

SCIENCE BENCHMARK 2 REVIEW

THROUGH WHICH OF THESE OBJECTS WOULD SOUND TRAVEL THE FASTEST?

- A. The air
- B. Water in a pool
- C. A metal table
- D. Milk in a glass



EMMA

FOUR FRIENDS ARE IN A CHOIR. EMMA'S VOICE HAS THE HIGHEST PITCH, FOLLOWED BY HALEY'S VOICE, MIKE'S VOICE, AND WILLIAM'S VOICE, WHICH HAS THE LOWEST PITCH. WHICH SINGER'S VOCAL CORDS VIBRATE THE FASTEST?

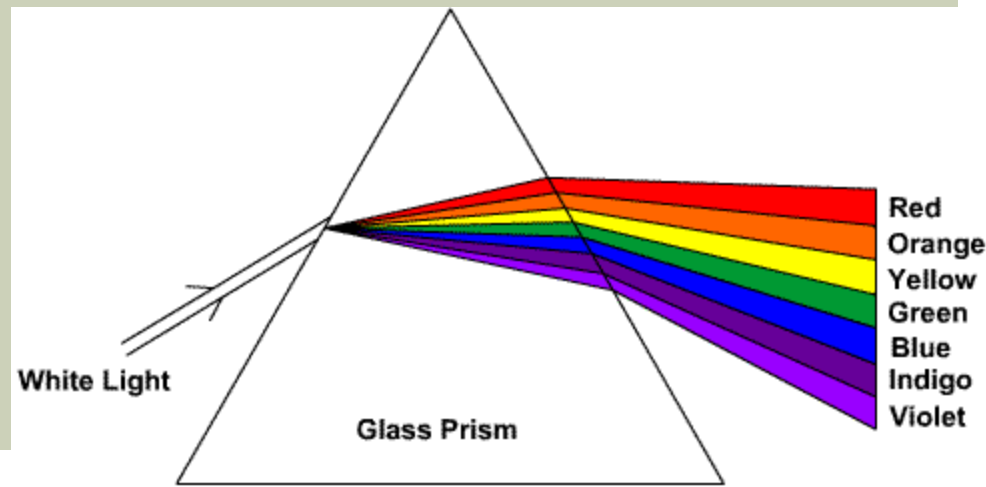
HOW CAN YOU MAKE THE VOLUME OF SOUND FROM A TRUMPET INCREASE?

- A.** By holding it higher in the air
- B.** By blowing into it with greater force
- C.** By blowing into it with less force
- D.** By holding it lower toward the floor



HOW DOES A PRISM AFFECT WHITE LIGHT THAT PASSES THROUGH IT?

- A. It makes white light brighter
- B. It changes white light to black light
- C. It separates white light into its different wavelengths
- D. It creates a laser beam



WHY DOES A PENCIL APPEAR TO BEND WHEN YOU PUT IT PARTLY INTO A GLASS OF WATER?

- A.** The heat in the water weakens the pencil
- B.** The light reflects off the pencil
- C.** The water pressure breaks the pencil
- D.** The light refracts when it passes from air into water



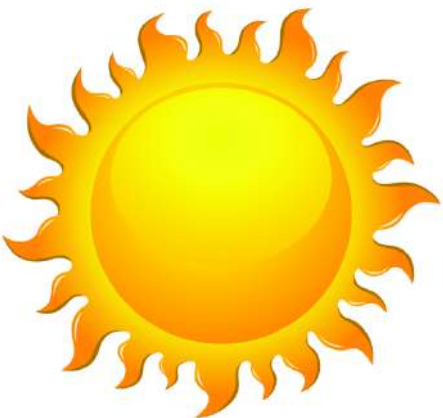
WHEN YOU FIRST SIT ON A CAR SEAT ON A COLD DAY, THE SEAT MAY BE COLD. HOW CAN THE SEAT GET WARMER AFTER YOU SIT ON IT FOR AWHILE?

- A.** Light energy changes to thermal energy
- B.** Thermal energy transfers from your body to the seat by conduction
- C.** Your body gets used to the cold seat after awhile
- D.** Thermal energy transfers from the seat to your body by conduction



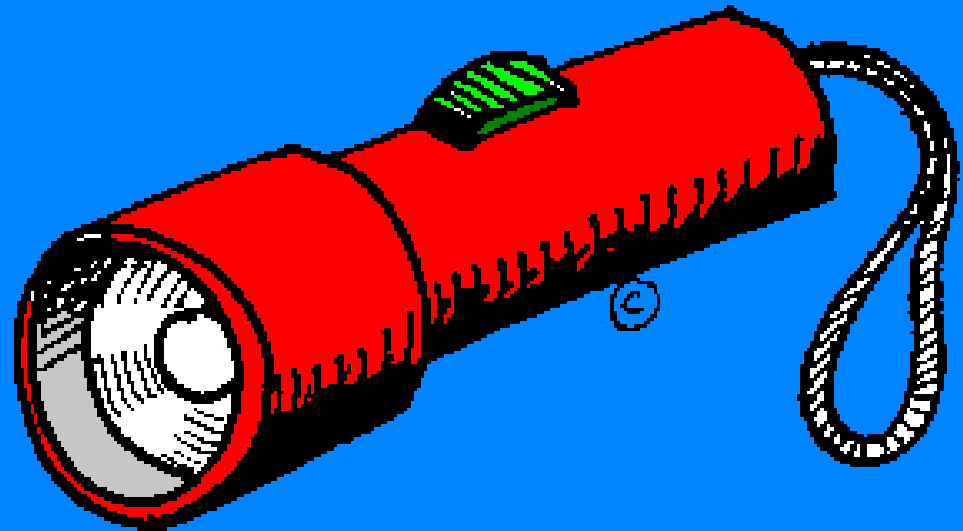
WHAT WOULD HAPPEN TO A GLASS OF COLD ICED TEA IF YOU LEFT IT IN THE SUN FOR AN HOUR ON A HOT DAY?

- A.** Radiant energy would not affect the iced tea
- B.** Thermal energy would convert to radiant energy and warm the tea
- C.** Thermal energy would not affect the iced tea
- D.** Radiant energy would convert to thermal energy and warm the tea



**IF YOU SHINE A FLASHLIGHT DIRECTLY
AT A MIRROR, THE LIGHT WILL BE**

- A.** Reflected upward
- B.** Bent to the left or right
- C.** Reflected back to you
- D.** Bent downward



WHEN ARE CAR HAS NOT BEEN DRIVEN, THE TIRES FEEL COOL. AFTER THE CAR IS DRIVEN ON THE HIGHWAY, THE TIRES FEEL WARM. WHICH OF THE FOLLOWING PRODUCES THIS HEAT?

- A. Friction
- B. Magnetism
- C. The car's gasoline engine
- D. The car's heating system



WHAT WOULD BE AN ADVANTAGE OF DESIGNING AN AIRPLANE WHOSE OUTSIDE SURFACE CREATES ALMOST NO FRICTION?

- A.** More heat would be produced during flights
- B.** It would fly more slowly
- C.** Less heat would be produced during flights
- D.** It would be harder to fly



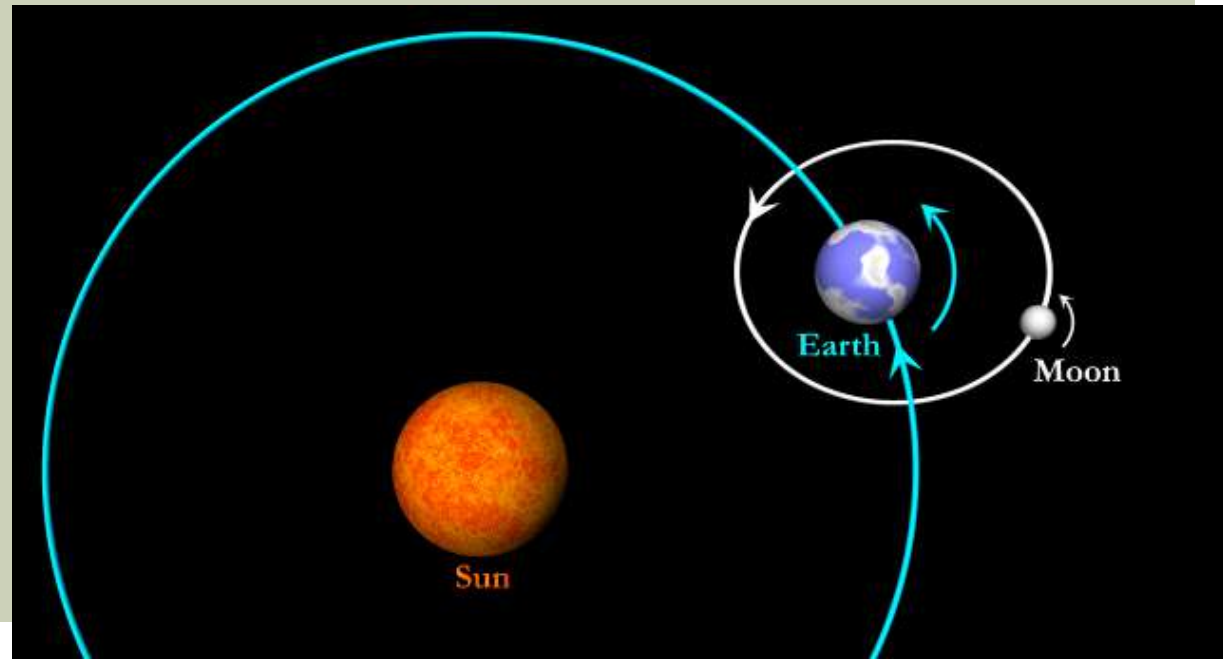
WHAT CAUSES DAY AND NIGHT ON EARTH?

- A.** Earth revolving around the sun
- B.** The moon revolving around Earth
- C.** Earth rotating on its axis
- D.** Long and short shadows



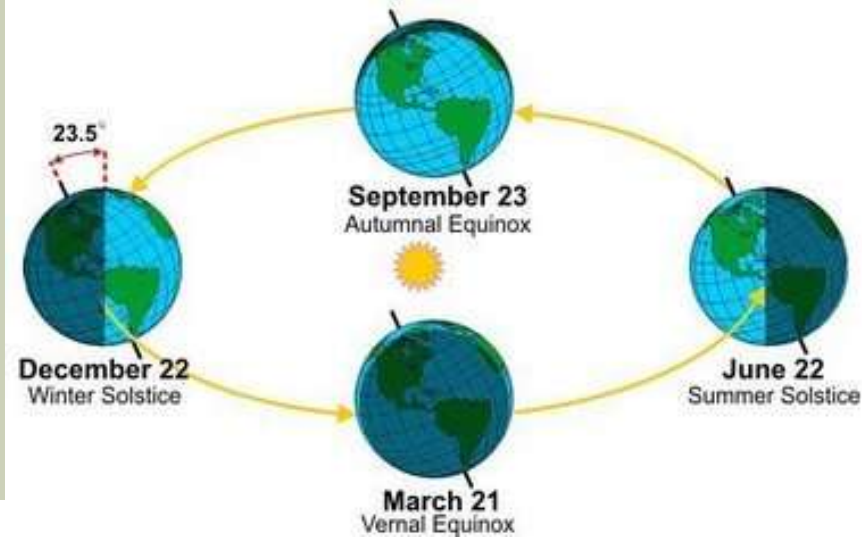
WHAT KEEPS THE MOON IN ORBIT AROUND EARTH?

- A. Ellipse
- B. Gravity
- C. Rotation
- D. Revolution



WHAT CAUSES DAYS ON EARTH TO BE LONGER IN SUMMER, SHORTER IN WINTER, AND MORE NEARLY EQUAL IN SPRING AND FALL?

- A. Earth's rotation and tilt
- B. Earth's elliptical orbit
- C. A solar eclipse
- D. Earth's tilt and revolution



■ A student observes two rocks that look alike. The only difference the student notices between the rock samples is that one of the rocks breaks apart a little when scraped with a fingernail, and the other rock does not break. Which property of the rocks is the student observing?

- A. Texture
- B. Hardness
- C. Weight
- D. Color

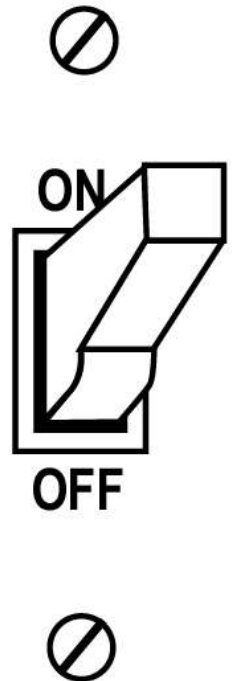
**WHEN WE SEE A FULL MOON FROM EARTH,
HOW MUCH OF THE ENTIRE MOON ARE WE
SEEING?**

- A.** The entire moon
- B.** Half of the moon
- C.** A quarter of the moon
- D.** A sliver of the moon



WHICH OF THE FOLLOWING ACTIONS WILL CHANGE A CLOSED CIRCUIT INTO AN OPEN CIRCUIT?

- A. Touching the insulator
- B. Watching television
- C. Turning off the light in a room
- D. Listening to a CD player



WHEN IT RAINS, A SOIL HOLDS WATER WELL AND BECOMES MOIST AND STICKY. THE SOIL PROBABLY CONTAINS A LARGE AMOUNT OF _____

- A. Sand
- B. Silt
- C. Pebbles
- D. Clay

HOW IS A LUNAR ECLIPSE SIMILAR TO A SOLAR ECLIPSE?

- A.** Both involve the moon blocking the sun
- B.** Both involve an object in the sky blocking light
- C.** Both involve Earth blocking the sun
- D.** Both happen once in a lifetime



DURING THE NEW MOON PHASE, _____.

- A.** The unlighted half of the moon faces the sun
- B.** The lighted half of the moon faces Earth
- C.** The unlighted half of Earth faces the sun
- D.** The unlighted half of the moon faces Earth



MANY POTS AND PANS ARE MADE OF METAL. WHICH OF THE FOLLOWING STATES THE BEST REASON THAT METAL IS USED TO MAKE POTS AND PANS?

- A.** Metal has a shiny surface
- B.** Metal is not very dense
- C.** Metal conducts heat
- D.** Metal melts at a low temperature



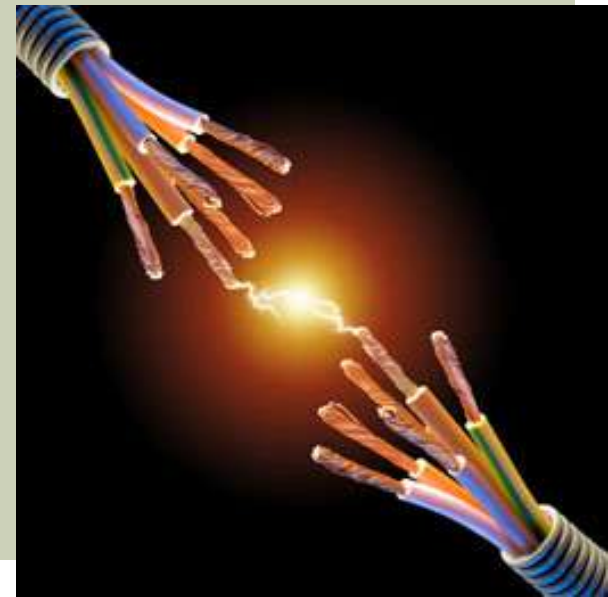
THE PLUG FOR AN OLD TOASTER HAS A BREAK IN ITS PLASTIC COVERING. PART OF THE COPPER WIRE IS EXPOSED. WHY IS IT DANGEROUS TO USE THIS TOASTER?

- A. The exposed wire can cause an electric shock
- B. The plastic covering can cause an electric shock
- C. The exposed wire might burn the toast
- D. There is no danger



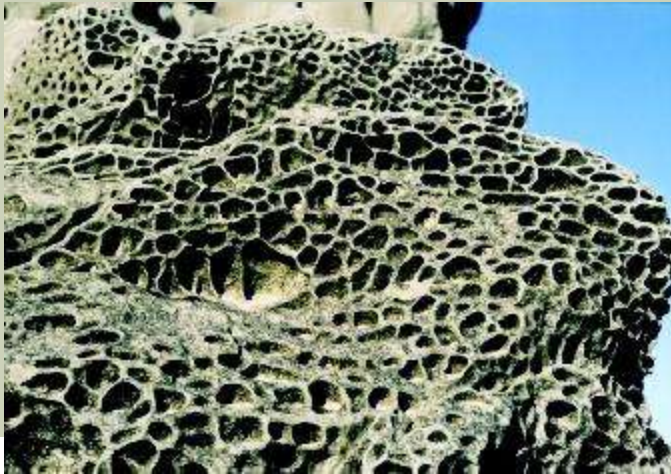
HOW ARE CONDUCTORS USED IN ELECTRIC CIRCUITS?

- A.** To prevent electric shocks
- B.** To slow down electric charges
- C.** To provide a break in electric circuits
- D.** To provide a fast path for electric currents



WHICH OF THE FOLLOWING IS AN EXAMPLE OF CHEMICAL WEATHERING?

- A. Ice expanding cracks in rocks
- B. Plant roots breaking rocks as they grow
- C. Moving water scraping small rocks against larger rocks
- D. Rainwater and carbon dioxide changing minerals in rocks



WHICH OF THE FOLLOWING IS NOT A PROPERTY OF MINERALS?

- A. Luster**
- B. Streak**
- C. Deposition**
- D. Crystal shape**

HOW CAN HUMANS MINIMIZE THE DANGER OF DESTRUCTION FROM EARTHQUAKES?

- A. Reduce carbon dioxide emissions
- B. Avoid building near fault lines
- C. Strengthen walls using sandbags
- D. Reduce physical weathering



SANDSTONE AND LIMESTONE ARE BOTH SEDIMENTARY ROCKS. HOW ARE THEY DIFFERENT FROM EACH OTHER?

- A.** They are made of different materials
- B.** Only one was formed in a volcano
- C.** They are found in different places in the world
- D.** Only one can contain fossils



HOW COULD YOU USE SEDIMENTARY ROCKS TO COMPARE THE AGE OF DIFFERENT FOSSILS?

- A.** The rocks near the surface have the oldest fossils
- B.** The rocks farthest from the surface have the oldest fossils
- C.** The fossils in limestone are the oldest
- D.** The oldest rocks don't contain fossils



WHY IS LOAM A BETTER CHOICE THAN SAND FOR GROWING PLANTS?

- A.** Loam is darker than sand
- B.** Loam contains air
- C.** Loam has nutrients
- D.** Loam has many particles



WHEN YOU PLUCK A GUITAR, WHAT ENERGY TRANSFORMATION IS TAKING PLACE?

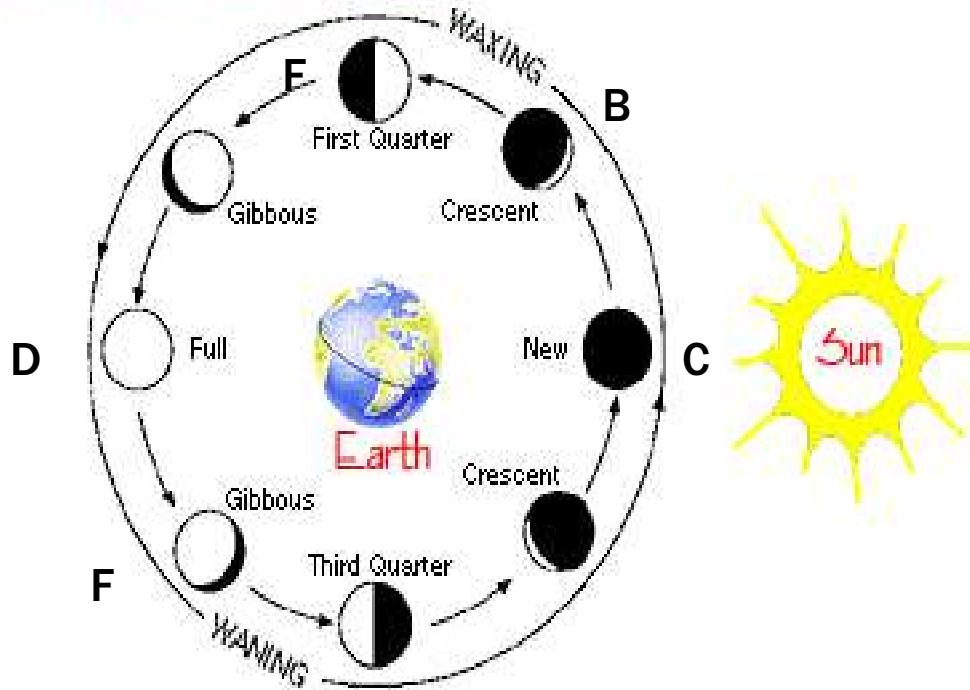
- A.) heat energy to electrical energy
- B.) electrical energy to mechanical energy.
- C.) sound energy to heat energy.
- D.) mechanical energy to sound energy

CRYSTAL TESTED THE HARDNESS OF ROCKS AND MINERALS. WHICH TYPE OF ROCK COULD SAMPLE 3 BE?

<u>Sample</u>	<u>Mohs hardness scale</u>
■ Sample 1	2
■ Sample 2	7
■ Sample 3	10
■ Sample 4	1

- A.) talc
- B.) calcite
- C.) quartz
- D.) Diamond

The Moon as seen from Earth



- If Letter C represents a New Moon, which phase of the moon is showing at letter B? Waxing Crescent
- Letter F represents the Waning Gibbous

**OBSIDIAN, GRANITE, AND BASALT ARE
ROCKS FORMED FROM MOLTEN ROCK
THAT IS COOLED. WHAT KIND OF ROCKS
ARE THEY?**

- **A.) Sedimentary**
- **B.) Fossils**
- **C.) Igneous**
- **D.) Metamorphic**

- Brenda has made a telephone using two paper cups and a string. When she talks into one cup, her friend John can clearly hear her words through the paper cup. How does this work?

This is because Brenda's voice causes the string to vibrate and the wave travels down the string until it reaches John's ear.

TWO EXAMPLES OF SOUND TRAVELING BETTER THROUGH SOLIDS IS:

- Putting your ear against a wall to hear people talking.
- Putting your ear on the ground to hear something coming (footsteps, and a train.)