Locating Data & Imagery for Student Investigations

### Quick Start Guide

**Title:** Locating Data & Imagery for Student Investigations

**Description:**
For additional information and to link to the resources below, go to the interactive table at http://www.nasa.gov/earth-science/education/quick-start-guide.

**Purpose:**
This table lists examples of NASA datasets and imagery that could be used for student investigations related to content and practices in the Framework for K-12 Science Education. Explore the data on the left using the online sources on the right. Many datasets are available through multiple avenues, each source provides unique features, analytical tools, and time periods. Sources are color-coded for relative level of ease of use: **EASY** (periodic), **INTERMEDIATE** (intermediate), and **ADVANCED** (advanced).

### Data examples that students can use...

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<th>Data examples that students can use...</th>
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<td>Earth's energy budget (ESS2.A)</td>
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<td>Black Marble/Earth at Night: Natural nighttime view of Earth, showing visible light emitted from natural sources, e.g., city lights.</td>
<td>Urban growth/land use (ESS3.D)</td>
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<td>Blue Marble Next Generation: Composite images showing how the surface would look to a human in space if our world had no clouds and no atmosphere.</td>
<td>Seasonal changes on land surface (ESS2.A)</td>
<td>Spring, summer, winter, drought, etc.</td>
<td>(ESS2.A, ESS2.D)</td>
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<td>Climate: Solar Insolation, temperature, precipitation, albedo, greenhouse gases, aerosols, and topography.</td>
<td>Factors contributing to global and regional climates (ESS5.B)</td>
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<td>Earth Systems: Solar Insolation, surface temperature, cloud fraction, aerosols, precipitation, and vegetation index.</td>
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<td>Land Cover Classification: Maps displaying Earth's natural and human-made landscapes as color-coded categories.</td>
<td>Land cover changes (ESS3.C, ESS3.C)</td>
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[View the full interactive table here.](http://www.nasa.gov/earth-science/education/quick-start-guide)

### Are you searching for NASA data examples to include in your instruction or student research?

The Quick Start Guide lists examples of NASA datasets and imagery that could be used for student investigations related to content and practices in the Framework for K-12 Science Education. This Guide is part of an educators toolkit that features resources for grades K-12 that can support and frame student investigations with NASA data and content. Check out the toolkit and samplers for elementary, middle, and high school at [https://www.strategies.org/education/educators-toolkit/](https://www.strategies.org/education/educators-toolkit/).

The NASA Earth Science data visualization tools featured here include:

- **My NASA Data**'s Earth System Data Explorer
- **The GLOBE Program**
- **Precipitation Measurement Missions**
Many datasets are available through multiple sources; each source provides unique features, analytical tools, and time periods.

Sources are color coded for relative level/ease-of-use: BLUE (introductory), ORANGE (intermediate), and GREEN (advanced).

Explore the data on the left using the online sources listed on the right.

**Mapping Our World**

NASA satellites have been mapping Earth for over 40 years. These global observations of the atmosphere, biosphere, land surface, solid Earth, and ocean enable an improved understanding of
the Earth as an integrated system. This interactive visualization and poster allow you to explore data sets from over a dozen NASA Earth science missions for 25 unique views of our world. The images feature data from over a dozen Earth observation missions.
This map shows an extensive region of low salinity water (in blue) where the Amazon River flowed into the Atlantic Ocean.

Click on the tile to learn more about this data set and mission.

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Document Resources

- QUICK START GUIDE