Reading & Writing in a Digital Age

Educurious English Language Arts units use social media, multimedia, and real-life collaborations to engage students in meaningful and contemporary learning. Students deconstruct challenging texts and write substantial pieces in a range of genres as they construct compelling, relevant projects.

Engaging in 21st Century Biology

Biological research is in the midst of a revolutionary change as it becomes more interdisciplinary. Using a social media, project-based learning approach allows learners to productively participate in contemporary biology.

ENVIRONMENTAL & HUMAN HEALTH

In Environmental & Human Health, students explore a field of biology that affects all of us, wrestling with two big questions: How can we use plants and other living things to remove toxins from our environment? Where do these environmental contaminants come from and how do they affect us? By designing, conducting, and reporting on experiments around these questions, students contribute to the scientific knowledge base around the use of bioremediation to remove toxins from the environment. They share their results with scientists and their community via a multimedia digital journal.

PREDICTING & PREVENTING INFECTIOUS DISEASE

Have you ever wondered how infectious diseases constantly outsmart us and continue to threaten human populations around the globe? What is it that causes us to get sick? In Predicting & Preventing Infectious Disease, students explore transmission of infectious pathogens from the cellular to the global level by leveraging interdisciplinary techniques. Specifically, students explore immune system structure and function, as well as concepts associated with virology and vaccines. As part of the infectious disease module, students engage deeply with software tools and data analysis techniques developed and currently used by scientists (e.g., social network analysis of infection between people and computational modeling of disease transmission across locations).

THE ECOLOGICAL IMPLICATIONS OF CLIMATE CHANGE

How do scientists study climate change? What are the ecological impacts of climate change? Through fieldwork, lab experiments, and GIS data visualization, Exploring the Diversity of Life asks students to design and conduct investigations into how predicted climate change impacts will affect local and global ecosystems. As they explore the ecological implications of climate change, students contribute to a national citizen science effort and create an infographic that highlights scientific evidence for climate changes, impacts on species and their ecosystems, and why students think people should care about climate change.

A 21ST CENTURY CURRICULUM

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Facing Amazing Art

What does art tell us about ourselves and our cultural values? How can we use different artistic expressions to articulate our views on social justice? In Approaching Amazing Art, students read informational texts about Poe’s life and to short stories that are being read in class. The characters provide links to informational texts about Poe’s life and to original correspondence between Poe and his contemporaries.

APPROACHING AMAZING ART

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INVESTIGATING SCIENCE THROUGH STORY

How do we make complex and current science content relevant, accessible, and personal? In Investigating Science Through Story, students deconstruct the genre of creative nonfiction using Rebecca Skloot’s The Immortal Life of Henrietta Lacks and articles from the Creative Nonfiction journal. Students research, investigate, and evaluate a personally relevant scientific topic to compose a piece of creative nonfiction modeled after Skloot’s text. Throughout the unit, students engage in the important practice of revision. They also develop interview skills, engage in gym study, and participate in peer review. As a final project, students turn their scientifically rigorous, personally and community relevant creative nonfiction piece into either a vodcast/podcast, a children’s book, or an article for a class newsletter.

EXPLORING THE DIVERSITY OF LIFE: PAST, PRESENT AND FUTURE

What can fossils and DNA evidence tell us about biodiversity and evolution? How are organisms related? How can we represent relationships between organisms? In Exploring the Diversity of Life, students sort fossils and examine DNA evidence to investigate these questions. Then, students choose to research either fossils or DNA evidence to solve mystery about whale evolution. Students use multiple lines of evidence to help them create a phylogenetic tree that combines the evidence from the past (fossils) and the present (DNA) and create scientific posters to share their findings.

CHARTING CURRENT CONTROVERSIES

Today, students are bombarded with information from a number of sources on an amazing array of topics—both big and small. In Charting Current Controversies, students develop sound arguments and informed opinions using a wide variety of resources from digital text and video to books and magazines. They analyze arguments in op-eds, legal rulings, editorial cartoons, and mini-documentaries for perspective, reasons, and evidence. They identify and build counterarguments, have the opportunity to conduct collaborative research, and write an informed opinion on a controversial topic of their own choosing. When students complete this unit, they are able to answer the question: Why are some arguments taken up by others and thought of as sound, while other arguments go unheard or are dismissed?

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CONTEMPORARY APPROACHES TO GENETICS

How do genetics and the environment interact to impact human health? How do scientists use DNA technology and multi-player gaming to solve related problems? In Contemporary Approaches to Genetics, students explore cutting edge approaches to research in the fields of genetics, genomics, and evolutionary biology through: (a) planning and carrying out a DNA bar-coding investigation of a species identification challenge; (b) competing in protein folding puzzles that address current research problems; and (c) understanding the current state of personal genetic information and the ethical issues related to its widespread availability.

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