

# Open-source Electronic Resources (OERs)

Open-source electronic resources are free resources that can be useful assets to build new lesson plans or supplement existing ones. Here, you will find assets that will help you incorporate relevant information, recent data, and content that appeals to your students' particular interests. Specific resources have been suggested for each grade, but most of these assets offer resources for all grade levels. Many of the resources also provide Professional Development materials.

When determining if OER materials are appropriate for your classroom, it is important to evaluate them just as you would any other resource. You could accomplish this by using the EQUIP rubric. You should also consider whether the resource exposes students to name brands or logos, or any type of stereotype that may demean a particular group of people.

## Grade K

Animals and Movement  
Weather

The Smithsonian Science Education Center (<https://ssec.si.edu/>) provides an online game called Shutterbugs that allows students to observe animals at the National Zoo and describe their movements. SSEEC also offers weather-related videos that are appropriate for kindergarten.

## Grade 1

Sky and Earth

NASA Kids' Club (<https://www.nasa.gov/kidsclub/index.html>) gives students a safe place to explore NASA and practice their science skills. They can find out about the astronauts on the International Space Station and complete virtual activities to practice building with shapes and working with numbers. You can use the grade-level suggestions to help you differentiate instruction for struggling students and advanced learners.

## Grade 2

Plants and Animals

Exploring California Biodiversity (<http://gk12calbio.berkeley.edu/lessons.php>) offers a wide array of lessons for Grades K-12 that help students practice science skills while also learning more about biodiversity. Explore the Teaching Resources link for suggestions of Web sites where you can find wildlife photos and identification keys.

## Grade 3

Fossils and Changing Environments

The University of California, Berkeley's Understanding Evolution Web site (<https://evolution.berkeley.edu/>) has resources that will help you establish a foundation for your students' understanding of evolutionary concepts. Resources will help you develop the concepts that Earth changes over time and that fossils provide evidence of past life.

## **Grade 4**

### Human Body

KidsHealth® in the Classroom (<http://classroom.kidshealth.org>) provides videos describing the functions of human body systems, as well as age-appropriate readings, and activities.

## **Grade 5**

### Human Impacts

EPA: Lesson Plans, Teacher Guides and Online Environmental Resources for Educators (<https://www.epa.gov/students/lesson-plans-teacher-guides-and-online-environmental-resources-educators>) provides a large array of resources, such as games and workbooks. The assets cover many topics related to human impacts on Earth systems including air, climate change, ecosystems, waste, and water.