Unit 7 Vocabulary Crossword

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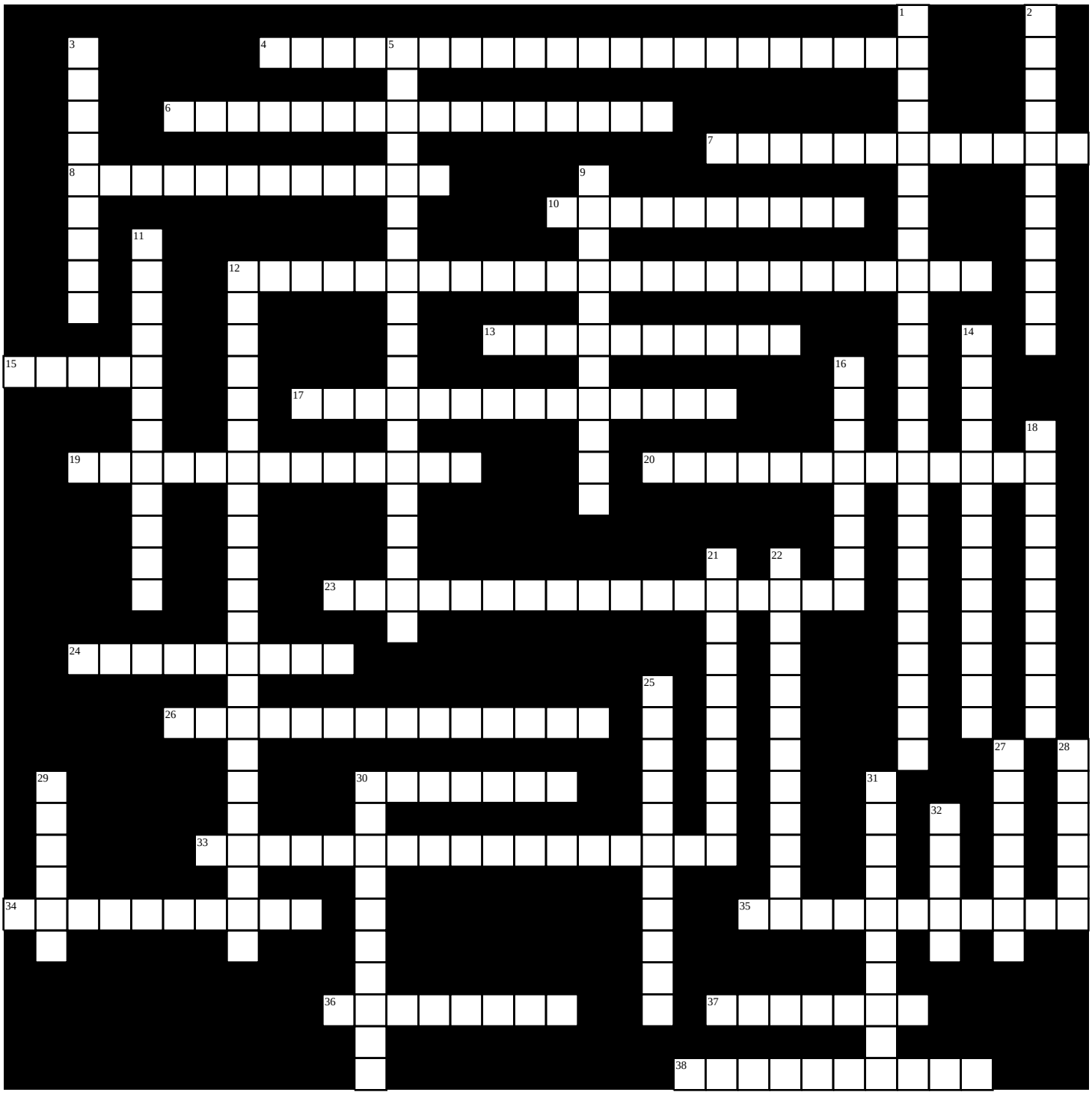
Earth Science Unit 7: Meteorology Vocabulary



Across

4 The amount of difference in air pressure over a specific distance; the greater the pressure gradient, the greater the speed of the wind

6 A weather condition in the which the boundary between two air masses remains in the same position

7 The change in state or phase from a gas to a liquid, such as when water vapor changes to liquid water droplets as clouds form

8 An instrument that is used to indirectly measure the amount of water vapor in air, such as a sling psychrometer; with the use the use of data tables, temperature readings from a psychrometer can be used to determine relative humidity and dew point.

10 The boundary of an advancing warm air mass and retreating wedge of a cooler air mass; characterized by a gentle slope, long periods of precipitation, and strato (layered) clouds

12 A chart that shows the full range of types of electromagnetic energy, usually in order of wavelength.

13 A concentrated curving band of high speed, easterly moving winds usually at the top of Earth's troposphere

15 An instrument that uses radio / microwave electromagnetic radiation to observe many weather features such as precipitation, tornados, and hurricanes

17 The processes by which a liquid changes to a solid

19 Weather data on maps represented by circles, with symbols with and around each circle that indicate the many weather variables

20 Falling liquid or solid water from clouds towards Earth's surface.

23 The ratio of the amount of water vapor in the air to the maximum amount it can hold; often expressed as a percent

24 the transfer of energy through air and space by light waves.

26 The boundary of opposing wedges of cold air masses formed when a cold front overtakes a warm front, lifting the warm air mass off Earth's surface, forming mid-latitude cyclones (lows).

30 A low-pressure portion of the troposphere that has air moving counterclockwise and towards its center-includes hurricanes, tornadoes, and mid-latitude cyclones, also called a low.

33 All the energy of an object or system not related to the individual motions of atoms and molecules; the total of the potential and kinetic energy of an object or system

34 The distance between the point on a wave and the corresponding point on the next wave, such as the distance between two successive crests in an electromagnetic wave

35 Energy that is transferred from one body to another as a result of a difference in temperature or thermal energy of two bodies

36 A large body of air in the troposphere with similar characteristics of pressure, moisture, and temperature

37 Cyclic and extreme weather changes caused by the shifting wind and pressure belts; especially strong in southeast Asia where summer brings wet weather from the ocean and winter brings dry weather from the continental interior

38 The transfer of heat energy by circulatory movements in a fluid, (usually liquids or gases) that result from differences in density with the fluid.

Down

1 How transparent the atmosphere is to insolation; how easily insolation can pass through the air.

2 The part of the atmosphere immediately above Earth's surface; where most weather changes occur

3 The temperature at which the air becomes saturated with water vapor and the relative humidity is 100%; at temperatures below the dew point, condensation or sublimation of water vapor occurs.

5 East-west zones on Earth where the wind blows from one direction much of the time; also see Prevailing Winds; example – the prevailing southwest winds that blow over the contiguous United States

9 Gaseous water in the atmosphere; also called moisture or steam

11 The change in state from liquid to a gas, such as liquid water into water vapor.

12 Energy that is radiated (given off) from all objects not at temperature of absolute zero, examples – visible light, radio waves, infrared radiation, and ultraviolet radiation; often called light or radiant energy.

14 The quantity of heat, in calories, needed to raise the temperature of one gram of a substance one degree Celsius; the degree of difficulty a material offers to heating up or cooling off

16 The amount of water vapor (gaseous water) in the atmosphere

18 A weather instrument used to measure wind speed.

21 The farthest distance at which one can see a prominent object at Earth's surface with the naked eye; decreased by fog, air pollution, and precipitation.

22 The weight of the atmosphere pushing down on a given unit of area; affected by changes in temperature, water vapor, and altitude

25 A measure of the average kinetic energy of the particles in a body of matter; a measure of how hot or cold a substance is

27 The roughness or smoothness of a surface

28 The ability to do work

29 An isoline used on weather and climate maps that connects points of equal air pressure

30 The transfer of energy in the form of heat or electricity from one atom to another within an object by direct contact

31 The boundary of an advancing cold air mass and a warmer air mass, where the underlying cold air pushes forward like a wedge; characterized by a sleep slope, rapid changes in weather, thunderstorms, and sometimes hail and tornados.

32 The interface, or boundary, between two air masses of different characteristics