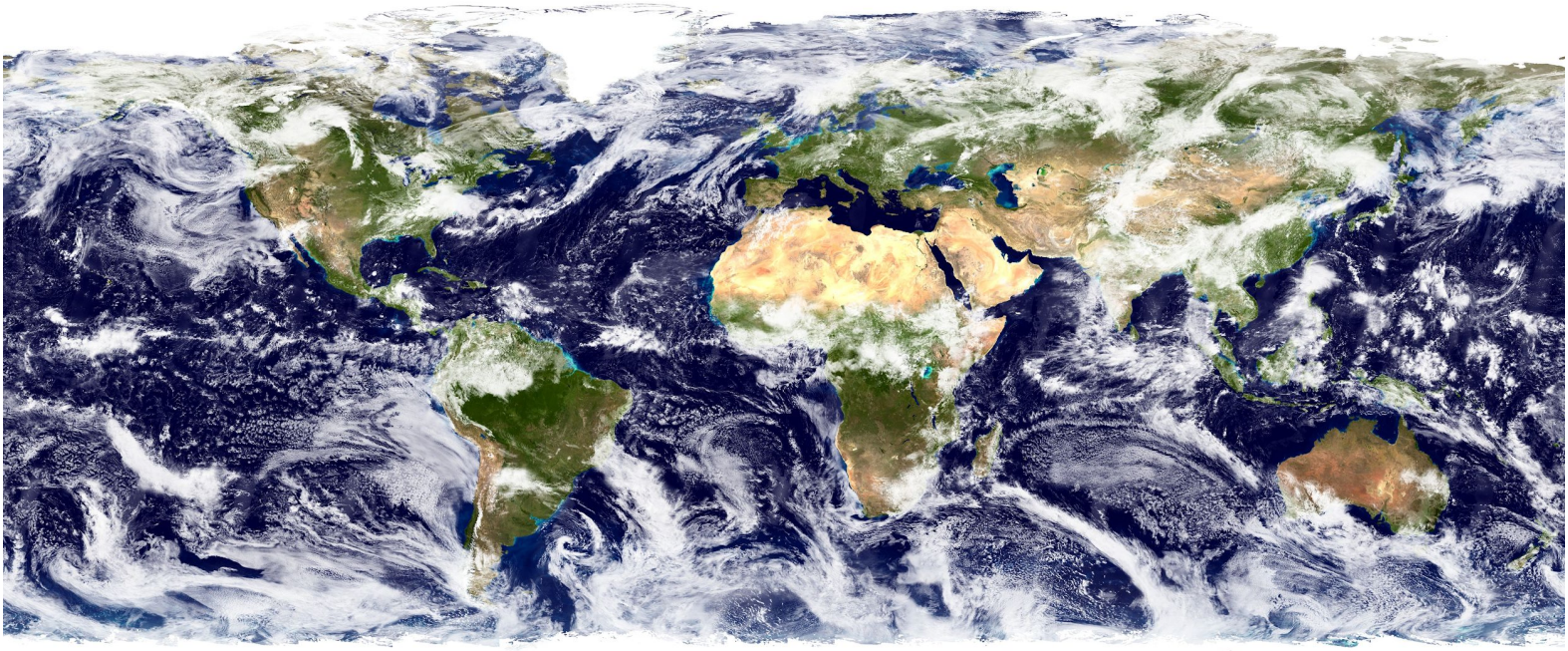
Weather in the World

Name _____ Class _____

We expect to experience different weather conditions in different places around the world. Amount and type of precipitation varies. The chance of strong wind varies. The amount and type of clouds varies. The high and low temperatures vary. But why?



Can you demonstrate forces that impact climate and weather around the world? Find a globe or sphere of some kind. This is the earth. You will be demonstrating the forces of wind, sunlight, and water.

Be sure to take photos, video, draw or write about what you did for your teacher.

Light

Light and heat comes from the sun. The equator receives the most direct light and heat throughout the year, making it the warmest part of the planet. In October - March the southern hemisphere has more sunlight and heat. In April - September the northern hemisphere receives more sunlight and heat.

How can you demonstrate light and heat on the earth?

Can you show the earth tilted on its axis?

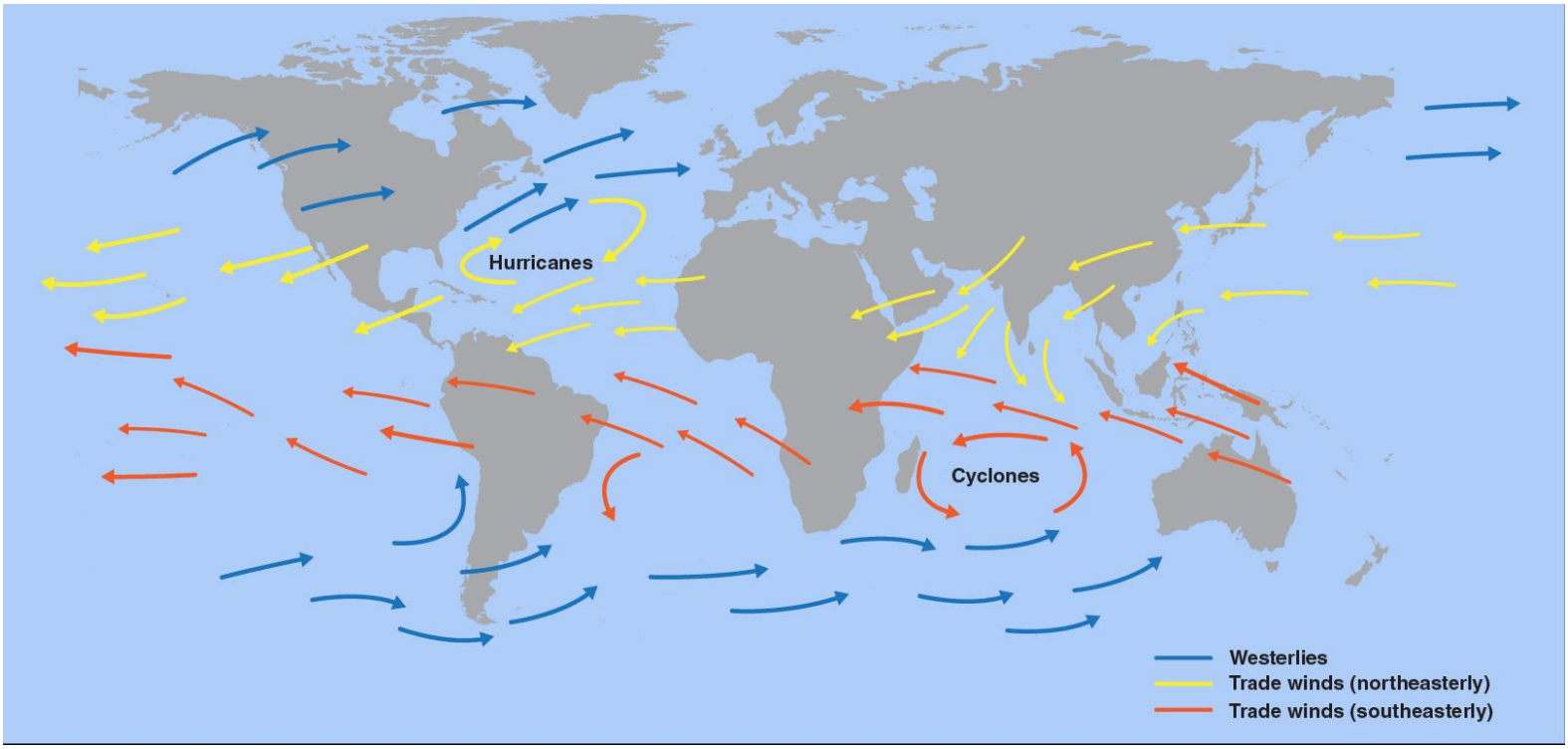
Can you show the north pole receiving lots of light and heat while the south pole sees none?

Can you now show the south pole receiving lots of light and heat while the north pole receives none?

Wind

In the middle of northern hemisphere, where cold air meets warm air, there are strong winds that move from west to east in a big circle, around and around the globe. This is called a jet stream. The same thing happens in the southern hemisphere, a circle of strong wind moving from west to east. In the winter in each hemisphere the jet stream is stronger. Winds around the equator are a bit different, often moving from east to west.

Can you demonstrate the northern jet stream?
Can you demonstrate the southern jet stream?
Can you demonstrate the easterly winds around the equator?
Can you show a hurricane moving with easterly winds across the Atlantic Ocean?
Which winds might affect the weather where you live?



Water

We can think about water affecting weather in three main ways. First, water precipitates from clouds - as rain, snow, hail or sleet. Second, there is water in the air, known as humidity. Third, melting snow, tides and storm surge effect flooding events. (Note rain can also cause floods.) Water comes into the atmosphere from evaporation, especially from oceans, lakes and other bodies of water. Water moves around the world with wind, in the form of clouds and humidity. Precipitation often occurs when moist air collides with mountains or when warm and cool air meet.

What are the sources of water where you live?
Demonstrate how water moves around where you live.
Are there places near where you live that do not receive much water?