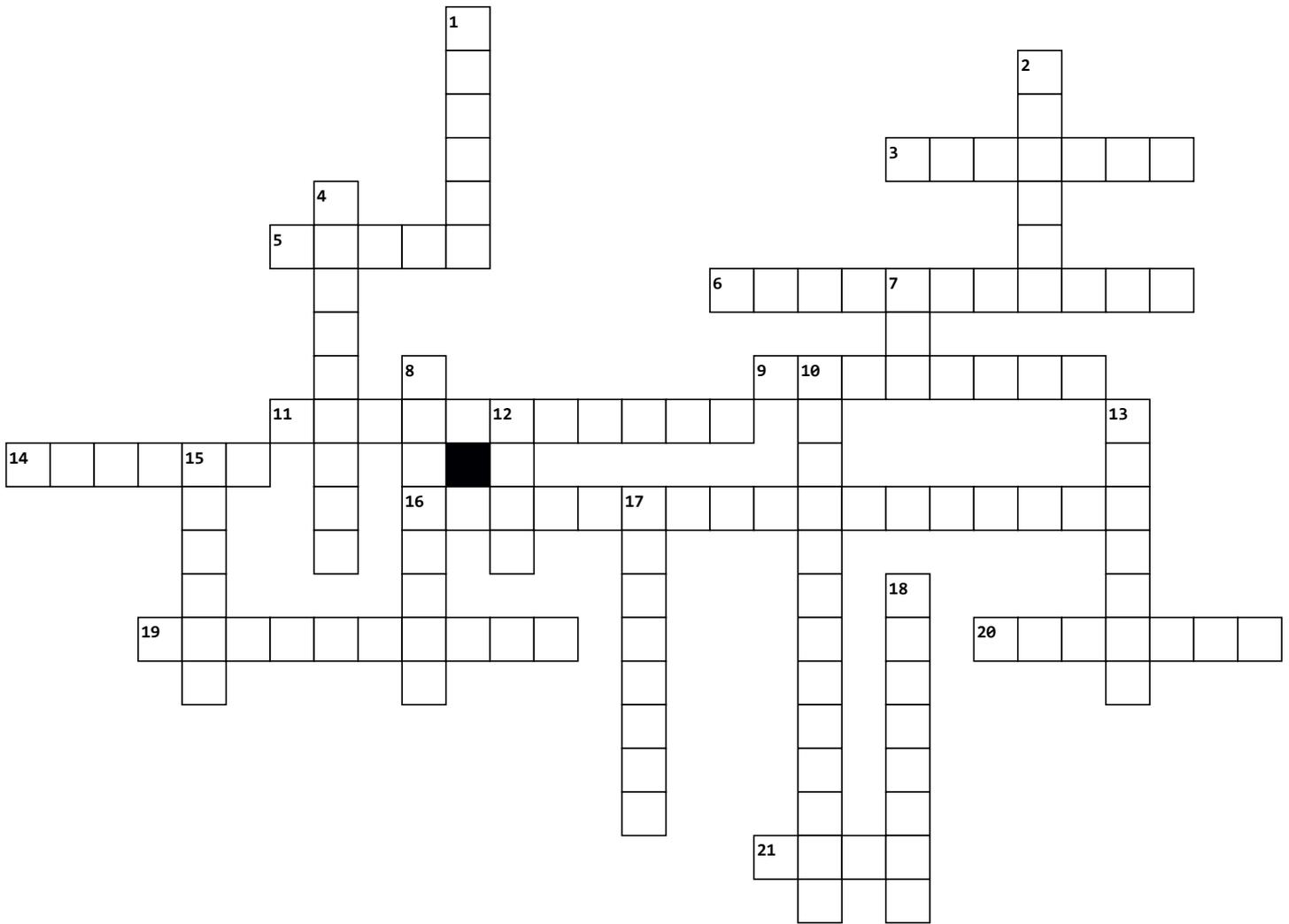


# Matter and its nature



## Across

- 3.** The temperature point at which a liquid becomes a gas.
- 5.** A state of matter with a definite shape and volume - particles are closely packed in a fixed arrangement.
- 6.** Mixtures with a uniform composition throughout also known as solutions.
- 9.** Properties that can be observed or measured without changing the substance's chemical identity.
- 11.** The process by which a solid changes directly into a gas without passing through the liquid state.
- 14.** A high-energy state of matter with ionized particles found in stars and neon lights.
- 16.** The principle that in a closed system, matter cannot be created or destroyed; it can only change forms.

## Down

- 1.** A state of matter with a definite volume but no definite shape - particles are close together but can move past each other.
- 2.** The amount of space occupied by an object or substance typically measured in liters or cubic meters.
- 4.** Substances consisting of two or more elements chemically combined in a fixed proportion.
- 7.** A state of matter with no definite shape or volume - particles are far apart and move freely.
- 8.** Substances consisting of one type of atom that cannot be broken down into simpler substances.
- 10.** Mixtures with a non-uniform composition with distinct phases or layers.
- 12.** A measure of the amount of matter in an object typically measured in kilograms or grams.

**19.** The process by which a gas changes directly into a solid without passing through the liquid state.

**20.** The temperature point at which a solid becomes a liquid.

**21.** Substances with a fixed composition and distinct properties which cannot be separated into simpler substances by physical methods.

**13.** The mass of a substance per unit volume often expressed in grams per cubic centimeter ( $\text{g}/\text{cm}^3$ ).

**15.** Anything that has mass and occupies space.

**17.** Properties that describe a substance's ability to undergo chemical changes and form new substances.

**18.** Matter with a variable composition made up of two or more substances that retain their individual properties and can be separated by physical methods.