



Earth Science at Your Fingertips

FLIPBOOK

PLANT GROWTH & DECLINE

<https://mynasadata.larc.nasa.gov/>

NASA thinks you will “flip out” with this hands-on visualization!

NASA visualizers take data – numbers, codes – and turn them into animations people can see and quickly understand. You can become a data visualizer by creating your own flipbook animations using maps of science variables that NASA scientists commonly study to better understand the Earth System. Each frame in this flipbook shows monthly averages collected in 2016 and 2017. There are six flipbooks available for different science variables: aerosols, cloud coverage, vegetation concentrations, precipitation, incoming solar radiation, and surface temperature. Please visit our website for more information.

The processes in the Earth System take place in and between the Atmosphere, Cryosphere, Hydrosphere, Biosphere, and Geosphere, as well as include energy from the Sun. As we can see, Earth System processes are not bound by oceans, mountains, or country delineations—they are truly global in scope!

ESSENTIAL QUESTIONS:

- What do the colors in the flipbook represent?
- How does this variable change over time?
- Why do you think these changes occur?
- What is affected by these changes?

MATERIALS NEEDED:



Binder clip



Scissors



Copier Paper

INSTRUCTIONS



- 1** **PRINT** flipbook on cardstock.



- 2** **CUT** cardstock along the dotted line, making 26 frames.



- 3** **STACK** the 26 frames in order. The frames are numbered.



- 4** **CLIP** the stack of frames together, with the binder clip.



SATELLITE STUDIES: Earth System Science

Satellites collect data to help unlock the unexpected wonders of how our Earth works as a system.

1 CLIP HERE



<https://mynasadata.larc.nasa.gov/>

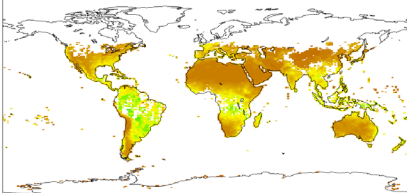


For best results, print on cardstock paper.
Color and data values may appear distorted.

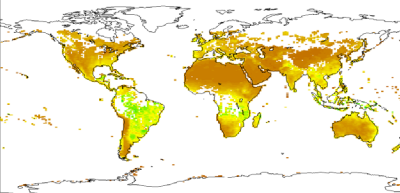
2

These dimensionless data are the "greenness" values of vegetation across Earth's landscapes. This quantity measures the health of plants on the Earth's surface, by how much near-infrared radiation is reflected at the surface. (MISR)

3 January 2016

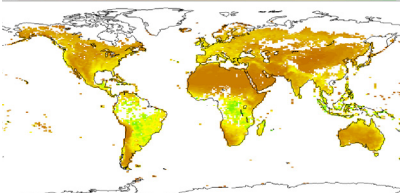


4 February 2016



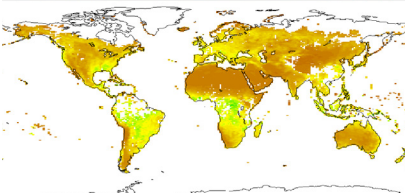
5

March 2016

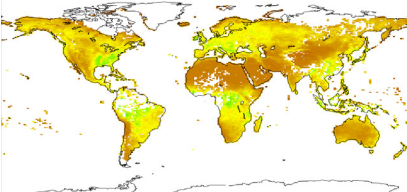


6

April 2016

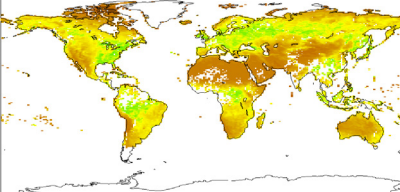


7 May 2016



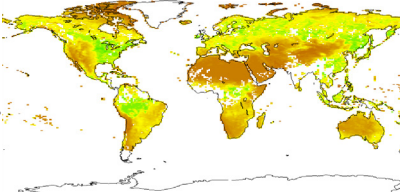
8

June 2016



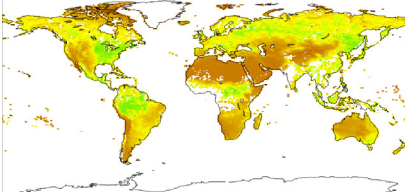
9

July 2016

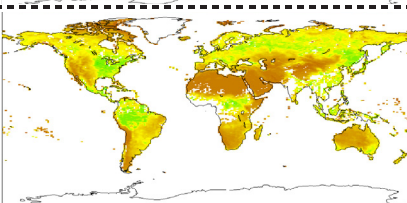


10

August 2016

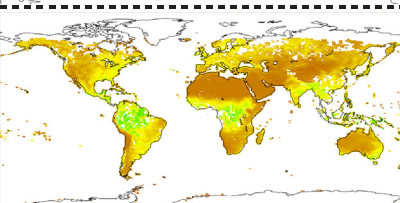


11 September 2016



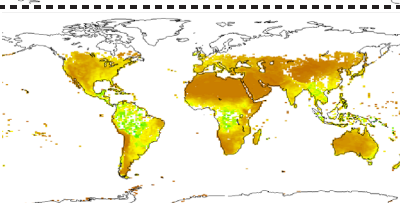
12

October 2016



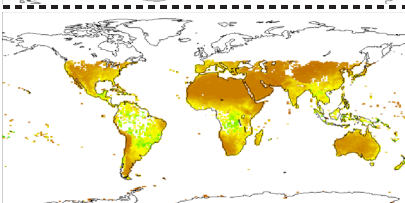
13

November 2016

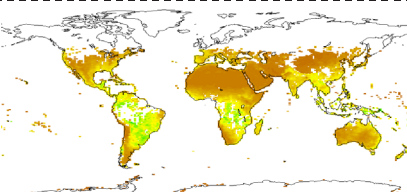


14

December 2016

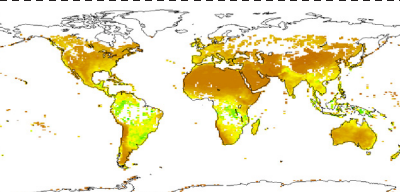


15 January 2017



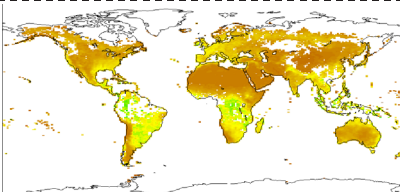
16

February 2017



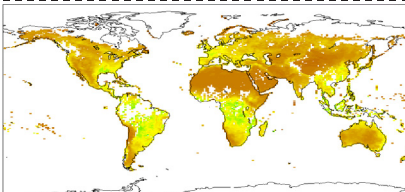
17

March 2017

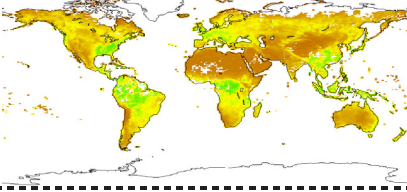


18

April 2017

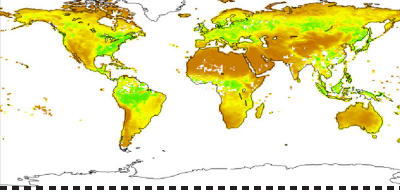


19 May 2017



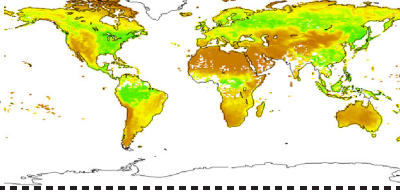
20

June 2017



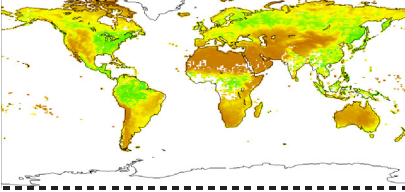
21

July 2017

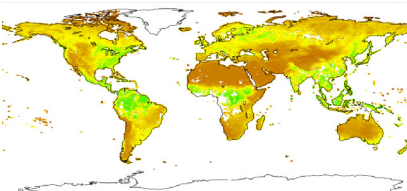


22

August 2017

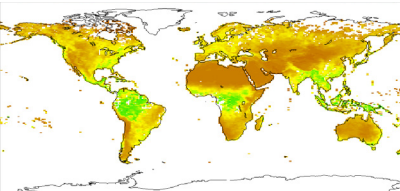


23 September 2017



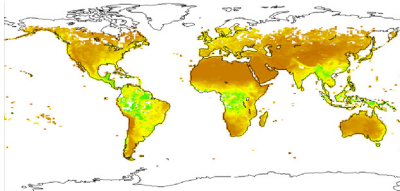
24

October 2017



25

November 2017



26

December 2017

