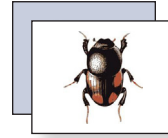


kids' kreation



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116

COMBUSTION

Power from the Almighty

Rocket Fuel

The three main fuels used to launch rockets today are liquid kerosene, liquid hydrogen, and liquid methane. Each of these fuels burn in the presence of liquid oxygen to produce thrust.

SpaceX Falcon Heavy uses liquid kerosene as fuel.



All forms of power and combustion come from the hand of Almighty God. He is the One who established “the law of conservation of energy,” which states that energy is neither created nor destroyed. Our Lord alone can create and destroy energy. But He graciously allows us to harness a tiny portion of it to power our cars, rockets, trains, and planes. May we thank Him for His bounty to us all!

And my God will supply every need of yours according to His riches in glory in Christ Jesus. Philippians 4:19

PHOTO CREDITS:
Falcon Heavy launch—SpaceX CC0 1.0 Deed
Campfire—© Benevolente82 / Shutterstock

CROSSWORD

The words used in the CROSSWORD are taken from the articles found in the **CREATOR Journal** Volume 28 Number 4.

Answers to CROSSWORD found in *kids' kreation* # 115

Across: 2. PAPILLAE 4. SPICES
6. SALT 8. SAVORY 9. BUDS
10. JOY 11. TASTE 13. FISH
14. BITTER 15. POISONOUS

Down: 1. MANNA
2. PHOTOSYNTHESIS 3. ACIDS
5. SEEDS 7. GOOD 12. TREES

Across

3. Wood is composed of extremely long molecules called _____.
5. As a fire blazes, electrons in the _____ of the wood vapor get very excited.
6. Burning wood is a bright beacon of our Lord's incomparable _____.
9. Gases released from wood react with _____ to form carbon dioxide, water, and heat.
10. The energy Jesus stores in wood logs ordinarily came from a _____.
12. Ashes in a campfire are leftover _____ that can't burn.
13. Our Lord Almighty rearranges the atoms in a _____, breaking chemical bonds between them, and releasing stored energy.
14. Digestion can be thought of as very _____ combustion.

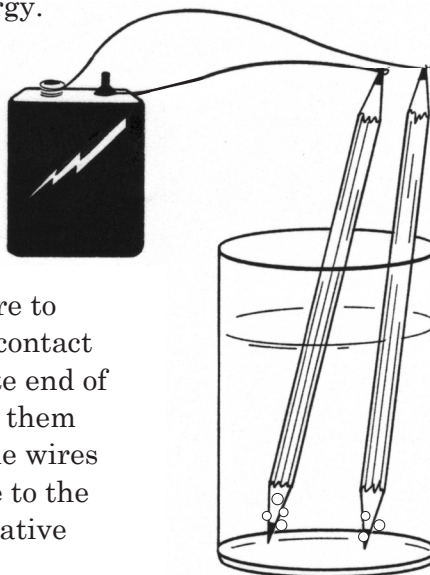
FAMILY ACTIVITY: "Rocket Fuel"

Some rockets burn hydrogen in the presence of oxygen to produce thrust. When they do, a tremendous amount of energy God stored in the hydrogen molecules is released. This activity will demonstrate that hydrogen can store energy.

You will need the following:

- 6 or 9-volt battery
- 2 short insulated copper wires with ends exposed
- 2 new pencils sharpened at both ends
- glass of water

Attach one of the exposed ends of each wire to one end of each pencil so that it comes in contact with the graphite (lead). Place the opposite end of the pencils into the water, but don't allow them to touch. Then, connect the free ends of the wires to the battery terminals (connect one wire to the positive terminal and the other to the negative terminal).



Tiny bubbles should form in the water at the ends of each pencil point. Hydrogen gas (H_2) bubbles will appear at the end of one pencil, and bubbles of oxygen gas (O_2) at the other pencil tip. The electricity (a form of energy) causes water molecules (H_2O) to break apart and form these two different gases. In the process, energy was stored in the hydrogen gas, which is rocket fuel.



Down

1. _____ is formed by the extremely slow combustion of steel.
2. There are about 60 different organic chemicals released from _____ as it combusts.
3. _____ is just another name for burning.
4. Our Lord Jesus stores an unbelievable amount of _____ in wood.
7. When we eat a meal, the Lord converts our _____ into energy and carbon dioxide (CO_2).
8. When something is burned, _____ and light are produced.
11. It is the chemicals in the _____ given off by heated wood that burn, not the solid wood itself.