



# Data Lens: Exploring Earth's Visual Stories

We are going to slow down and take ten minutes or so to observe a map and discuss what we discover and notice about it. There are no right or wrong answers!

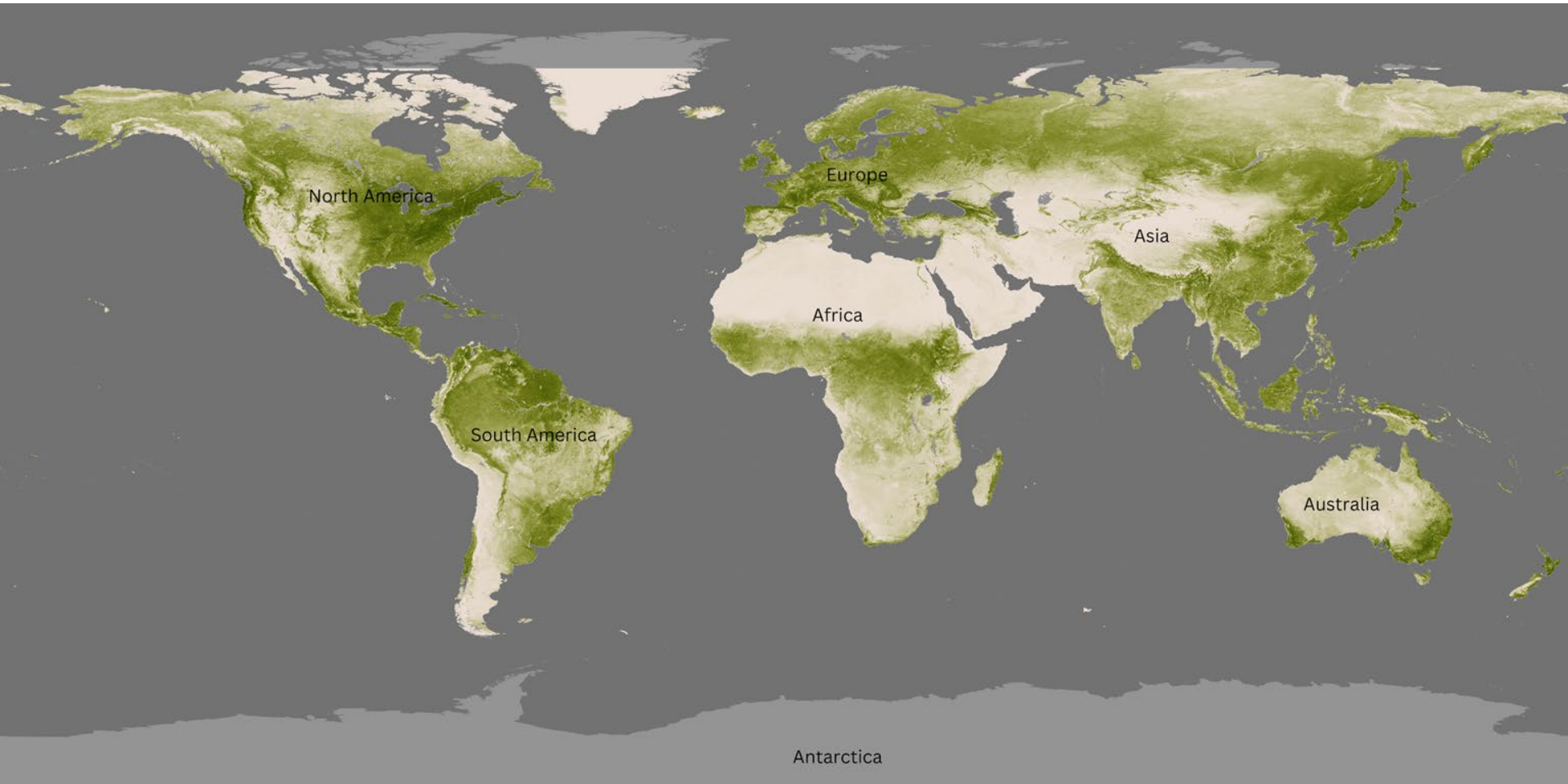
## First: Ground Rules

- **Raise your hand** to share your ideas with the class.
- **All** ideas are welcome.
- Be **respectful** of others' ideas!
  - It's okay if you disagree!
  - Build off each others' ideas.

Next: One minute to quietly observe...

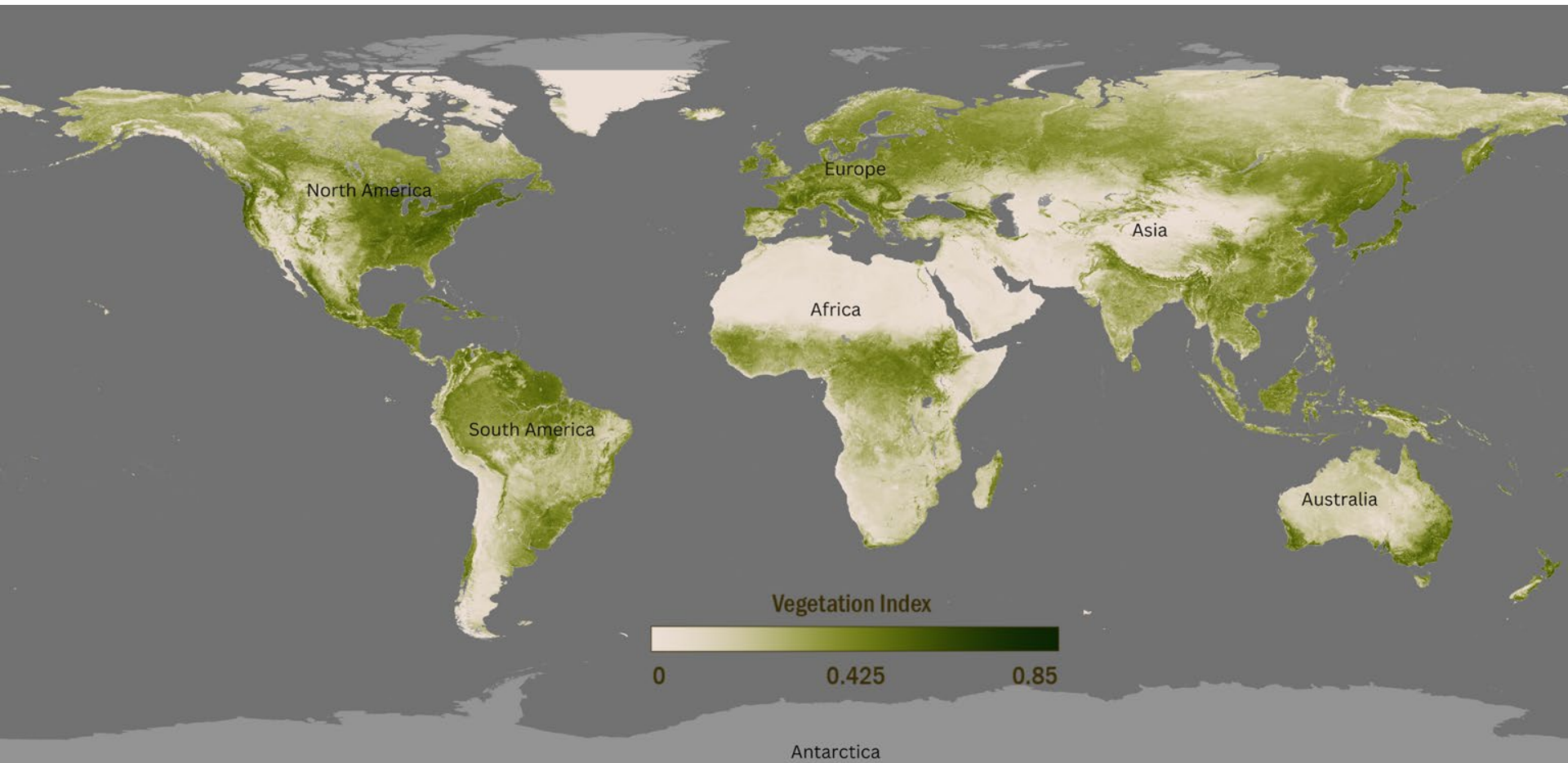


What's going on in this image?





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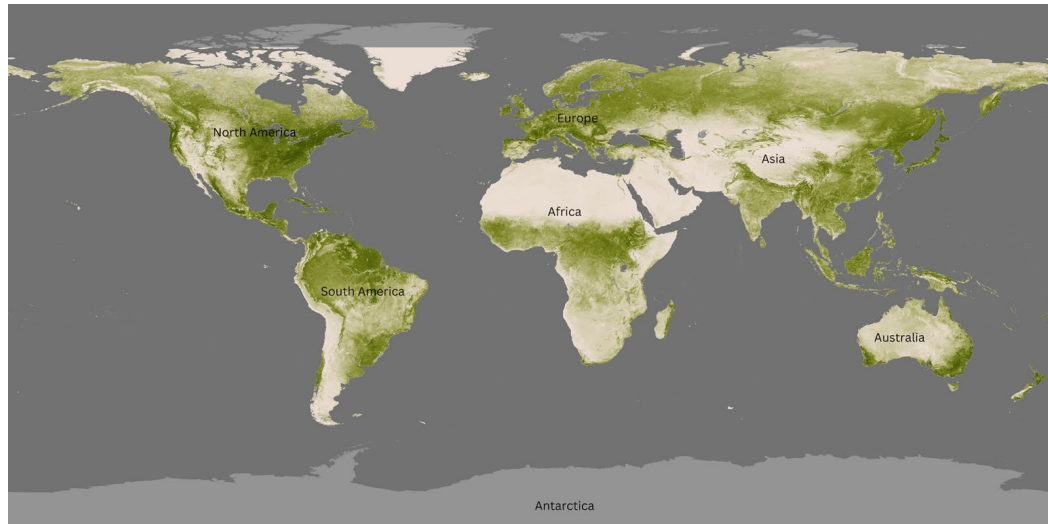
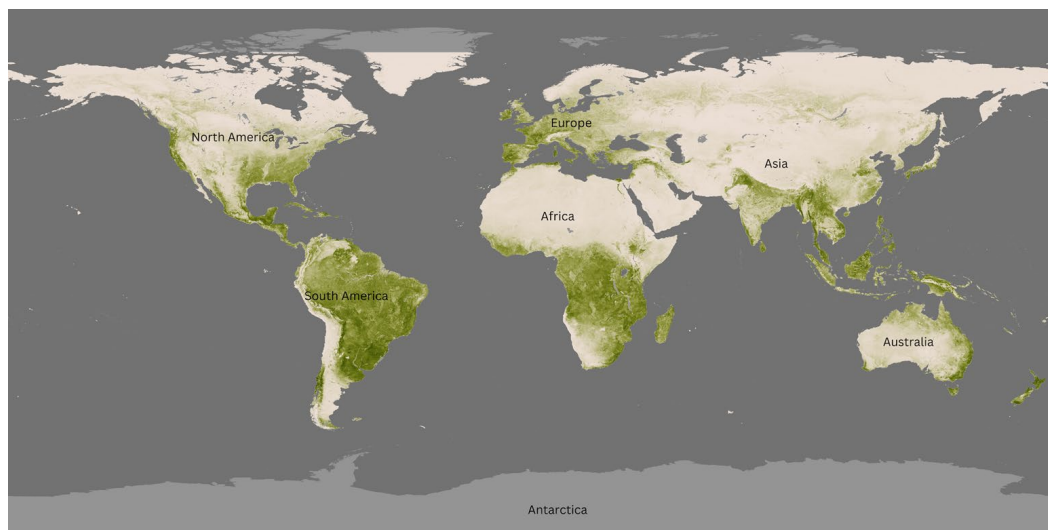
Map A:  
March 2024

What is different and what is similar about these two different time periods of the same mapped data?

Fill out the Venn diagram with your answers.

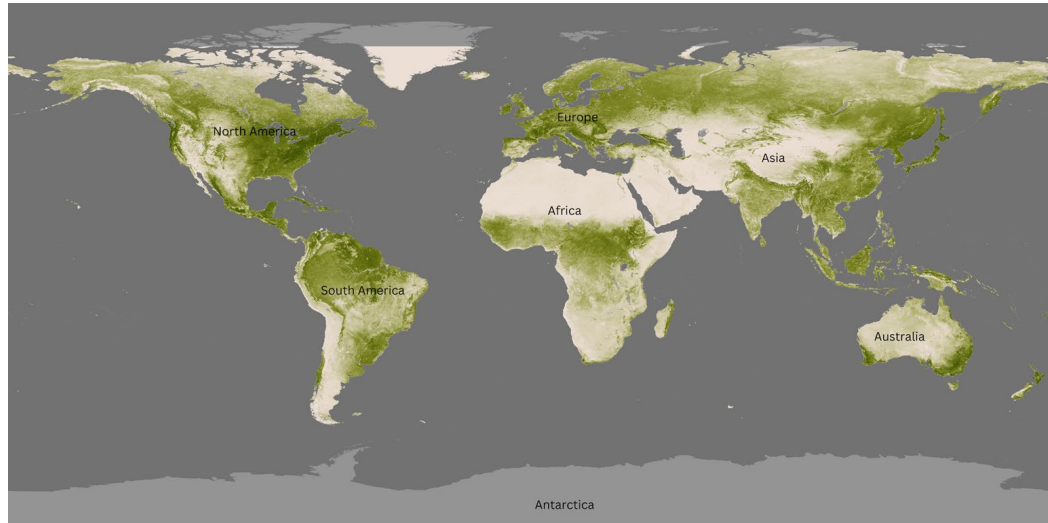
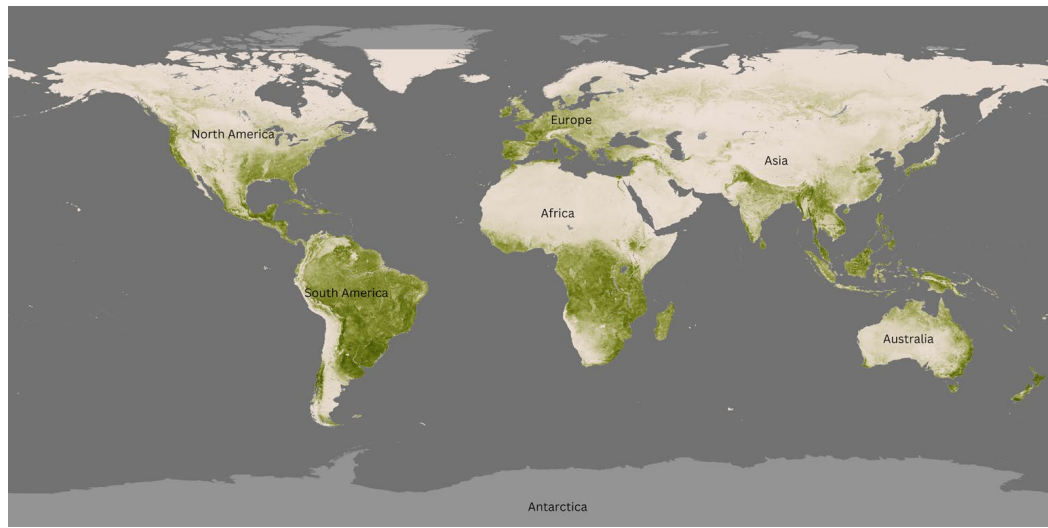
Map B:  
September 2024

Vegetation Index



Using your Venn Diagram,  
write two questions that  
scientists might study  
based on your  
observations.

(on your worksheet)



## End of *Data Lens*

Want to learn more about this data from NOAA's Science On a Sphere?

Read the dataset description on the next slide.



# About the data: Vegetation

Earth's surface is mostly covered in water, but the land—about 25% of it—is full of green, living things that change over time. The NOAA-20 satellite, which circles the Earth near the North and South Poles, helps scientists watch these changes in greenness using a special instrument called the Visible-Infrared Imager/Radiometer Suite (VIIRS). This tool allows NOAA scientists to create highly detailed pictures of plants and vegetation on our planet.

In these images, dark green areas show the lushest spots, where plants are thick and soak up a lot of sunlight. Lighter colors show places with less plant life, such as snowy, dry, rocky, or city areas. VIIRS picks up changes in how much visible light is reflected by the plants, which helps scientists see changes in vegetation over time.

Each week, NOAA-20 captures a new image of Earth's vegetation. This creates a year-long animation that shows how plants have changed across seasons and regions. The images from VIIRS are clearer and have more detail than older satellite images, letting us see changes in plants with great accuracy. This information is important for weather forecasts, environmental studies, and the U.S. Drought Monitor. Many organizations use NOAA's vegetation data, including the U.S. Department of Agriculture and the U.S. Geological Survey, to monitor crops and predict food supplies.

The data seen in this exercise is monthly averages for March and September of 2024.

**This description has been edited from the one linked above to increase understanding.**

**Source: NOAA Science On a Sphere, NOAA View Global Data Explorer**

# Extensions

**Reading:** Read about the changing seasons [NOAA Education](#) or [Astronomical vs. Meteorological Seasons](#) and parse out the main ideas to share with a partner.

**Activity/Experiment** - Can crickets tell the temperature? The answer is in their chirp! [NOAA Education activity.](#)