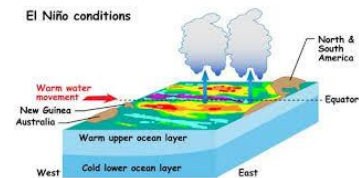


# Global Precipitation Measurement Mission

## El Niño Webquest

Before you begin this webquest, answer the following questions on a separate sheet of paper.

1. What do you think the “El Niño” weather pattern is?
2. What is the impact on people and wildlife from El Niño events?



Let's get started learning about the natural phenomenon known as “El Niño”. Go to [The Space Place](#) and use the information to answer these questions on your paper.

1. Where does this weather phenomenon often begin?
2. Normally, how does the direction that the wind is blowing impact the temperature of ocean water near South America’s coast?
3. What is different about the wind patterns during an El Niño event in this region?
4. Why do many of the fish leave the coastline of South America during El Niño events?
5. How did this natural phenomenon get its name?
6. How might weather patterns change during an El Niño event?

Not only does the El Niño modify weather patterns around the world, but it also has an impact on living organisms. Read the article and watch the video entitled “[NASA Examines El Niño’s Impact on Ocean’s Food Source](#)” and answer the questions below.

1. What normally occurs during upwelling that helps the ocean’s food chain?
2. Why does the El Niño impact this normal chain of events?
3. What does the change in ocean color seen by NASA satellites tell us about the impact on the ocean food chain?
4. Based on the satellite data, what did researchers conclude occurred to green chlorophyll off the coast of Chile during the 1997-1998 El Niño?
5. Why was the 1997-1998 El Niño worse for the fishing industry in Chile compared to the 2015-2016 event?

This year, NASA scientists will be studying the El Niño event using new technologies. Read [this article](#) from NASA to find out how they plan to learn more about this natural phenomenon. Use the information from the article to answer the questions below.

1. Why will scientists be able to learn more about this year’s El Niño event than they have in the past?
2. What two events does Lesley Ott, a research meteorologist at NASA’s Goddard Space Flight Center, say are related even through they are in opposite parts of the world?
3. List three of the potential impacts of an El Niño event that NASA scientists will learn more about this winter.
4. What is happening in the visualization showing 1997/1998 as compared to this year’s data?

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We will finish by watching a [short data animation](#) that shows various NASA satellite data sets that will help scientists better understand El Niño events. Use the information from the video to answer these questions.

1. What two things are changing in the Pacific Ocean to cause an El Niño event?
2. What three types of data do we see in this animation?
3. What happens to the amount of chlorophyll during El Niño?

So, let's see how much you have learned in this webquest! Using a different color pen/pencil, add more information to these two questions that you started with:

1. What do you think the "El Niño" weather pattern is?
2. What is the impact on people and wildlife from El Niño events?

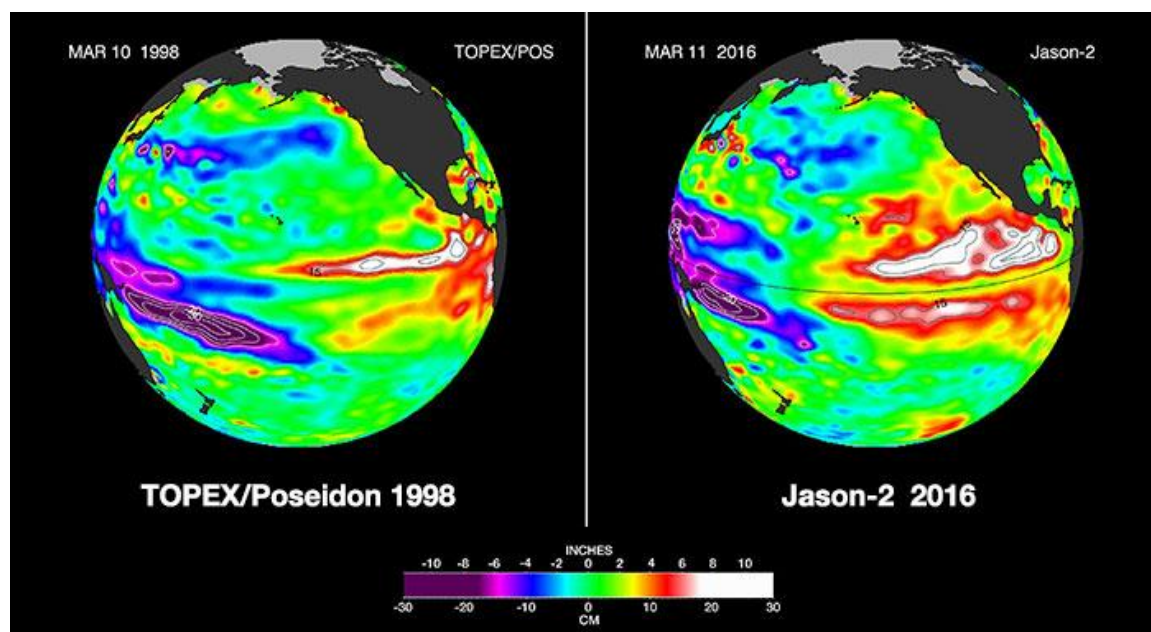


Image source: <http://sealevel.jpl.nasa.gov/elnino2015/index.html>

Links spelled out:

- The Space Place: <http://spaceplace.nasa.gov/el-nino/en/>
- NASA Examines El Niño video: <http://go.nasa.gov/1TwwHSx>
- NASA article about El Niño: <http://go.nasa.gov/1RpjIRi>
- ClimateBits data animation: <https://youtu.be/titsRUo4t4>