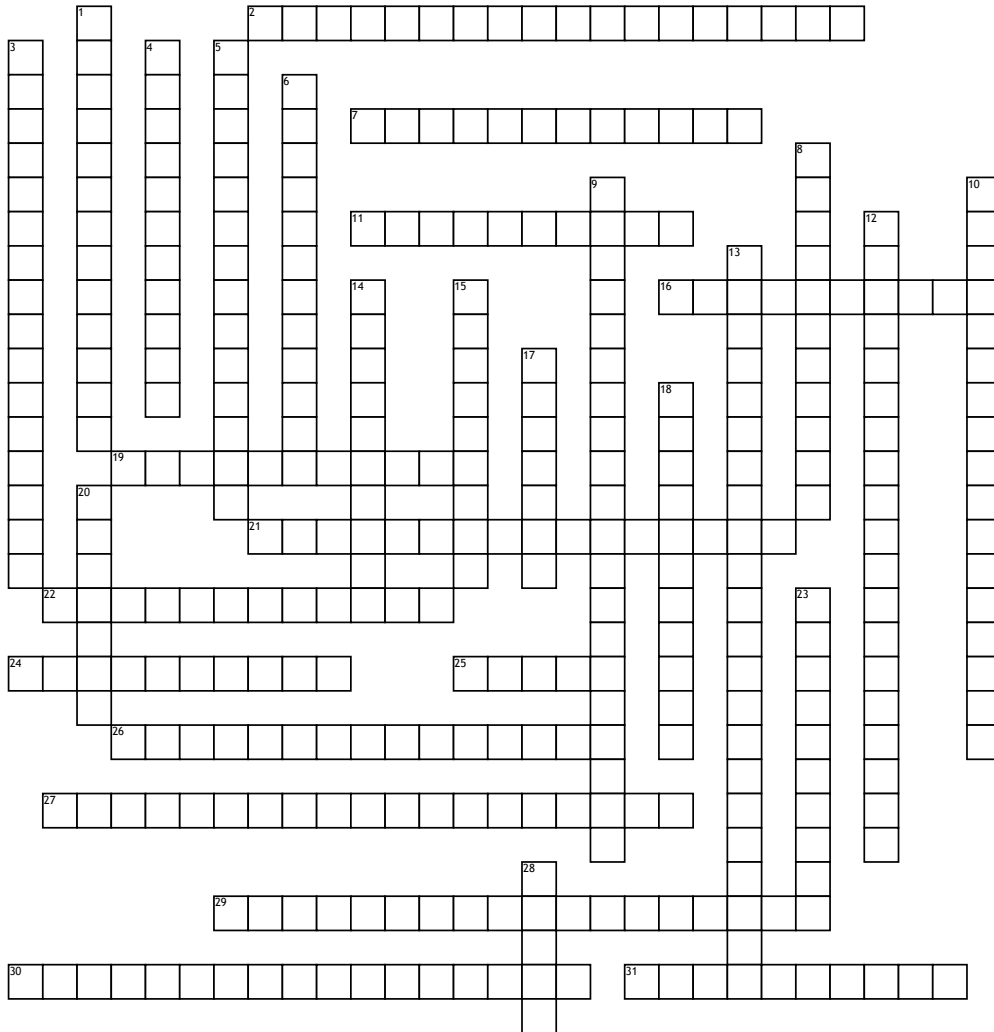


Science Vocabulary



Across

2. can be expressed either in a graphical format where the variable and the constant are connected via a straight line or in a mathematical format where the independent variable is multiplied by the slope coefficient, added by a constant, which determines the dependent variable.

7. a colorless, sweet-smelling, sweet-tasting, nonflammable, slightly water-soluble gas, N_2O , that sometimes produces a feeling of exhilaration when inhaled; used chiefly as an anesthetic in dentistry and surgery, in the manufacture of chemicals, and as an aerosol.

11. the gaseous envelope surrounding the earth; the air.

16. a dispersion, in air, of molecules of water, especially as produced by evaporation at ambient temperatures rather than by boiling.

19. show how much one variable is affected by another. The relationship between two variables is called their correlation.

21. an atmospheric heating phenomenon, caused by short-wave solar radiation being readily transmitted inward through the earth's atmosphere but longer-wavelength heat radiation less readily transmitted outward, owing to its absorption by atmospheric carbon dioxide, water vapor, methane, and other gases; thus, the rising level of carbon dioxide is viewed with concern.

22. the region of the upper atmosphere in which temperature increases continuously with altitude, encompassing essentially all of the atmosphere above the mesosphere.

24. the transfer of heat by the circulation or movement of the heated parts of a liquid or gas.

25. a form of oxygen, O_3 , with a peculiar odor suggesting that of weak chlorine, produced when an electric spark or ultraviolet light is passed through air or oxygen. It is found in the atmosphere in minute quantities, especially after a thunderstorm, is a powerful oxidizing agent, and is thus biologically corrosive. In the upper atmosphere, it absorbs ultraviolet rays, thereby preventing them from reaching the surface of the earth. It is used for bleaching, sterilizing water, etc.

26. any of the gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide, methane, ozone, and the fluorocarbons.

27. any of several volatile, inert, saturated compounds of carbon, fluorine, chlorine, and hydrogen; used as refrigerants, foam-blowing agents, solvents, and, formerly, as aerosol propellants until scientists became concerned about depletion of the atmospheric ozone layer.

29. a measure of the strength of a linear association between two variables and is denoted by r .

30. the transfer of heat by the mass movement of heated particles into an area of cooler fluid

31. Meteorology, the layer of the upper atmosphere where most atmospheric ozone is concentrated, from about 8 to 30 miles (12 to 48 km) above the earth, with the maximum ozone concentration occurring at an altitude of about 12 miles (19 km).

Down

1. a colorless, odorless, incombustible gas, CO_2 , present in the atmosphere and formed during respiration, usually obtained from coal, coke, or natural gas by combustion, from carbohydrates by fermentation, by reaction of acid with limestone or other carbonates, or naturally from springs; used extensively in industry as dry ice, or carbon dioxide snow, in carbonated beverages, fire extinguishers, etc.

3. the amount of water vapor in the air, expressed as a percentage of the maximum amount that the air could hold at the given temperature; the ratio of the actual water vapor pressure to the saturation vapor pressure.

4. the lowest layer of the atmosphere, 6 miles (10 km) high in some areas and as much as 12 miles (20 km) high in others, within which there is a steady drop in temperature with increasing altitude and within which nearly all cloud formations occur and weather conditions manifest themselves.

5. information about quantities; that is, information that can be measured and written down with numbers.

6. the region of the upper atmosphere extending upward from the tropopause to about 30 miles (50 km) above the earth, characterized by little vertical change in temperature.

8. the force exerted by air, whether compressed or unconfined, on any surface in contact with it.

9. an abnormal increase in temperature with height in the troposphere

10. (HFCs) are greenhouse gases (GHGs) commonly used by federal agencies in a wide variety of applications, including refrigeration, air-conditioning (AC), building insulation, fire extinguishing systems, and aerosols.

12. shows how close similar circumstances lead to similar outcomes.

13. show whether and how strongly pairs of variables are related. For example, height and weight are related

14. (in the classification of the earth's atmosphere by chemical properties) the region between the ionosphere and the exosphere, extending from about 250-650 miles (400-1050 km) above the surface of the earth. (in the classification of the earth's atmosphere by thermal properties) the region between the stratosphere and the thermosphere, extending from about 20-50 miles (32-80 km) above the surface of the earth.

15. the process in which energy is emitted as particles or waves. the complete process in which energy is emitted by one body, transmitted through an intervening medium or space, and absorbed by another body, the energy transferred by these processes.

17. a body of air covering a relatively wide area, exhibiting approximately uniform properties through any horizontal section.

18. a straight line that best represents the data on a scatter plot. This line may pass through some of the points, none of the points, or all the points.

20. a colorless, odorless, flammable gas, CH_4 , the main constituent of marsh gas and the firedamp of coal mines, obtained commercially from natural gas; the first member of the methane, or alkane, series of hydrocarbons.

23. the transfer of heat between two parts of a stationary system, caused by a temperature difference between the parts.

28. an interface or zone of transition between two dissimilar air masses.

Word Bank

Convection Current
Atmosphere
Convection
Water Vapor
Relative Humidity
Troposphere
Conduction

Air Pressure
Ozone
Linear Relationship
Thermosphere
Stratosphere
Ozone Layer

Scatter Plot
Statistical Association
Methane
Hydrofluorocarbon
Air Mass
Pearson Correlation

Radiation
Chlorofluorocarbons
Front
Quantative Data
Nitrous Oxide
Greenhouse Gases

Greenhouse Effect
Temperature Inversion
Carbon Dioxide
Best Fit Line
Statistical Strength
Mesosphere