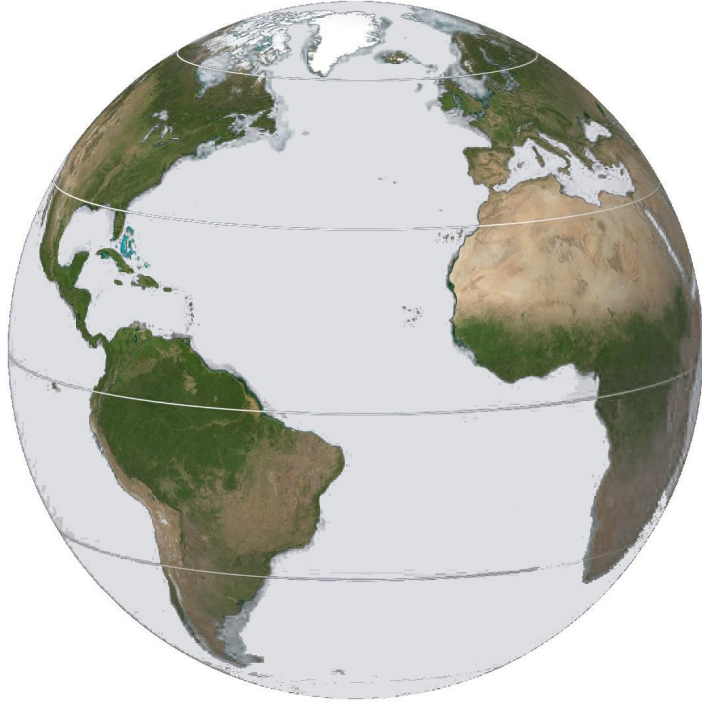


To complete this worksheet, see the instructions in the textbook (Chapter 3 Investigation).

Table 1. Regional Patterns of Pressure and Wind

The globes below show a view centered on the Atlantic Ocean. Follow the instructions in the textbook and mark the following features on each globe and label them with the following abbreviations: IL – Icelandic Low, BAH – Bermuda-Azores High, ITCZ – Intertropical Convergence Zone and associated low pressure, TW – Trade Winds, HL – horse latitudes, W – westerlies, and CW – Circular wind patterns



January



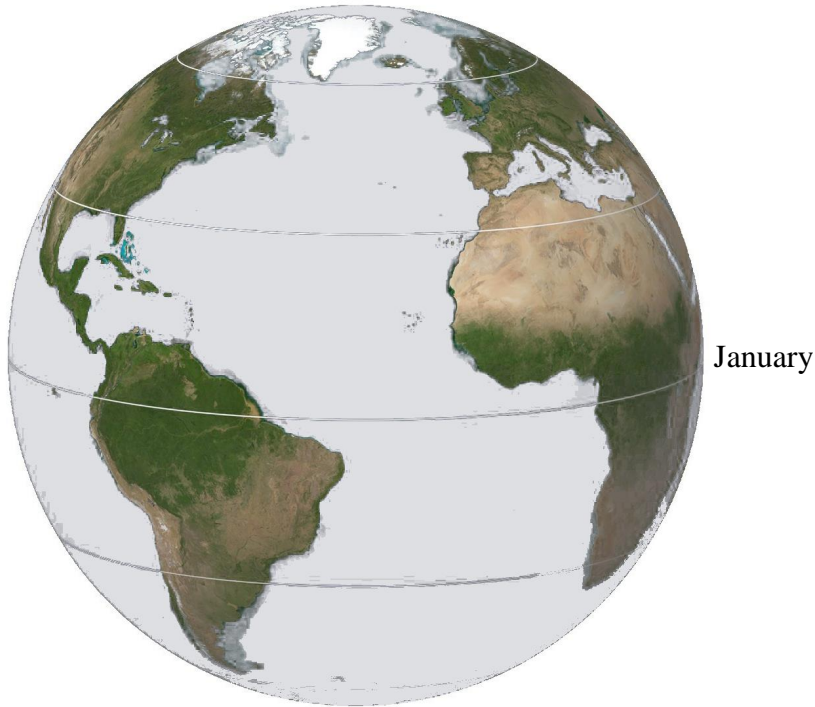
July

Circle the best answer for each question below.

| Question | Answers |
|---|--|
| In the Atlantic, areas of calm winds along the horse latitudes match up most closely with the location of the | a) ITCZ b) Bermuda-Azores High c) westerlies d) Icelandic Low |
| In the list below, the pressure feature most directly associated with sinking air is the | a) ITCZ b) Bermuda-Azores High c) westerlies d) Icelandic Low |
| Comparing the positions of the main pressure features between January and July, they are shifted farther toward the | a) north b) south c) west d) east |
| The trade winds are located between | a) the ITCZ and the horse latitudes in the Southern Hemisphere b) the ITCZ and the Bermuda-Azores High c) both of these d) none of these |
| Circular wind patterns are centered on | a) saltier water in some parts of the ocean as compared to others b) curved coastlines c) differences in friction across different surfaces d) areas of high or low pressure |
| The relationship between the Icelandic Low and the westerlies is that | a) the westerlies lie to the north of the Icelandic Low b) the westerlies lie to the south of the Icelandic Low c) the westerlies and the Icelandic Low occur at the same latitude d) the westerlies exist at a different time of year than the Icelandic Low |

Table 2. Precipitation Patterns

On the two globes below, mark the main areas of high precipitation and low precipitation, based on the patterns of pressure, wind, and cloud cover. Use colors or patterns to outline the main areas of low precipitation. Label the resulting areas with the following abbreviations: HP – High Precipitation, and LP – Low precipitation.



Circle the best answer for each question below.

| Question | Answers |
|---|--|
| An area that is generally associated with low precipitation is the | a. ITCZ b. Bermuda-Azores High c. westerlies d. Icelandic Low |
| Precipitation associated with the ITCZ generally occurs because | a. the low zenith angles heat the air and cause it to rise b. the westerlies converge there, forcing the air to rise c. the polar front jet stream flows overhead d. all of the above |
| A tropical area that would have high precipitation in January but low precipitation in July would more likely be located in the | a. Northern Hemisphere b. Southern Hemisphere |
| A place where the ITCZ would likely dip farthest southward and bring rains in January would be | a. interior North America b. interior South America c. central North Atlantic Ocean d. central South Atlantic Ocean |
| Storms steered by the Icelandic Low are likely to move into | a. North America b. Europe c. Africa d. South America |

Table 3. Seasonal Changes in Pressure, Winds, and Precipitation

On the globe below, sketch the main changes between January and July and use the space around the globe to explain the seasonal shifts and what might be causing them.



Pressure features move throughout the year most directly in response to a) migration of the direct rays of insolation; b) changes in the Earth's angle of tilt throughout the year; c) changes in regional cloud cover throughout the year; d) monsoons.