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Answer the following questions in your own words.

1. What are lines of latitude ? **east-west lines that circle the Earth parallel to the equator**
2. Which is the longest line of latitude? **the equator**
3. How far is each degree of latitude apart from each other ? **69 miles (111 km)**
4. What latitude does the Tropic of Capricorn have ? **23.5 degrees south of the equator**
5. What latitude does the Tropic of Cancer have? **23.5 degrees north of the equator**
6. How long does daylight last north of the Arctic Circle in summer? **24 hours**
7. Which large city does the Prime Meridian go through ? **London**
8. What happens when you cross the International Date Line ? **when you cross the line from east to west you move a day forward**
9. Where are degrees of longitude farthest apart from each other ? **at the equator**
10. How was early navigation different from the way we navigate today? **in the Middle Ages navigators used a sextant and stars to navigate , today they use GPS devices**
11. How long does it take for the Earth to rotate around its axis ? **24 hours**
12. Name a few countries that have more than one time zone ? **Russia, the USA, Canada**
13. How many degrees, in theory, is each time zone ? **15 degrees**
14. How does Daylight Saving Time (DST) work ? **in spring the clocks are moved one hour forward and in autumn one hour backwards**
15. What is the main aim of DST? **to save energy; to have more daylight during the summer months when people are outside a lot**
16. Where is DST mainly used? **North America, Europe**
17. Why don't countries around the equator use DST ? **because there is little difference between night and daytime during the year**

LATITUDE, LONGITUDE AND TIME ZONES – KEY

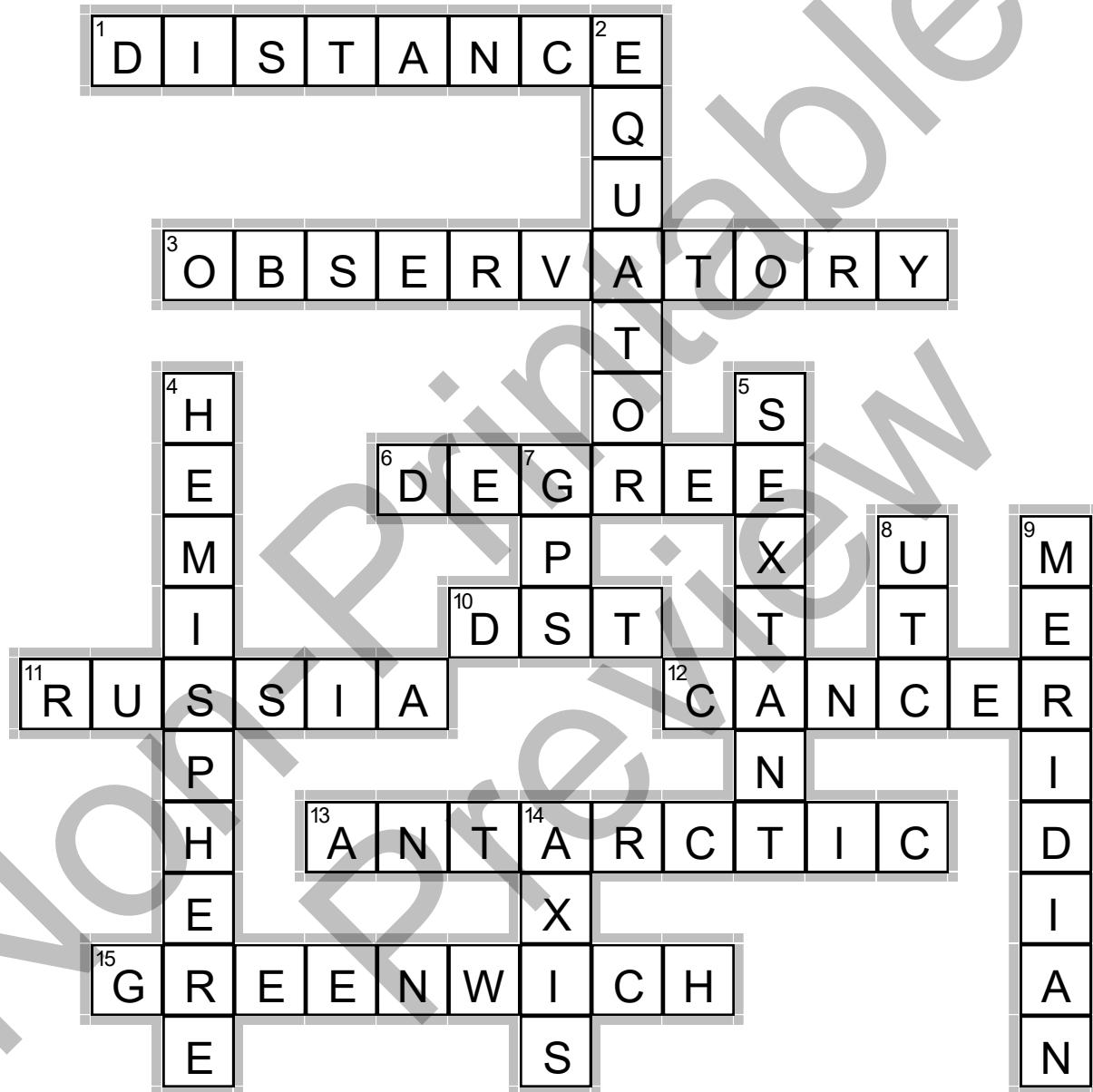
2

Match the words on the left with the definitions on the right.

A	imaginary	I	referring to a king or queen
B	pinpoint	D	half of the Earth
C	equator	G	leading, number one
D	hemisphere	M	power that is in wires and cables and which gives us light and makes machines work
E	axis	B	to show the exact location
F	observatory	N	something that you hope to achieve
G	dominant	A	something that is not real; it does not exist physically
H	degree	J	to move around an object in a circle
I	royal	K	tool for measuring angles between the stars in order to calculate the position of a ship or airplane
J	rotate	F	round building where you can watch the stars and the planets
K	sextant	L	officer on a ship who plans which way to go
L	navigator	H	unit around which lines around the Earth are measured
M	electricity	E	line around which the Earth rotates
N	goal	C	line around the middle of the Earth

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Crossword



LATITUDE, LONGITUDE AND TIME ZONES – KEY

4

Complete the text with the words from the box. There are THREE words you will not need.

Lines of latitude and longitude (1) **circle** the Earth. Latitude defines the location north and south of the (2) **equator**. Longitude are lines that go through both (3) **poles**. All lines are measured in (4) **degrees**, seconds and minutes.

The equator divides the Earth into a northern and southern (5) **hemisphere**. Any location along the equator has a latitude of 0°. Because the Earth tilts its (6) **axis** when it revolves around the sun there are special lines of (7) **latitude**. The sun is exactly over your head when you stand along the Tropic of Cancer and Capricorn in June and December. North of the Arctic Circle and south of the Antarctic Circle (8) **daylight** lasts for 24 hours during the summer months.

(9) **Meridians** are lines that run through the poles. The starting point for this longitude system is the British Royal Observatory at Greenwich, England. It is also called the Prime Meridian. The International Date Line is on the (10) **opposite** side of the globe. Travellers who cross this dateline (11) **westwards** change to the following day.

The Earth is divided into 24 time zones because it (12) **rotates** around its axis every 24 hours. Although most countries only have one time zone, larger countries that (13) **span** thousands of kilometres, like the United States and Russia, are divided into several time zones. China, on the other hand, has been using only one time zone since the Communists took over after World War II.

axis
circle
daylight
degrees
eastwards
equator
hemisphere
kilometres
latitude
longitude
meridians
opposite
poles
rotates
span
westwards



LATITUDE, LONGITUDE AND TIME ZONES – KEY

5

Find the cities with the following coordinates and put them into the map below.

City	Longitude	Latitude
New York	40°N	74°W
Paris	49°N	2°E
Cairo	30°N	31°E
Rio de Janeiro	23°S	43°W
Hong Kong	22°N	114°E
Moscow	55°N	37°E
Cape Town	34°S	18°E
Los Angeles	34°N	118°W
Sydney	34°S	151°E
Quito	0°	78°W
Mexico City	19°N	99°W
Tokyo	35°N	139°E

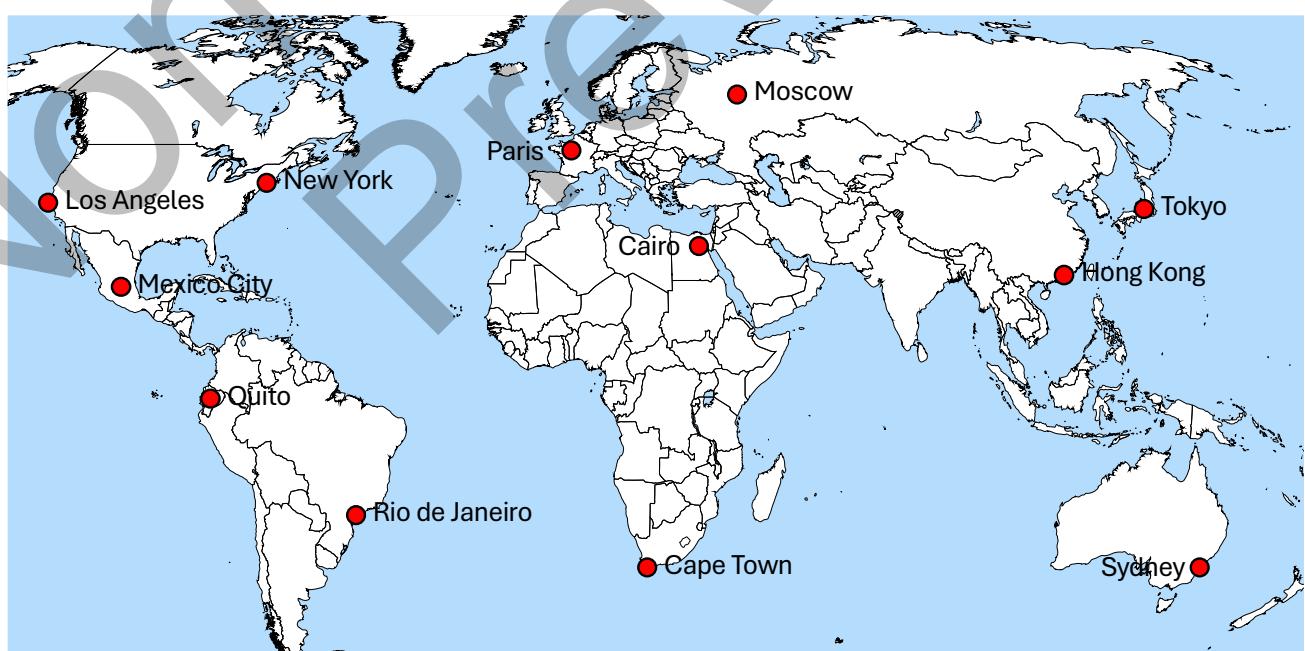


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