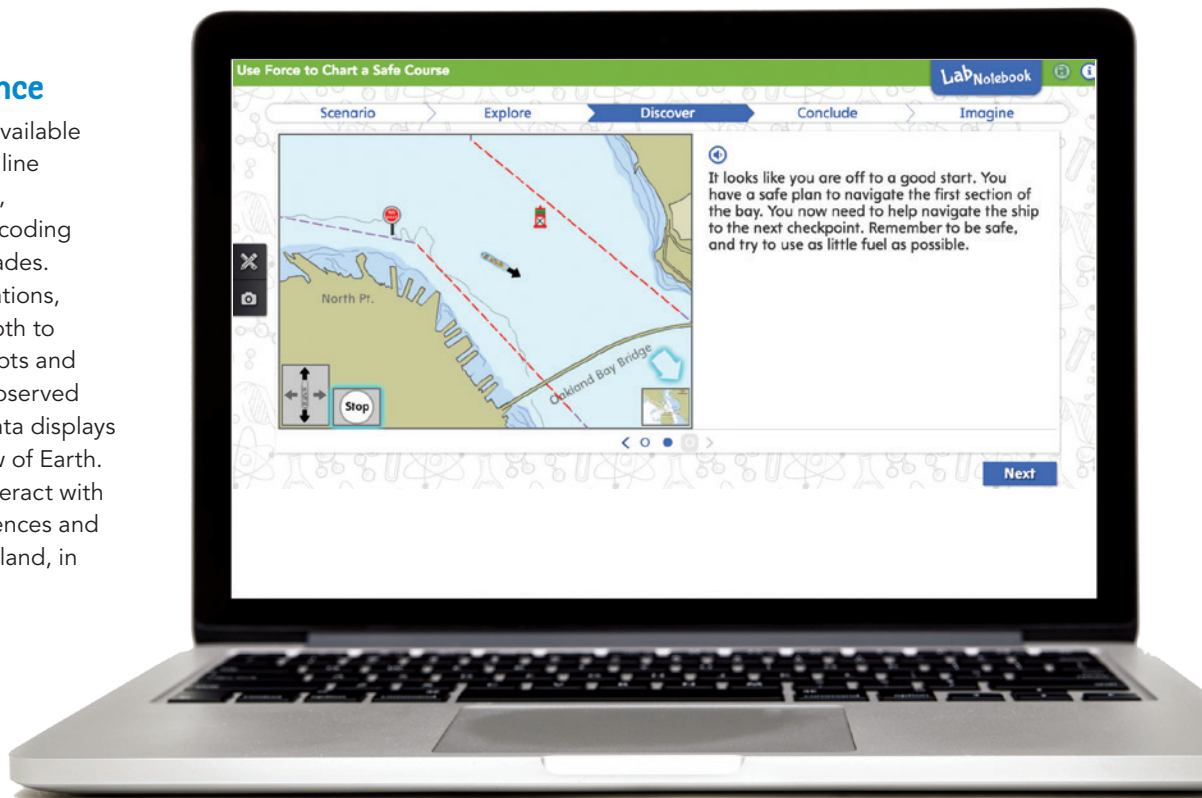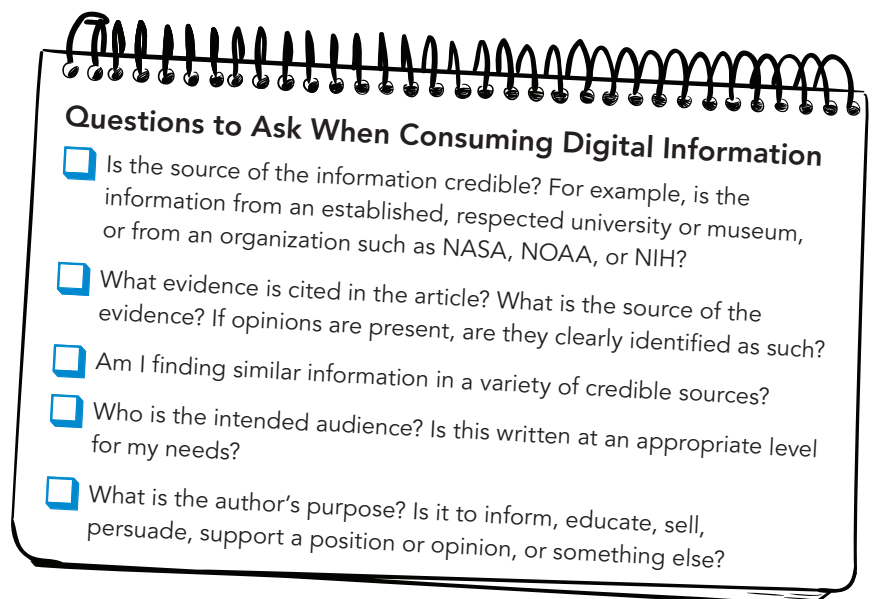
Students as Producers of Digital Content

Because digital experiences are now so common, it is important for students to learn about their roles, rights, and responsibilities as digital citizens. Students can share text, photos, and videos instantaneously and contribute to the digital world as producers of digital content. Students establish a digital footprint that becomes their digital identity. As contributors, students need to understand topics and issues around privacy, copyright, cyber-bullying and Internet safety. Share these tips with your students.

Quest Findings: Climates on Location

In the Quest, you described the climates needed for three outdoor scenes. Based on your descriptions, you suggested a location for each scene. You also suggested when each scene should be filmed.

Your locations were used in the movie! Now use your knowledge to help make a travel brochure for people visiting Mount Kilimanjaro.

Safety Tips for Digital Citizens

- ✗ **Never...** post personal information like your address or phone number.
- ✗ **Do not...** write or post things that you would not be proud to put your name on.
- ✗ **Do not...** illegally copy materials; always cite sources when referencing someone else's work.
- ✓ **Always...** treat others with respect online.

Students as Consumers of Digital Content

As access to online resources increases, it matters more than ever that students become critical consumers of information. Students need to use the SEP of *asking questions* about what they read and see online, for example, "Are the claims I am reading evidence-based?". Evaluating online sources, seeking out multiple sources, and finding credible sources provide opportunities to interpret information and draw more accurate conclusions about a claim. With the abundance of online content, it is vital for students to learn strategies for distinguishing evidence from opinion. Through the inquiry process, students become better communicators, consumers, producers, and active digital citizens.

Questions to Ask When Consuming Digital Information

- ☐ Is the source of the information credible? For example, is the information from an established, respected university or museum, or from an organization such as NASA, NOAA, or NIH?
- ☐ What evidence is cited in the article? What is the source of the evidence? If opinions are present, are they clearly identified as such?
- ☐ Am I finding similar information in a variety of credible sources?
- ☐ Who is the intended audience? Is this written at an appropriate level for my needs?
- ☐ What is the author's purpose? Is it to inform, educate, sell, persuade, support a position or opinion, or something else?

elevate science

elevateScience™ is a K-8 phenomena-based science curriculum that immerses students in the inquiry process. Science and engineering practices, core ideas, and crosscutting concepts combine to help students develop a deeper, more cohesive understanding of science.

For classrooms, hybrid instruction, and distance learning

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