Chapter 11 Study Guide Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Parent signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Interpreting Diagrams** Identify the kind of local wind shown in each diagram. Choose from the following terms: *land breeze, sea breeze, mountain breeze, valley breeze, summer monsoon*, and *winter monsoon.*

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| --- | --- |
| **1. valley breeze****2. mountain breeze****3. winter monsoon** | **4. summer monsoon****5. sea breeze****6. land breeze** |

Write the term or phrase that best completes each statement.

  **1.** Matter is anything that has mass and volume

 **2.** The gas that makes up most of air is \_nitrogen.

 **3.** The layer of the atmosphere closest to Earth’s surface is the

troposphere.

 **4.** The layer of the atmosphere that is helpful to communications is the

Ionosphere.

 **5.** The movement of energy through empty space is called radiation

 **6.** Heat moves through solids by conduction

 **7.** Heat moves through liquids and gases by convection.

 **8.** Air pressure at sea level is about \_\_\_\_10 N/cm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 **9.** As water vapor in the air increases, air pressure decreases

 **10.** Evangelista Torricelli invented the \_\_mercury barometer\_.

 **11.** Air pressure is measured in this unit millimeters, millibars, or N/cm

 **12.** Standard air pressure is equal to \_\_\_1,013.20 mb\_\_\_\_.

 **13.** Regions of cold, heavy air are called \_\_\_\_\_\_\_\_highs\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 **14.** As cool air moves under warm air, it pushes the warm air \_\_\_\_\_up .

 **15.** A breeze that blows from the ocean toward the land is a sea breeze

 **16.** A wind that changes direction with the season is a monsoon

 **17.** Wind speed is measured with an anemometer\_\_.

 **18.** A wind that blows from the east toward the west is east wind

 **19.** An up-and-down movement of air is an air current.

 **20.** Wind direction is measured with a wind vane\_.

**21.HYPOTHESIZE:** Why does weather take place only in the troposphere?

The troposphere is the only layer of the atmosphere that has winds, water vapor, and

variations in temperature. All of these conditions are necessary for weather.

**22. ANALYZE:** Is Earth’s atmosphere warmed by radiation from the Sun or radiation from

 Earth’s surface? Explain. Earth’s atmosphere is mostly warmed by Earth’s radiation. The

Sun’s radiation passes through the atmosphere and warms Earth. Earth’s radiation then

 warms the atmosphere.