

Directions: Read the information below.

Seasons of Earth

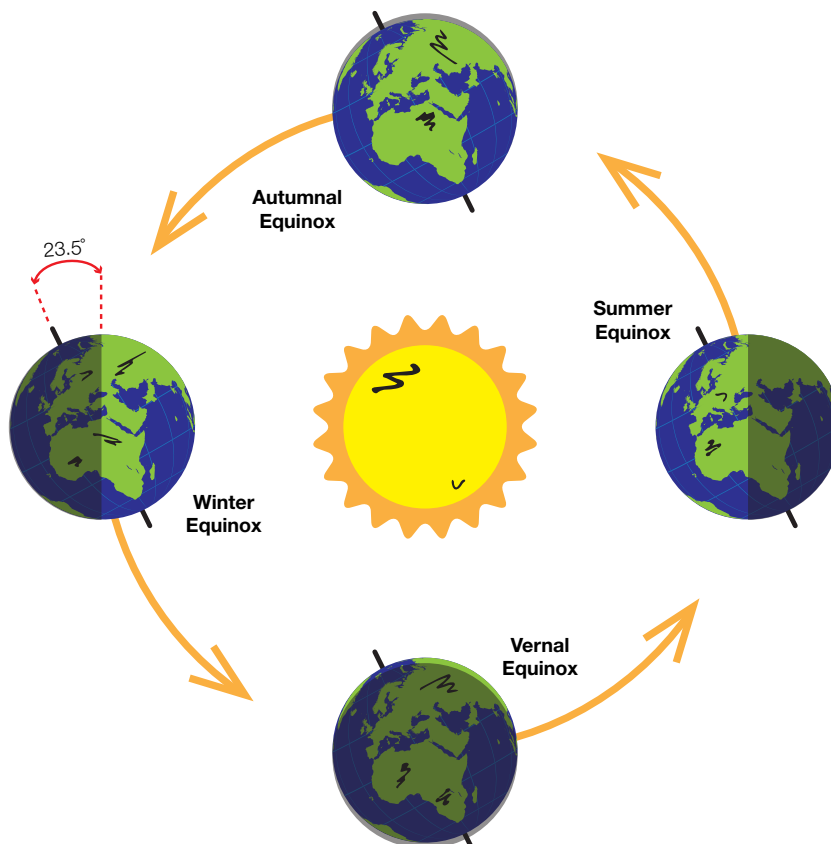
January in North America means being bundled up tight in winter coats, scarves and gloves hoping for a snow day. For kids in other places around the world, January means swim suits, no school and warm sunshine. It is the rotation of the earth around the sun that causes this to happen.

Each 365 days, the earth makes a complete rotation around the sun. Every day, the earth makes one full rotation around its axis. To better understand this, imagine the globe with an invisible rod sticking through the middle, going from top to bottom. This rod, or axis, is actually tilted at about 23.5° . In other words, the earth does not sit straight up and down, rather at an angle.

As the earth moves around the sun on its axis, we experience different seasons. During our winter months, like January and February, the earth is in a position to get less light and warmth from the sun whereas in our summer months like June, we are positioned to receive more light and warmth.

In the middle of the earth, wrapping around the globe is the equator. This line is measured in degrees latitude (the equator's latitude is 0 degrees). Locations on Earth may be measured by how far away they are from the equator, or their latitude. A city that is far away from the equator will have a latitude farther away from zero. The closer to zero degree, the closer that place is to the equator line.

This is important to understanding what affects seasons on Earth because the planet is not actually a perfect sphere. The locations closer to the equator actually experience more direct sunlight than other locations. What effect do you think this might have on temperatures and seasons?

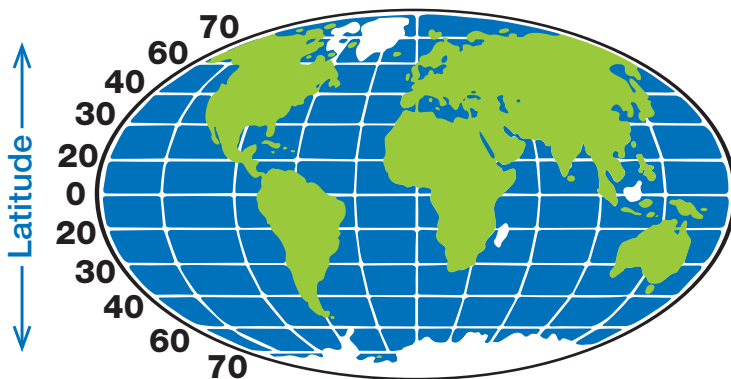


Directions: Look at the data in the table. Create a scatter plot to show the relationship between latitude and temperature.

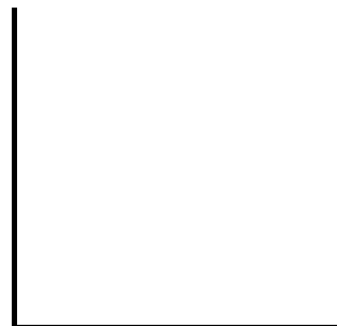
Table A: Data Set

City	Latitude (in degrees North & South)	Average High Temperature in Summer	Warmest Month
Washington D.C., United States	38	89	July
Mexico City, Mexico	19	80	April
London, England	51	73	July
Paris, France	48	75	February
Cape Town, South Africa	33	78	February
Dubai, United Arab Emirates	25	103	July
Cairo, Egypt	30	93	June
Reykjavik, Iceland	64	55	July
Fortaleza, Brazil	3	87	January
Sydney, Australia	33	79	January
Berlin, Germany	52	74	July
Lima, Peru	12	80	February
Nairobi, Kenya	1	80	February
Beijing, China	39	87	June
Tokyo, Japan	35	88	August
Townsville, Australia	19	89	January
Quito, Ecuador	0	68	September
Sao Paulo, Brazil	23	82	February
Istanbul, Turkey	41	83	July
Kuala Lumpur, Malaysia	3	91	March

*Sources: <http://www.worldatlas.com/aatlas/findlatlong.htm>; www.weather.com



Title _____



Directions: Answer the questions below.

1. Describe what observations you can make about the relationship between latitude and temperature around the globe.
2. Why might some countries experience summer in January?