1 A student recorded the time it took for all the water in a puddle on a sidewalk to evaporate after a rain. Which kind of energy causes water to evaporate?

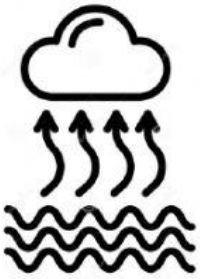
A Light energy from streetlights

B Sound energy from passing cars

C Thermal energy from the environment

D Mechanical energy from nearby streets

What cause water to evaporate



The photograph shows a laser cutting a sheet of metal as the laser moves from one end of the metal to the other.

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Mechanical – move
Thermal – heat
Sound – noise
Light - shine

Four groups of students each made a table of examples of the different types of energy involved in this process. Which of these tables is correct?

F

Type of Energy	Example
Mechanical	The laser moves across the metal.
Thermal	Light reflects off the metal.
Sound	Sparks hit the floor.
Light	The metal turns red.

H

Type of Energy	Example
Mechanical	The laser produces a beam of light.
Thermal	The temperature of the metal rises.
Electrical	The laser is part of a circuit.
Sound	Pieces of metal hit the floor.

G

Type of Energy	Example
Mechanical	The laser produces sparks.
Thermal	The laser is part of a circuit.
Electrical	The light cuts the metal.
Sound	Sparks hit the floor.

J

Type of Energy	Example
Mechanical	The laser moves across the metal.
Thermal	The laser produces sparks.
Sound	Pieces of metal hit the floor.
Light	The laser produces a beam of light.

1 Which of these devices is the only one NOT designed to produce both sound and light energy?

A 

C 

B 

D 

Does not make sound (noise) and light (shine) energy.

26 A family was vacationing in the mountains in a cabin that had no electrical power. They needed boiling water in order to prepare dried soup mix.

With no electrical energy available, which method would most likely provide enough thermal energy to quickly heat the water to boiling?

F Using a microwave oven to heat water in a glass jar for 3 minutes

G Shaking the water in a closed, insulated plastic bottle for 3 minutes

H Shining a battery-powered flashlight on a metal container of water for 10 minutes

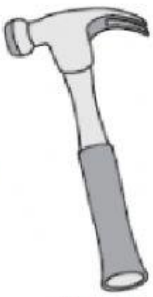
J Placing a metal pot of water over glowing charcoal in an outdoor grill for 10 minutes

Read carefully
The answer cannot use electricity!

21 Which object requires only mechanical energy to perform its main function?

Mechanical energy = moving

A



Hammer

C

Thermometer

B

Fan

D

Iron

11 A student made a list of activities that involve energy.

Mechanical energy means to move

1. Sharks chasing a school of fish
2. A toaster heating bread
3. A cell phone charging
4. A tree limb falling to the ground
5. Tomato plants absorbing sunlight
6. A canoe floating down a river

Which activities on the list are examples of the use of mechanical energy?

A Activities 1, 4, and 6

B Activities 2, 4, and 5

C Activities 1 and 2

D Activities 3, 5, and 6