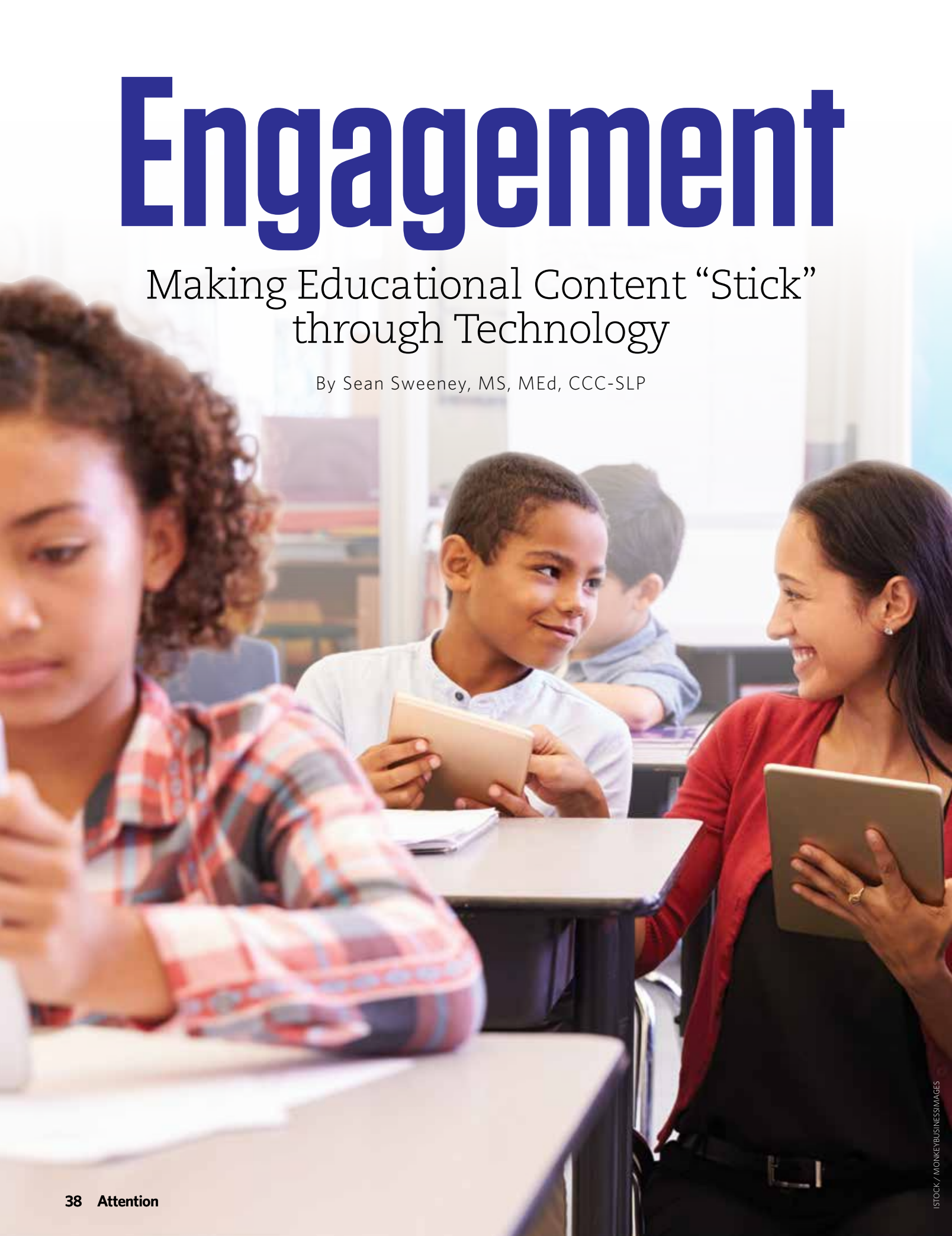
Engagement

Making Educational Content "Stick" through Technology

By Sean Sweeney, MS, MEd, CCC-SLP



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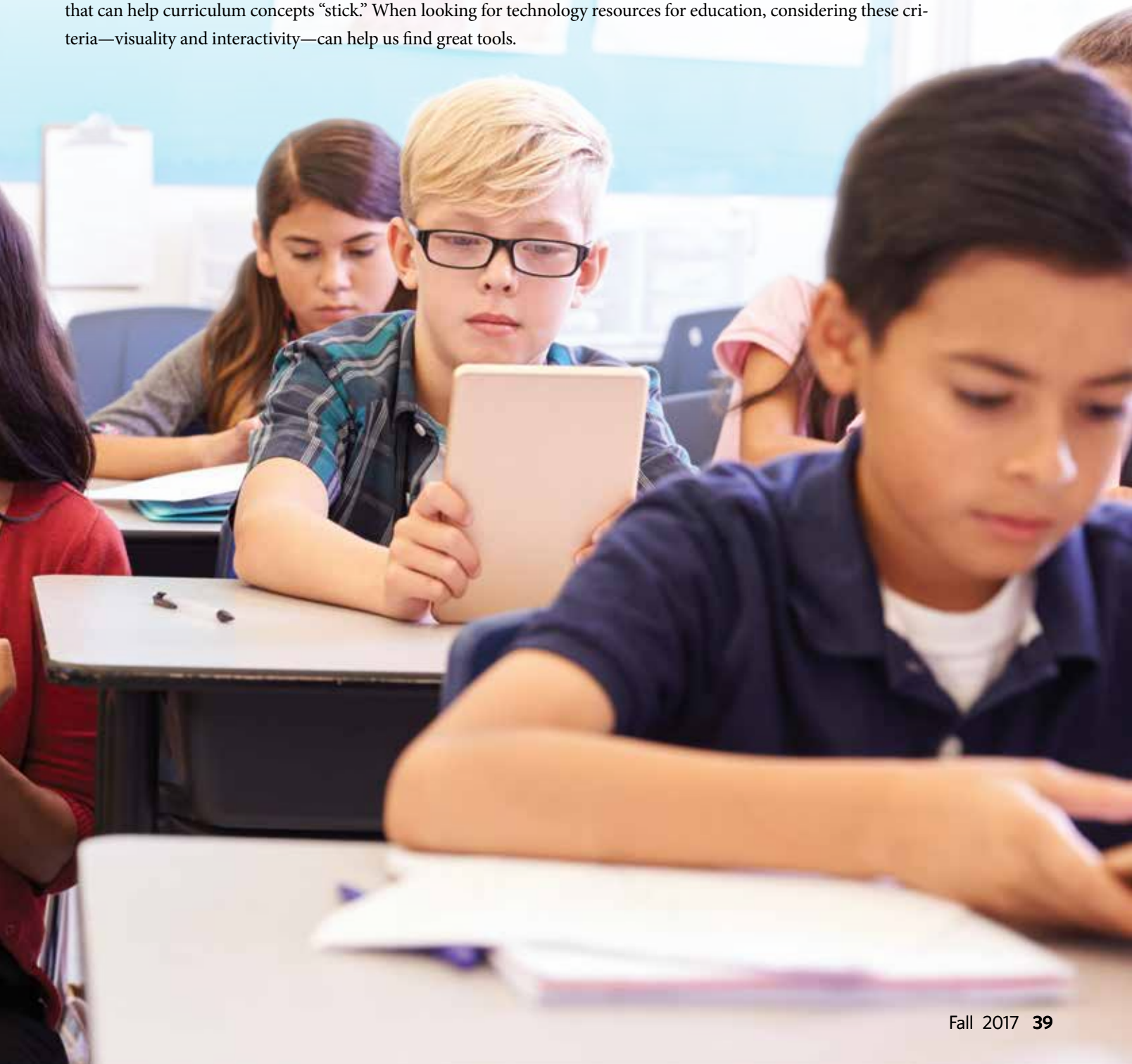
ENGAGEMENT. In my years as a speech and language pathologist working with students with a wide variety of learning issues, I have learned that engagement is half the battle in facilitating success. Students with attention difficulties must struggle with immersion in educational environments not necessarily designed for their needs, in which the material they are intended to learn is often presented through an oral and way-too-ethereal means. Spoken by the teacher or peers, the key points can be gone before a student even knew he or she wasn't attending.

For students with language comprehension, executive functioning, and attention issues, when seeking to build skills I often turn to curriculum contexts, partially because there are so many resources that can turn educational topics visual and interactive. Technology brings tools that can make any topic become visual, and visuals hold attention, providing opportunity for verbal exploration, connections in learning, and application through strategies. Resources that allow students to make interactive choices with content naturally also add fun, engagement, and an experiential quality that can help curriculum concepts "stick." When looking for technology resources for education, considering these criteria—visuality and interactivity—can help us find great tools.

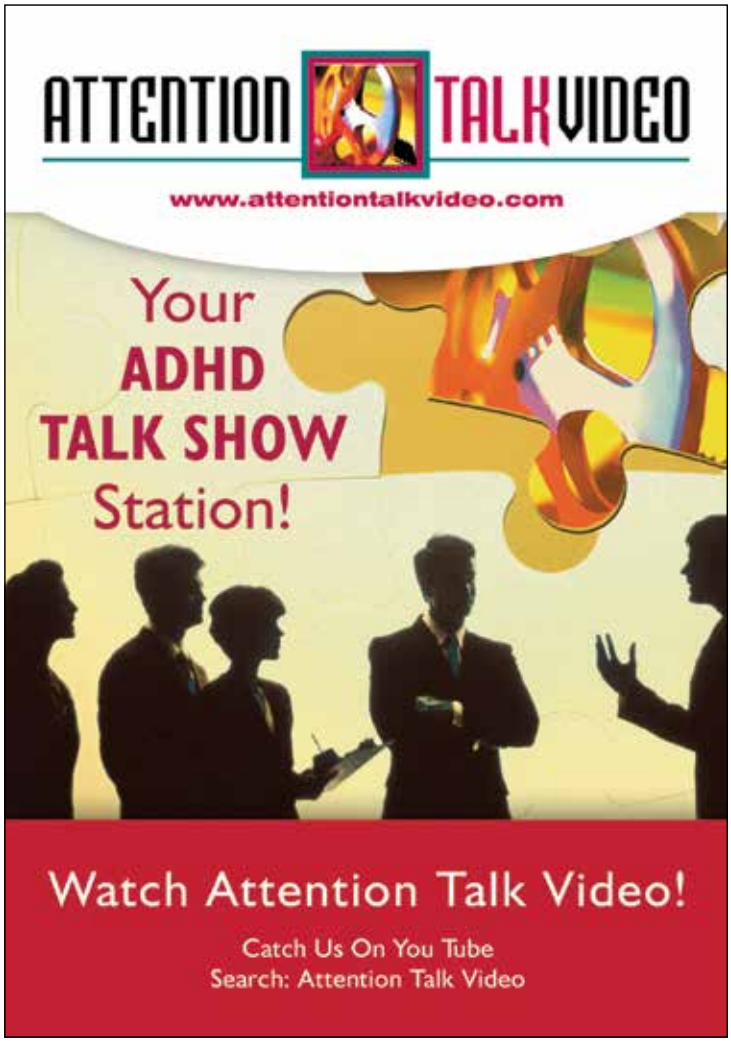


Students are also engaged by creating their own visualizations of topics using technology tools in order to show what they know. As the saying goes, if you can explain it, you have learned it!

Take them to the "movies"

Many studies support the efficacy of using video in education as supporting both attention and motivation; take, for example, the research underlying interventions such as video modeling. In a practical sense, students enjoy watching video resources, and these can render concepts and vocabulary more visual within any topic. The educational website Classhook was created for this express purpose, to provide teachers with resources to "hook" students with videos from pop culture (such as movies and television) that relate directly to subjects across the curriculum.

For example, the biology category has videos related to evolution, life cycles, and genetics from sources such as the TV show *Seinfeld* and the film *Gattaca,* thus providing both visual connections and narrative engagement. Other, more straightforwardly informational resources include Brainpop, a subscription service used by many school districts and TED-ED, both of which use animation to make curriculum topics more visual.



Interacting and applying

Attending to and memorizing vocabulary and concepts too often seems a goal of learning. If one can discuss, solve problems with, and apply curriculum ideas, both engagement and establishment of knowledge of the topic are more easily accomplished. An educational "interactive" provides opportunity within a website or app for a student to make choices and decisions with content, in the process mediating visuals and language that facilitate the learning process. The aforementioned Brainpop website has a section called "Game Up" with interactive games linking to a wide variety of curriculum topics, tapping such resources as iCivics, a comprehensive gamification of American government. Besides searching for "interactives" to add engagement and visuals to any curriculum topic, you can rely on clearinghouse sites such as learningscience.org, which catalogues interactive activities summarizing and applying physical, life, and earth science and other topics.

In the world of mobile device apps, a number of devel-

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opers have focused on making curriculum topics interactive. My favorites are the apps from TinyBop (for iPad), whose apps revolve around science, technology, engineering and math (STEM) topics, as well as social studies, and provide playful sandboxes to interact with, say, a full atlas of the human body (The Human Body). The apps provide very little language but rather are meant to be constructivist in allowing students to manipulate systems and items within topical categories; helpful handbooks are available for each app. Consider browsing the education category of the App Store and consulting blogs such as Smart Apps for Kids, Teachers with Apps, and iPad Apps for School for more great examples.

Create it!

Students are also engaged by creating their own visualizations of topics using technology tools in order to show what they know. As the saying goes, if you can explain it, you have learned it! Apps such as Book Creator (available for iPad, Android, and soon for Chromebook) allow the creation of a multimedia book that is sharable to e-readers such as iBooks. Students can insert vibrant images, draw pictures or diagrams, or even record audio or video into the book, thus providing opportunities to interact with any curriculum topic. The "explanimation" tool Explain Everything (also for iPad, Android, and Chromebook) is a medium for creating a simple animated video with ANY kind of content, including files such as PDFs. Students can write, draw, and speak over photos, videos, or documents to create a shareable film.

Students also have at their disposal the varied, simpler tools afforded by Google, as many districts have adopted G Suite for Education (formerly known as Google Apps). These productivity tools include the ever-evolving Docs and Slides, which provide great opportunities for teacher and peer feedback and collaboration while creating small or larger projects. Don't miss the gorgeous new Google Earth (for Chrome web browser and Chromebooks, but also accessible on mobile devices), which as a webtool allows students to create "tours" of placemarks (leading to visuals of 3D buildings and terrain) relevant to curriculum content which can be stored in their Google account.

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