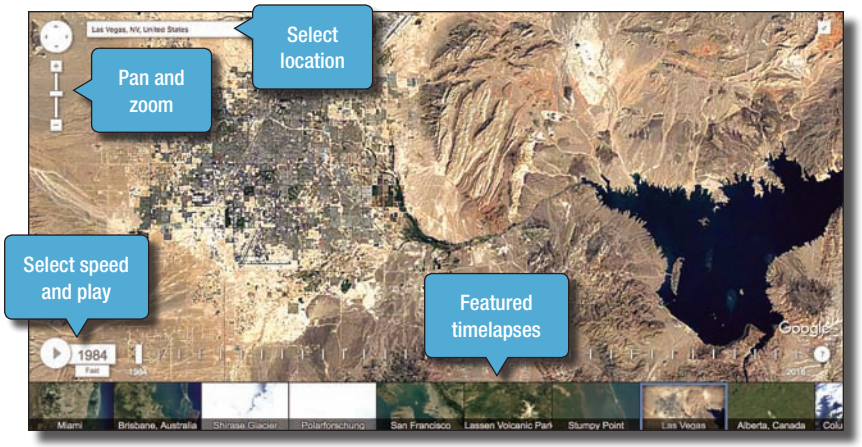
Online Resources: KEY FEATURES

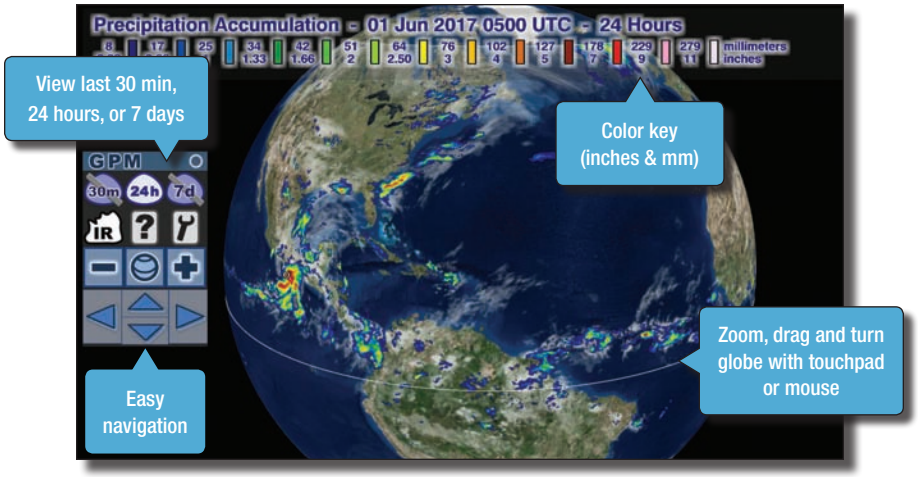
Explore key features of online Earth science data tools that can be useful for K–12 student investigations. Sources are color coded for relative level/ease-of-use: BLUE (introductory), this page; ORANGE (intermediate) and GREEN (advanced), back.



Google Earth Engine: Time Lapses

https://earthengine.google.com/timelapse

Global, zoomable video that lets you see how the Earth has changed over the past 32 years. The majority of the images come from Landsat, a joint USGS/NASA program.



Precipitation Measurement Missions

http://bit.ly/Precipitation

Data visualization tools for viewing near-real-time, global precipitation data, and flood and landslide nowcasts. Includes links to download data.

NASA Earth Observations (NEO)

https://neo.sci.gsfc.nasa.gov

Browse, download and explore imagery of NASA satellite data for over 50 global datasets—related to atmosphere, energy, land, life, and ocean.

START HERE:

NEO Analysis in 10 Easy Steps:
bit.ly/NEO_Analysis

INTRODUCTORY Source

IMAGE CREDITS

Top left: Las Vegas and Lake Mead, Landsat, USGS/NASA.

Top right: Precipitation accumulation, May 3, 2017, Global Precipitation Measurement (GPM) mission.

Bottom: Monthly Land Surface Temperature Anomaly, February 2017, Images by Jesse Allen, NASA's Earth Observatory, using data courtesy of the MODIS Land Group.

The GLOBE Program: Visualization System & Advanced Data Access Tool (ADAT)

https://www.globe.gov/globe-data/visualize-and-retrieve-data

International GLOBE schools and citizen scientists collect environmental data related to the atmosphere, biosphere, hydrosphere, and soils. Use the visualization system to locate and visualize GLOBE data, with maps, graphs, and data tables.

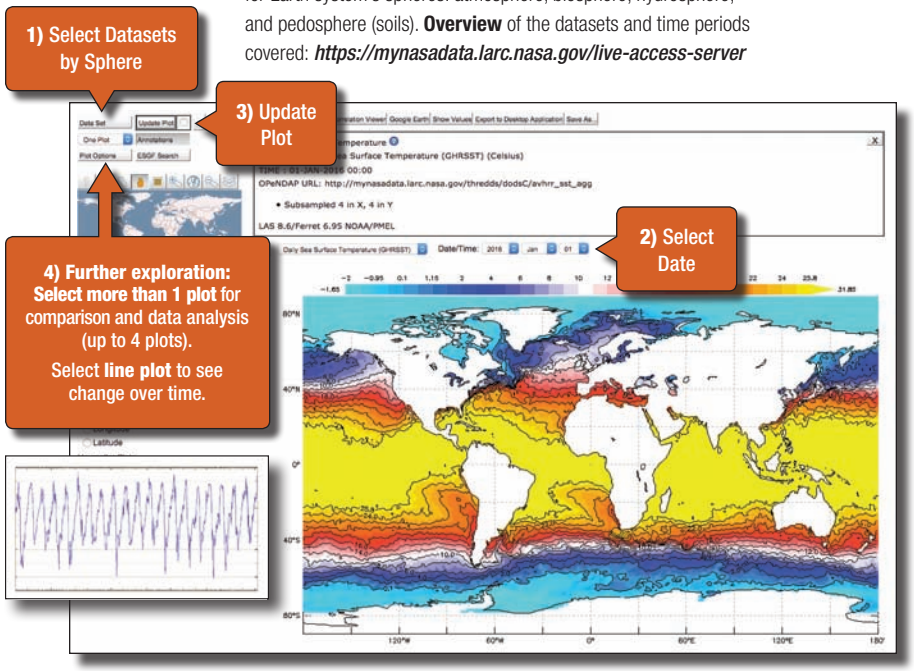
Start with tutorial at the URL above.

Use the ADAT to find, retrieve, and download the data into a csv file for detailed analysis—
https://www.globe.gov/globe-data/retrieve-data

MY NASA DATA: Earth System Data Explorer

https://mynasadata.larc.nasa.gov/EarthSystemLAS/UI.vm

Browse, download, print and explore NASA satellite data available for Earth system's spheres: atmosphere, biosphere, hydrosphere, and pedosphere (soils). **Overview** of the datasets and time periods covered: *https://mynasadata.larc.nasa.gov/live-access-server*

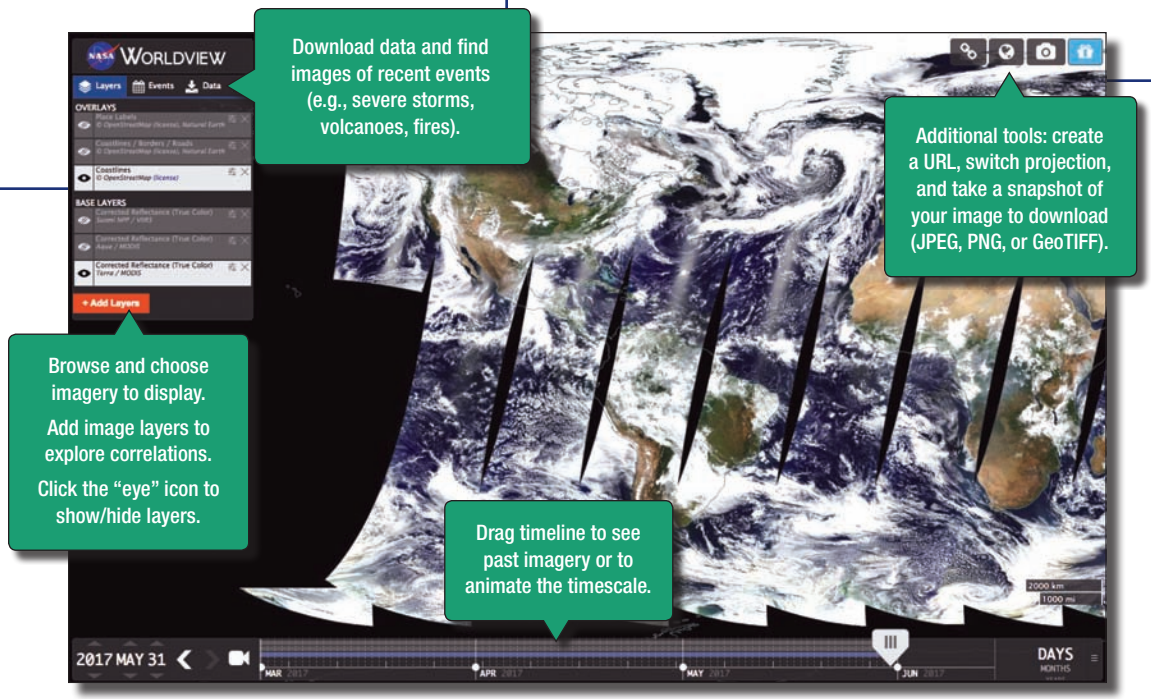


NASA Worldview

https://worldview.earthdata.nasa.gov

Interactively browse global, full-resolution satellite imagery and download the underlying data. Most of the 400+ available products are updated within three hours of observation, essentially showing the entire Earth as it looks "right now."

This supports time-critical application areas such as wildfire management, air quality measurements, and flood monitoring. Arctic and Antarctic views of several products are also available for a "full globe" perspective. Browsing on tablet and smartphone devices is generally supported.



INTERMEDIATE Source

ADVANCED Source

IMAGE CREDITS

Top left: Cloud cover observations by GLOBE Schools and GLOBE Observer citizen scientists on April 21, 2017.

Top right: Daily Sea Surface Temperature, Group for High Resolution Sea Surface Temperature (GHRSST), Jan. 1, 2016.

Bottom: Corrected reflectance (true color), May, 31, 2017, Terra/MODIS.