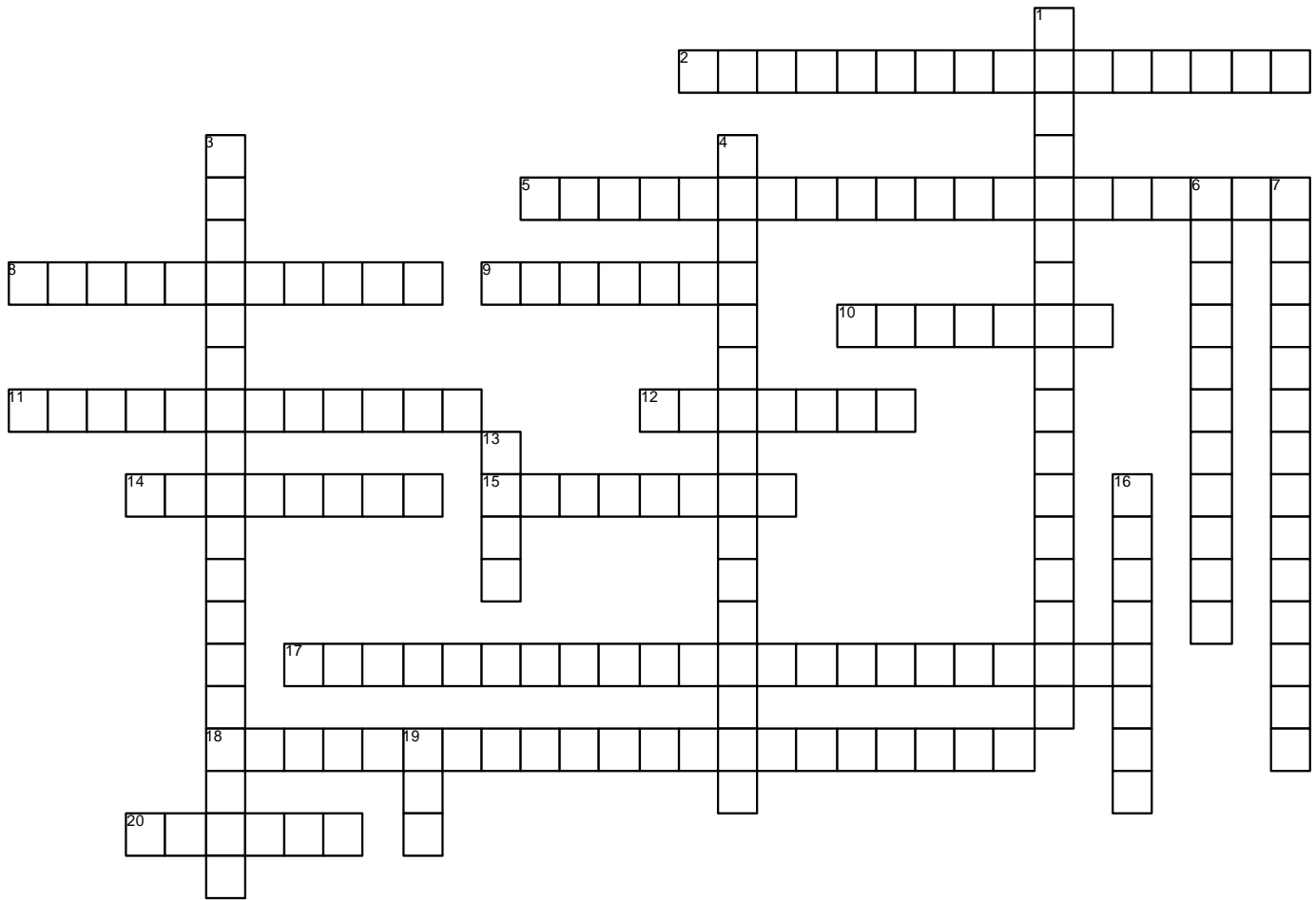


Alternative Fuels

Chapter 69



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ACROSS

- 2** Pure alcohol with no more than 0.5% water is called _____.
- 5** _____ is another alternative fuel that is often used in fleet vehicles.
- 8** _____ can be used to make ethanol and is a summer perennial grass that is native to North America.
- 9** _____ is usually made from grain and is the type of alcohol found in alcoholic drinks.
- 10** _____ can be converted to synthesis gas by a process called partial oxidation, and later converted to methanol.
- 11** Coal can be converted to a liquid fuel through a process

- called _____.
- 12** _____ is the most widely used of all of the alternative fuels.
- 14** _____ is a chemical compound formula that includes one carbon atom, four hydrogen atoms and one oxygen atom.
- 15** Using E85 in a _____ vehicle can result in a power increase of about 5%.
- 17** A _____ measures both the percentage of ethanol blend and the temperature of the fuel.
- 18** When sold as a fuel, propane is also known as _____ because the propane is often mixed with about 10% of other gases to give the propane a smell.

- 20** Using a simple reaction between coal and steam, a gas mixture called _____ is formed.

DOWN

- 1** _____ is composed of cellulose and lignin, with smaller amounts of proteins, lipids, and ash.
- 3** Exxon Mobil has developed a process for converting methanol into gasoline in a process called _____.
- 4** _____ can be produced from a wide variety of cellulose biomass feedstock.
- 6** _____ technology uses a catalyst, usually iron or cobalt, and incorporates steam re-forming to give off the by-products of carbon dioxide, hydrogen, and carbon monoxide.
- 7** _____ can be made from a variety of products, using several different processes.
- 13** The _____ can operate on pure gasoline or blends up to 85% ethanol.
- 16** _____ is created from a process where coal is reacted with hydrogen at high temperatures and pressure with a catalyst.
- 19** Diesel fuel created using the _____ process is often called GTL diesel.