

Type of Resource	Subject	Website	Website URL	Description	Access (open, limited, at cost)	Registration required	additional notes
Simulation / Virtual Lab	Biology	Avida-ED	https://avida-ed.msu.edu/	Researchers and educators designed Avida-ED to help students learn about evolution and scientific methods by allowing them to design and perform experiments to test hypotheses about evolutionary mechanisms using evolving digital organisms.	free/open	no	
Simulation / Virtual Lab	Biology	BioInteractive - HHMI	https://www.biointeractive.org/classroom-resources?f%5B0%5D=resource_type%3A17	virtual laboratories with workshops, handouts and teacher materials	free	no	ipad apps
Simulation / Virtual Lab	Biology	Biologica - the concord consortium	http://biologica.concord.org/webtest1/web_labs.htm	web labs and 3D cell renderings to each genetics	free	no	shockwave
Simulation / Virtual Lab	Biology	Biology Simulations	www.biology-simulations.com	Biology simulations for evolution, ecology, heredity, and cell	free/open	no	Virtual lab worksheets available for download, simulations each include random components, many can be used for inquiry based investigations.
Simulation / Virtual Lab	Biology	Biomanbio Games	https://biomanbio.com/	[pre-college] video games on bio topics - teacher sign-up and student scores sent to spreadsheet	free	yes	
Case Studies	Biology	Case It Biology	http://www.caseitproject.org/wp-content/uploads/2012/07/RM2017.html				
Simulation / Virtual Lab	Biology	DataNuggets	http://datanuggets.org/	Activities to develop quantitative skills. Undergrad. = Content Level 4	free	no	Digital specific data nuggets: http://datanuggets.org/digital-data-nuggets/?fbclid=IwAR2QjV62vfiHQ2jrhZf1ODzPhIRjkGbGAbQkwZ3qMQhHP9FVOaZ_F0iq6A
Simulation / Virtual Lab	Biology	Evo-Ed	http://www.evo-ed.org/index.htm	Integrative Evolution Case Studies/Modules/Games	free	no	
Simulation / Virtual Lab	Biology	Gel Scramble	https://mdcune.psych.ucla.edu/modules/gel	Critical thinking in molecular biology	free	yes	Students are given protocols and then have to decide which gels fit AND what happened when they don't fit perfectly. Good critical thinking lab.
Simulation / Virtual Lab	Biology	GelBox	http://douglaslab.org/gelbox/	Open Inquiry Simulation of DNA gel electrophoresis (only DNA currently)	Free	Yes	Download program, Mac only!
Simulation / Virtual Lab	Biology	Gizmos	https://www.explorellearning.com/index.cfm?method=cResource.dspResourceCatalog	online simulations with instructor guides, prompts for students	free	yes	
Simulation / Virtual Lab	Biology	Interactive Media - Virtual Labs Stanford	http://virtuallabs.stanford.edu/	online interactive media	free	no	adobe flash player
Other Media (video/photos/images/podcasts)	Biology	Jim Allison: Breakthrough (Free Film)	https://www.breakthroughdoc.com/for-educators	Award-winning documentary which is a moving, true story of one warm-hearted, stubborn scientist's visionary quest to find a cure for cancer (with discussion/activity guide).	free/open	Yes, but only the educator - you can send the link to students.	We hope that this story of how science can solve some of our most pressing problems today can be of inspiration to your students.
Simulation / Virtual Lab	Biology	Judith Nuno's AP Biology	http://www.jdenuno.com/APBiology/APBIO.htm	simulations, activities, lab protocols + for a few simulations	free	no	adobe for most
Simulation / Virtual Lab	Biology	Labster	https://www.labster.com/simulations/	simulations + short lesson/learning objectives	Free for K12, Discounted for higher ed (spring-summer 2020)	yes	accessed through BB
Simulation / Virtual Lab	Biology	LabXchange	https://www.labxchange.org/library/items/lb:LabXchange:c89bc1ea:ix_simulation.1	Experimental design - identify SNPs	free	no	
Simulation / Virtual Lab	Biology	Learn Genetics	https://learn.genetics.utah.edu/	Interactive techniques labs, online lessons in genetics, cell biology, evolution, human health, plants, neuroscience, ecology; includes Pigeonetics breeding game on Mendelian genetics	free	no	Virtual Labs only: https://learn.genetics.utah.edu/content/labs/
Simulation / Virtual Lab	Biology	Microbiology Virtual Lab	https://vlab.amrita.edu/?sub=3&brch=73	animations, lessons, simulators, assignments	free	yes	
Simulation / Virtual Lab	Biology	Microscopy Laboratory	http://www1.udel.edu/biology/ketcham/microscope/	virtual microscope	free	no	Flash 6 plugin required
Simulation / Virtual Lab	Biology	Molecular Workbench	http://mw.concord.org/modeller/	simulations + lesson guides for students	free	no	Java
Case Studies, Other Media (videos/photos/images/podcasts)	Biology	Network of Conservation Educators and Practitioners: Biodiversity and Conservation Modules	https://ncep.amnh.org	Over free 170 educational teaching modules (including case studies, data exercises, background materials, powerpoints, teacher notes) that are downloadable, modifiable and geared towards undergraduate level (but adaptable)	free	yes (teachers), no (students)	A great addition to any class that has topics of biodiversity, conservation, and ecology. All materials go through peer-review and are designed with evidence-based teaching techniques in mind. Select materials are published in an online journal, Lessons in Conservation https://ncep.amnh.org/linc
Simulation / Virtual Lab	Biology	NOVA interactives	https://www.pbs.org/wgbh/nova/topic/evolution/?content_type=interactive&sorting=newer	interactive modules for many subjects (and videos)	free	no	
Other Media (videos/photos/images/podcasts)	Biology	PEER - Partnership for environmental education and rural health	https://peer.tamu.edu/VBB/VideoProcedures.asp				
Simulation / Virtual Lab	Biology	Phet Interactive Simulations	https://phet.colorado.edu/	simulations + faculty resources: activities, questions to ask students	free	no	Adobe Flash Player, Java or others (depending on simulation)
Simulation / Virtual Lab	Biology	Praxilabs	https://praxilabs.com/en/virtual-labs	simulations with prompts embedded to walk students through lab	free	yes	
Simulation / Virtual Lab	Biology	QUBES	https://qubeshub.org/qubesresources	Biology/Math platform with open source simulations, activities etc			

Simulation / Virtual Lab	Biology	SimBio/ Simulated Biology	https://simbio.com/	experimentation using realistic simulations of biological systems	For Spring 2020 they are allowing greater free access; typically it requires payment per lab or chapter.	yes	
Simulation / Virtual Lab	Biology	Solve The Outbreak	https://www.cdc.gov/mobile/applications/sto/web-app.html	Simulation of a virus outbreak.	free/open	no	
Simulation / Virtual Lab	Biology	StarGenetics	http://star.mit.edu/genetics/	Mendelian genetics cross simulator developed at MIT by biology faculty, researched-trained scientists and technologists at MIT's OEIT. StarGenetics allows students to simulate mating experiments between organisms that are genetically different across a range of traits to analyze the nature of the traits in question. Its goal is to teach students about genetic experimental design and genetic concepts.	free	no	
Simulation / Virtual Lab	Biology	Teaching Genetics with Dragons	https://concord.org/teaching-genetics/dragons/	genetics game with instructor guides, resources	free	yes	
Simulation / Virtual Lab	Biology	Virtual Biology Labs	http://www.classzone.com/books/hs/ca/sc/bio_07/virtual_labs/virtual_labs.html	virtual labs that allow students to save predictions, data, calculations and conclusions from lab	free	no	adobe flash
Simulation / Virtual Lab	Biology	Virtual Interactive Bacteriology Laboratory	http://learn.chm.msu.edu/vibl/	virtual labs with pre-lab walk through (descriptions, steps, starts)	free	no	some make students do all or some steps
Simulation / Virtual Lab	Biology	Virtual Laboratory	http://virtuallaboratory.colorado.edu/virtuallabs.htm	videos, descriptions, simulations throughout lessons (Water properties, Ecoli, Growth, Mutation, Adaptation)	free	no	Adobe Flash Player required
Simulation / Virtual Lab	Biology	Virtual Microscope	http://virtual.itg.uiuc.edu/	virtual microscopes, 90 samples of multi-dimensional, high-resolution image datasets. The Virtual Microscope, available for free download, supports functionality from electron, light, and scanning probe microscopes, datasets for these instruments, training materials to learn more about microscopy, and other related tools	open	no	
Simulation / Virtual Lab	Biology	Virtual Scanning Electron Microscope	https://micro.magnet.fsu.edu/primer/java/electronmicroscopy/magnify1/indx.html	interactive microscope with different samples and ability to change focus, contrast, brightness and magnification (curriculum on microscopy available + interactive tutorials)	free	no	Java for interactive tutorials
Simulation / Virtual Lab	Biology: Microbiology	General Microbiology Labs	http://www.uwyo.edu/molb2021/	25 Virtual labs + accompanying lab lecture notes for students	free/open	no	
Simulation / Virtual Lab	Biotech	LabXchange/Amgen Biotech/Harvard	https://www.labxchange.org/library/clusters/abe	fundamental concepts and lab techniques essential to the field of biotechnology	Free	Account required	Can also curate playlists
Data Sets / Sources	Business and Finance	U.S. Govt Open Data	https://catalog.data.gov/dataset?groups=research9385#topic=research_navigation				
Simulation / Virtual Lab	Chemistry	AACT (American Association of Chemistry Teachers)	https://teachchemistry.org/news/unlocked-resources-through-march-31	activities, animations, projects, simulations, and videos for middle school, high school, and Advanced Placement/general chemistry	open through March 31	no	
Simulation / Virtual Lab	Chemistry	ChemCollective CMU	http://chemcollective.org/home	Virtual Labs and Simulations	free	no	online simulation of a chem lab; by concept and difficulty
Simulation / Virtual Lab	Chemistry	ChemSims	http://chemsims.com/	Evidence based assignments to support several online simulations from PhET and Pearson	free	no	
Simulation / Virtual Lab	Chemistry	Ck-12 Exploation Series	https://interactives.ck12.org/simulations/physics.html	easy to use simulations and walkthroughs	free	sign in via g	
Simulation / Virtual Lab	Chemistry	EduMedia	https://www.edumedia-sciences.com/en/node/105-global	simulations by subject	free	no	
Simulation / Virtual Lab	Chemistry	EduWebLabs	http://eduweblabs.com/	online laboratory - guides for students beside simulator (labs, exercises, drills, tutorials)	free	no	adobe flash player
Simulation / Virtual Lab	Chemistry	MIT OpenCourseWare Digital Lab Techniques Manual	https://ocw.mit.edu/resources/res-5-0001-digital-lab-techniques-manual-spring-2007/index.htm	videos of common chemistry laboratory techniques	open free	no	
Simulation / Virtual Lab	Electronics, 3D design, coding	Tinkercad	https://www.tinkercad.com/	free online tools, including Arduino simulation	free/open	yes	
Simulation / Virtual Lab	Engineering	Energy3D	http://energy.concord.org/energy3d/	Energy3D is a simulation-based engineering tool for designing green buildings that harness renewable energy to achieve sustainable development.	free/open	no	Download and install
Simulation / Virtual Lab	Environmental Science	The Habitable Planet - Annenberg Learner	https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/	a robust text plus lab simulations + lesson plans (pollution, C cycle, ecosystems), embedded topic movies, interviews w scientists, and more	free	no	
Simulation / Virtual Lab	Geology	Finding Lab Activities Online	https://serc.carleton.edu/NAGTWorkshops/online/lab_activities.html	a list of online courses/laboratories to teach geology	free	no	
Simulation / Virtual Lab	Geology	Geology Online Labs	https://www.sciencecourseware.org/GLOL/	curricula with virtual earthquake, dating and river	free	no	java or flash
Simulation / Virtual Lab	Geology	Jules Verne Voyager	http://jules.unavco.org/Voyager/Jr/Earth	manipulate maps of the world to view different features	free	no	
Simulation / Virtual Lab	Geology and Earth Sciences	Virtual Microscope	https://www.virtualmicroscope.org/collections	Our virtual microscope collections include a full range of rock	open	no	
Simulation / Virtual Lab	Math?	Patterns in Nature	http://polymer.bu.edu/java/	short lessons + online simulators	free	no	Java
Other Media (video/photos)	Microbiology	Public Health Image Library	https://phil.cdc.gov/	Pictures of human cases, media, test results, and microscop	free/open	no	It takes a while to understand the exact search you want but it is intuitive as you use it
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	Discovery Education	https://www.discoveryeducation.com/				

Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	Flickr Space X Photos	https://www.flickr.com/photos/spacex					
Case Studies	Multi-Disciplinary	Investigate Case Based Learning: BioQuest:	http://bioquest.org/icbl/cases.php					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	KSU Usage Media for Online Classes - scroll down for video (web-based sources)	https://www.kent.edu/onlineteaching/usablemedia					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	NASA TV images	https://www.nasa.gov/multimedia/imagegallery/index.html					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	National Geographic Video	https://video.nationalgeographic.com/					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	National Geographic Video (youtube):	https://www.youtube.com/user/NationalGeographic/videos					
Case Studies	Multi-Disciplinary	Native case studies	http://nativecases.evergreen.edu/collection/discipline					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	Old Book Illustrations	https://www.oldbookillustrations.com/advanced-search/?search_query=&tax_subject%5B%5D=science-technology&tax_obj_title=&tax_artist=&tax_writer=&tax_date_published=&tax_post_tag=&orderby=title&order=ASC&wpas_id=obi-form&wpas_submit=1					
Case Studies	Multi-Disciplinary	Science, Health & Medicine, Engineering and Environment:	https://genderedinnovations.stanford.edu/fix-the-knowledge.html					
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary	Smithsonian Channel	https://www.smithsonianchannel.com/					
Case Studies	Multi-Disciplinary	The Hallway: case studies	https://www.hallway.org/browse					
Data Sets / Sources	Multi-Disciplinary	USGS (U.S. Geological Survey)	https://www.usgs.gov/products/data-and-tools/science-datasets	Science datasets; search by topic				
Other Media (videos/photos/images/podcasts)	Multi-Disciplinary, STEM	Fuse School	https://www.fuseschool.org/users/sign_in	Informational videos on science topics	free/open	yes		
Simulation / Virtual Lab	Neuroscience	UCLA	https://mdcune.psych.ucla.edu/modules	digital modules for undergraduate neuroscience course				
Simulation / Virtual Lab	Physics	Algodoo	http://www.algodoo.com/	Physics simulation	free/open	no	need to be downloaded and installed	
Simulation / Virtual Lab	Physics	HTML5 Physics Simulations	http://physics.bu.edu/~duffy/HTML5/index.html	manipulate systems and experiment with climate change, m	free	no		
Simulation / Virtual Lab	Physics	Java simulations by Eugene Butikov	http://butikov.faculty.ifmo.ru/index.html#_Current_Projects	complex Java simulations of oscillations, rotations, ... includi	free/open	no	virtual labs useful for undergraduate and graduate students	
Virtual Field Trip	Physics	Nuclear Reimagined Virtual Field Trip	https://www.navigatingnuclear.com/nuclear-reimagined-vft/	step inside a nuclear reactor, explore unexpected careers in nuclear science, and see what the future may hold thanks to advances in nuclear capabilities.	free/open	no	ipad/tablet download available in addition to windows or other mac downloads. Has a downloadable educator's guide with NGSS and ITEEA, including links to digital tools for Venn diagrams, brainstorming mapping.	
Simulation / Virtual Lab	Physics	Open Source Physics	https://www.compadre.org/osp/index.cfm	Lots of great tools—simulations, analysis programs.	free	no		
Simulation / Virtual Lab	Physics	oPhysics: GeoGebra Physics Simulations	https://ophysics.com/	simulations for intro mechanics, vectors, E&M, optics, and fluids.	free/open	no		
Simulation / Virtual Lab	Physics	physical phone experiments—your smar	https://phyphox.org/	Uses measurement capability of smartphone to do simple p	free/open	no	phyphox app available for android and iOS in appstore	
Simulation / Virtual Lab	Physics	Physics Classroom	https://www.physicsclassroom.com/	simulations, tutorials, concept builders, aimed at HS but usa	free	no	HTML5	
Simulation / Virtual Lab	Physics	physics simulations	https://www.myphysicslab.com/	interactive physics labs (change values and experiment)	free	no		
Simulation / Virtual Lab	Physics	Positive Physics	https://www.positivephysics.org/	physics questions and prep	free	yes	email the founder for access	
Simulation / Virtual Lab	Physics	Smartphone experiments that don't need apps	https://aapt.scitation.org/doi/10.1119/1.5080595	Five ideas for measurements that can be made with a smartphone.	free	no		
Simulation / Virtual Lab	Physics	The Physics Aviary	https://www.thephysicsaviary.com/Physics/Programs/Labs/find.php	lab simulations, some with built-in random error for better analysis	free	no		
Simulation / Virtual Lab	Physics, Biology, Chemistry, Earth Sciences	Pivot Interactives	https://www.vernier.com/product/pivot-interactives/	formerly "direct measurement videos", videos of lab trials with javascript tools for measurement see also: their free sample data library for student instructions for experiments along with sample data for analysis	at cost - requires payment	yes	30-day free trial for educators; in use at University of Washington (2020 spring)	
Data Sets / Sources	Science and Engineering (STEM Education and Workforce Development)	NSF NCSES (National Center for Science and Engineering Statistics)	https://www.nsf.gov/statistics/					
Case Studies	Sciences	National Center for Case Study Teaching in Science:	https://sciencecases.lib.buffalo.edu/	case studies - many different formats	cases free; requires payment for answer keys, teaching notes	yes		
Virtual Labs, Case Studies, Other Media	STEM	JoVE Science Education	https://www.jove.com/science-education-library	Video textbook that isolates and visually presents core concepts in Biology to improve learning comprehension.	Available through June 15, 2020	no		

Simulation / Virtual Lab	STEM	Labs Land	https://labsland.com/en	remote access to real labs	temporary free subscription	yes	Biology, Chemistry, Physics, Technology
Simulation / Virtual Lab	STEM	NobelPrize.org Education Games	https://educationalgames.nobelprize.org/educational/	educational games	free/open	no	Adobe Flash required (medicine, blood typing, PCR, DNA, Cell cycle, genetics, neuro, immunity, nerve signaling, Pavlov's dog)
Simulation / Virtual Lab	STEM	Virtual Labs (Indian Ministry of Human Resource Development)	http://vlab.co.in/	collection of science and engineering virtual labs from various institutions in India	free	no	some are Flash-based
Simulation / Virtual Lab	STEM	Virtual Labs at Amrita Vishwa Vidyapeetham	http://vlab.amrita.edu/index.php	Realistic virtual lab animation	free	yes	biotech, bioengineering, chemistry, physics, computer science, mechanical engineering, cybersecurity
Demonstrations	STEM	WOLFRAM Demonstrations Project	https://demonstrations.wolfram.com/topics.php	Mostly math, physical science, and life science.	Largely BY-NC-SA 3.0. See terms for details.	No.*	*However, in order to view or edit downloaded Demonstrations, you need the appropriate Wolfram Player or a Wolfram Language desktop interface.

What subject area(s) does this resource include? Please select ALL that are appropriate.	What grade levels does this resource include? Select ALL that are appropriate	Title/Name of Resource	URL of Resource	Short description of resource
Earth Science (General), Environmental Science (General), Oceanography, Climate Science	Undergraduate - Lower Division (Freshman/Sophomore)	Virtual Urchin Interactive Laboratories and Tutorials	https://depts.washington.edu/vurchin/	This website includes a series of interactive laboratories and tutorials, where students can perform laboratories in a virtual lab. Laboratory experiments include documenting how a more acidic ocean impacts urchin larva growth, how to use a microscope, and more.
Earth Science (General), Environmental Science (General), Physical Geography, Hydrology, Oceanography, Atmospheric Science, Climate Science	Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate	Learn GIS modules	http://learn.arcgis.com	Learn ArcGIS – a wonderful collection of short and focused lessons. Many can be strung together to create an entire GIS lab sequence or short course. They come with free evaluation software and all necessary data, also free. A relatively new option is the notion of Paths (lessons on a common theme such as conservation), feel free to browse them.
Earth Science (General), Climate Science	Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate	Global Change Video Archive	https://www.agci.org/public-lectures	These public lectures--ranging from 1990 to the present--offer an in-depth lecture on a variety of topics, ranging from how weather differs from climate to changes in phenological timing to food systems.
Earth Science (General), Environmental Science (General)	9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior)	Classic Story Maps Gallery	https://storymaps-classic.arcgis.com/en/gallery/#s=30	Story Maps are a tool of ArcGIS to effectively tell a "story" using mapping (and other) data. There are lots of different topics covered, and are a great way to share content in more interactive ways.
Climate Science	Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate	Climate Literacy Lecture Videos - UBC	https://www.youtube.com/user/climateliteracy/	Great series of lectures on different aspects of climate change.
Earth Science (General), Environmental Science (General)	K-5, 6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate	Science Education Resource Center at Carleton College	https://serc.carleton.edu/index.html	Plethora of different resources on science teaching including courses, modules, lessons, and more on many different earth and environmental science topics.
Earth Science (General), Environmental Science (General)	9-12, Undergraduate - Lower Division (Freshman/Sophomore)	The Habitable Planet: A Systems Approach to Environmental Science	https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/	Online textbook, labs, and videos related to environmental science.
Earth Science (General), Environmental Science (General), Ecology, Climate Science	6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore)	HHMI Biointeractive	https://www.biointeractive.org/	While the title has "Bio" in it, there are actual many earth and climate science related resources in this repository of online interactives. Very high quality and integrates information and videos from well know scientists.
Oceanography, Climate Science	Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior)	OOI Data Explorations	https://datalab.marine.rutgers.edu/data-labs/data-explorations/	The Ocean Observatories Initiative (OOI) Data Explorations provides a series of free online interactive data visualizations that make use of cutting-edge research datasets available from the OOI.
Earth Science (General), Environmental Science (General), Oceanography, Atmospheric Science, Climate Science, Instrumentation, Radars, Education & Outreach...	6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate, And for the general public	NCAR Explorer Series	https://ncar.ucar.edu/what-we-offer/education-outreach/public/ncar-explorer-series	The NCAR Explorer Series offers short science videos and hour-long archived lectures that span a variety of topics related to the the Earth, Sun, Ocean, Atmosphere, science instrumentation, and careers in the Earth sciences. These can be used as a resource/supplement to "learn more about" the topics your class is covering. The series also covers science conducted during different field campaigns. The field campaigns cover: wildfires/smoke (WE-CAN); Convection systems, lightning, hail, and hydrology (RELAMPAGO); and tropical convection (OTREC). Each set of field campaign videos also showcases instrumentation used for these studies.
Earth Science (General), Environmental Science (General), Physical Geography, Ecology, Hydrology, Oceanography, Atmospheric Science, Climate Science	9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior), Graduate, Professionals	Managing for a Changing Climate Videos	https://www.youtube.com/playlist?list=PLeQQSAEHE5PoblZ-Kft9FJDVX77SYBqX	A series of 50 short (5-10 minute) videos on all aspects of climate change from physical science to impacts, policy, and adaptation
Earth Science (General), Environmental Science (General), Geology, Physical Geography, Ecology	9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior)	Virtual Field Trips	https://vft.asu.edu/	Virtual field trips from ASU. Mostly geology focused but branching out to a few other topics.

Earth Science (General), Geology, Geodesy	6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior)	UNAVCO modules and activities	https://www.unavco.org/education/resources/modules-and-activities/modules-and-activities.html	Modules and Activities use geodesy as an approach to understand the changing face of our planet. They are organized by the intended learning level of the resource. In many cases, the resources can be used in more advanced or novice levels with simple modifications.
Earth Science (General), Environmental Science (General)	K-5, 6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore)	Virtual Field Trips	https://docs.google.com/document/d/1SvldgTx9djKO6SjyvPDsoGkqE3iExmi3qh2KRRku_w/edit?fbclid=IwAR2zrhrP-GaFtb9I7r6lOitlp_H2TIPdt65VuVu9FE74Bsti308a4nOroME	A teacher's compendium of online "virtual field trips" from museums, zoos, and other sources.
Earth Science (General), Environmental Science (General)	K-5, 6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore)	Visit the U.S. National Parks in Google Earth	https://www.blog.google/products/earth/visit-us-national-parks-google-earth/?fbclid=IwAR1gA6VcbvGoMJR1vzOclY-aExPeik9TGUGRwt8mli0L8t7DgmruxyhgvDU	A Google Earth tour of 31 different national parks throughout the U.S.
Environmental Science (General), Oceanography	9-12, Undergraduate - Lower Division (Freshman/Sophomore), Undergraduate - Upper Division (Junior/Senior)	Ocean Carbon & Biogeochemistry Outreach & Education	https://www.us-ocb.org/science-support/outreach-education/	Videos, animations, infographics, cartoons, and more related to ocean sciences.
Earth Science (General), Environmental Science (General)	Undergraduate - Lower Division (Freshman/Sophomore)	WebDICE model	https://serc.carleton.edu/integrate/teaching/10000/10000.html	Teaching activities, model assignments, and link to online WebDICE simulation. Students can model the social cost of carbon emissions, produce climate change projections and estimate their uncertainty, etc.
Earth Science (General), Environmental Science (General)	6-8, 9-12, Undergraduate - Lower Division (Freshman/Sophomore)	New Mexico State Conservation	https://innovativemedia.nmsu.edu/conservation/	virtual water fieldwork and laboratories
Environmental Science (General), Geology	9-12, Undergraduate - Lower Division (Freshman/Sophomore)	NM State Virtual Labs	https://virtuallabs.nmsu.edu/	These Virtual Labs help students learn basic laboratory techniques and practice methods used by lab technicians and researchers in a variety of careers, using specific food science lab processes.