

## ENERGY

### 1. ENERGY

#### Toss Up: Short Answer

Which compound contributes the most to global warming?

**Bonus Answer: water**

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#### Bonus: Short Answer

What is China's largest renewable energy source?

**Bonus Answer: Hydro**

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### 2. ENERGY

#### Toss Up: Multiple Choice

In a conventional light bulb, what is the ratio of light energy to the heat energy produced?

W) 1:9

X) 3:2

Y) 1:1

Z) 7:3

**Toss Up Answer: W**

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#### Bonus: Multiple Choice

The arctic is estimated to hold what percent of the worlds what percent of the world's undiscovered oil and natural gas reserves?

W) 7%

X) 13%

Y) 22%

Z) 35%

**Bonus Answer: Y**

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### 3. ENERGY

#### Toss Up: Multiple Choice

Which country generates the highest percentage of its energy from nuclear power?

W) France

X) China

Y) Britain

Z) Denmark

**Toss Up Answer: W**

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#### Bonus: Short Answer

List the operating temperatures from lowest to highest of these types of fuel cells

PEMFC

PAFC

MCFC

SOFC

**Bonus Answer: 1,2,3,4**

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### 4. ENERGY

**Toss Up: Multiple Choice**

16) Which uranium oxide is most commonly used in light water reactors?

- W) uranium(IV) oxide
- X) uranium(V) oxide
- Y) uranium(VI) oxide
- Z) Yellowcake

**Toss Up Answer: W**

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**Bonus: Multiple Choice**

If a 1 kg mouse runs at 5 m/s, what is its approximate energy in electronvolts?

- W)  $4.8 \times 10^{-3}$
- X)  $2.9 \times 10^{15}$
- Y)  $7.8 \times 10^{19}$
- Z)  $4.4 \times 10^{22}$

**Bonus Answer: Y**

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**5. ENERGY**

**Toss Up: Multiple Choice**

A metal coin and a plastic coin are heated to the same temperature. The two coins have the same size and shape, are dropped into the same tub of cold water at the same time, and are left for 30 seconds. Which coin will have the lower temperature?

- W) Metal coin
- X) Plastic Coin
- Y) Both coins will have the same temperature
- Z) Cannot be determined

**Toss Up Answer: W**

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**Bonus: Short Answer**

What is the general name for material that is used to block the flow of heat?

**Bonus Answer: Insulator**

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**6. ENERGY**

**Toss Up: Multiple Choice**

Using current technologies, which of the following sources of energy is nonrenewable?

- W) Geothermal
- X) Wind
- Y) Nuclear
- Z) Solar

**Toss Up Answer: Y**

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**Bonus: Multiple Choice**

Which of the following is NOT a fossil fuel?

- W) Coal
- X) Petroleum
- Y) Natural gas
- Z) Uranium

**Bonus Answer: Z**

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## **7. ENERGY**

**Toss Up: Multiple Choice**

What is one advantage to geothermal energy?

W) Low cost

X) Can be built anywhere

Y) Doesn't produce any hazardous chemicals

Z) Will never run out of steam

**Toss Up Answer: W**

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**Bonus: Short Answer**

In an internal combustion engine, what is the name of the device that ignites the fuel?

**Bonus Answer: Spark plug**

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## **8. ENERGY**

**Toss Up: Short Answer**

What is energy of motion?

**Bonus Answer: KE**

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**Bonus: Short Answer**

What is energy of location?

**Bonus Answer: PE**

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## **9. ENERGY**

**Toss Up: Short Answer**

From what country does the US import the most coal?

**Bonus Answer: Columbia**

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**Bonus: Short Answer**

Rank the coal production of these states from lowest to highest: Wyoming, West Virginia, Illinois, Pennsylvania.

**Bonus Answer: Pennsylvania, Illinois, West Virginia, Wyoming.**

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## **10. ENERGY**

**Toss Up: Multiple Choice**

Oil, coal, and natural gas supply what percent of energy used in the US?

W) 10

X) 35

Y) 55

Z) 90

**Toss Up Answer: Z**

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**Bonus: Multiple Choice**

A permeable rock that contains hydrocarbon fluids and gasses is called:

W) An oil trap

X) A source bed

Y) An oil reservoir

Z) An oil pocket

**Bonus Answer: Y**

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## **11. ENERGY**

**Toss Up: Multiple Choice**

The world has the least amount of which of the following fuel types?

W) oil

X) coal

Y) uranium

Z) there are about the same amount of each of these

**Toss Up Answer: W**

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**Bonus: Short Answer**

What region of the world holds the majority of already discovered oil fields?

**Bonus Answer: The Middle East**

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## **12. ENERGY**

**Toss Up: Short Answer**

What is the term for oil derived from oil shales or tar sands?

**Bonus Answer: Syncrude**

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**Bonus: Multiple Choice**

Burning of which of the following fuels produces the least amount of carbon dioxide per unit of energy?

W) coal

X) oil

Y) natural gas

Z) all of these produce the same amount of CO<sub>2</sub>

**Bonus Answer: Y**

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