

Renewable Energy Ag Mag - Vocabulary

Words with Multiple Meanings

Directions: Choose the word from the list that correctly completes both sentences.

1

The lawyer made a _____ to adjourn the trial.

The train was already in _____ when he tried to board it.

- A Heat
- B Watt
- C Motion
- D Power

2

The _____ of the oven made the entire kitchen warm.

In the _____ of the argument, he said some things he didn't mean.

- A Heat.
- B Power
- C Watt
- D Energy

3

The door slammed shut, seemingly under its own _____.

They attained _____ by overthrowing the local government.

- A Watt
- B Power
- C Heat
- D Motion

4

There are many types of renewable _____, including wind and solar.

I seem to have no _____ these days.

- A Energy
- B Watt
- C Heat
- D Motion

Renewable Energy Ag Mag - Math

Converting U.S. Customary Measurements

Directions: Choose the best answer

Capacity

1 tablespoon = 3 teaspoons

1 cup = 16 tablespoons = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

Weight

1 pound = 16 ounces (oz.)

1 ton (t.) = 2,000 pounds (lbs.)

1

One bushel of corn weighs 56 pounds. How many ounces does one bushel of corn weigh?

- A 3.5 ounces
- B 896 ounces
- C 72 ounces
- D 40 ounces

2

One bushel of corn yields about 2.8 gallons of ethanol. How many quarts of ethanol do two bushels of corn yield?

- A 1.6 quarts
- B 11.2 quarts
- C 22.4 quarts
- D 112 quarts

Renewable Energy Ag Mag - Math

Converting U.S. Customary Measurements

Directions: Choose the best answer

3

How many cups of ethanol does one bushel of corn yield?

- A 11.2 cups
- B 22.4 cups
- C 44.8 cups
- D 5.6 cups

4

One bushel of soybeans weighs 60 pounds. How many bushels of soybeans would it take to make 1 ton of soybeans?

- A Heat.
- B Power
- C Watt
- D Energy

5

How many bushels of soybeans would it take to make 9 gallons of biodiesel, if one bushel of soybeans makes 1.5 gallons of biodiesel?

- A 3 bushels
- B 6 bushels
- C 9 bushels
- D 12 bushels

6

How many tablespoons of biodiesel does one bushel of soybeans yield, if one bushel of soybeans yields 1.5 gallons of biodiesel?

- A 384 tablespoons
- B 24 tablespoons
- C 48 tablespoons
- D 88 tablespoons

Renewable Energy Ag Mag - Reading Passage

Ethanol and Other New Fuels

By Tea Benduhn

Can you imagine a car that runs on corn? That might sound like a crazy idea. In fact, many cars already get their power from corn. Ethanol is a type of fuel made from corn or other plants. Ethanol is added to the gasoline we put in our cars.

Ethanol is a type of alcohol. Alcohol is made from sugars in plants. Sugar gives corn its sweet flavor. Almost all plants contain sugars—even plants we don't eat. People can make ethanol from many plants besides corn. Soybeans, grass, and wood can all be turned into ethanol. In Brazil, people use sugarcane to make ethanol.

Ethanol is not the only fuel made from plants. Biodiesel is also made from plants. Most plants contain oils. Biodiesel is made from plant oils.

Ethanol and biodiesel are new fuels made from plants. Some inventors are trying to make new fuels from a different source—water! Water can be used to make a type of fuel called hydrogen fuel cells. Car engines that run on fuel cells are very expensive to make. But many people are working to make fuel cells better. They hope that hydrogen will be the fuel of the future.

What's so special about fuel? Fuel is used for energy. Energy is the ability to move people and things. There are different kinds of energy. When you're sitting still, you are filled with energy that you aren't using. That stored energy is called potential energy. When you stand up and walk, your potential energy becomes kinetic energy, or moving energy. Fuel is potential energy. It stores energy to power cars and planes.

Today, most cars and trucks get energy from gasoline. Gasoline is made from oil pumped from the ground. Oil is a fossil fuel. It formed from the remains of plants and animals that lived millions of years ago. Coal and natural gas are also fossil fuels. Fossil fuels are nonrenewable resources. Once they are used up, they can never be replaced.

Why are corn and other plants a good source of fuel? Plants are a renewable resource. They are a source of energy that can be replaced. When we use plants, we can grow more to replace them. Plants also help make the air clean. Plants give off the oxygen that we breathe. We need oxygen to live. We can make fuel from plants.

Renewable Energy Ag Mag - Reading Passage

Directions: Read each question and choose the best answer.

1

_____ is made from oil pumped from the ground.

- A Ethanol
- B Biodiesel
- C Gasoline
- D Hydrogen

2

Corn and other plants are a good source of fuel because plants are _____.

- A Nonrenewable resources
- B Alive
- C Green
- D Renewable resources

3

_____ is made from sugars in plants.

- A Energy
- B Oil
- C Fuel
- D Alcohol

4

What kind of energy is used to walk or move?

- A Kinetic energy
- B Hydroelectric energy
- C Potential energy
- D Solar energy

Renewable Energy Ag Mag - Reading Passage

Directions: Read each question and choose the best answer.

5

The ability to move people and things is called _____.

- A Energy
- B Fuel
- C Motion
- D Cells

6

Biodiesel is made from plant _____.

- A Nutrients
- B Sugars
- C Oils
- D Energy

7

Many people hope that _____ will be the fuel of the future.

- A Ethanol
- B Hydrogen
- C Alcohol
- D Oxygen

Extended Response

What is the difference between nonrenewable and renewable energy resources? Be sure to include examples from your own knowledge and experiences in your explanation.