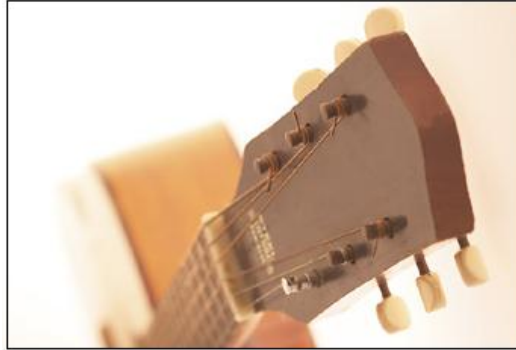


Energy

Question 1 .

The picture shows a guitar. The knobs on the guitar can be used to tighten or loosen the guitar strings.



What does tightening the strings do?

- A. It makes the pitch lower.
- B. It makes the volume louder.
- C. It makes the pitch higher.
- D. It makes the vibration slower.

Question 2 .

The pitch of a sound is how high or low the sound is. Which sound would most likely have the highest pitch?

- A. a whistle
- B. man's voice
- C. thunder
- D. rumble of a heavy truck

Question 3 .

Mario built a sandcastle at the beach. An ocean wave came in and washed the castle away. Where did the energy that moved the sand come from?

- A. sunlight
- B. burning oil
- C. gravity
- D. moving water

Question 4 .

Julia did an experiment using drums. She compared the vibrations she felt and the pitch she heard listening to two different drums. Her data is shown in the table below.

Data From Drum Investigation

Type of Drum	Vibrations Felt	Pitch Heard
Bass Drum	slower vibrations	lower pitch
Snare Drum	faster vibrations	higher pitch

Which conclusion fits the data she gathered?

- A. Larger drums make higher-pitched sounds.
- B. The type of drum does not affect the pitch.
- C. Slower vibrations make higher-pitched sounds.
- D. Faster vibrations make higher-pitched sounds.

Question 5 .

A radio is playing music loudly. There is a cup right in front of the radio's speaker. Pat touches the cup and feels that it is vibrating. What makes the cup vibrate?

- A. light
- B. cold
- C. heat
- D. sound

Question 6 .

A waterwheel is a device that works a little like a windmill. One difference is that the blades of a water wheel are pushed by moving water instead of wind.



Once the water pushes the blades of the waterwheel around, the water passes on down the stream. If the waterwheel does not capture the water, what is a waterwheel used to capture?

- A. fish
- B. electricity
- C. energy
- D. air

Question 7 .

Garrett has four strings that are the same thickness and are made of the same material. Garrett cuts the strings to different lengths and pulls them to the same tightness.

When he plucks the strings with his finger, which string will have the highest pitch?

- A. They will all have the same pitch.
- B. It is impossible to say.
- C. The shortest string will have the highest pitch.
- D. The longest string will have the highest pitch.

Question 8 .

How is all sound produced?

- A. heat
- B. electricity
- C. light
- D. vibration

Question 9 .

Which form of energy makes it possible for humans to see?

- A. mechanical energy
- B. heat energy
- C. sound energy
- D. light energy

Question 10 .

Which of the following statements is true?

- A. The Sun provides all of the light energy for the Earth, and there are no other objects that provide light energy.
- B. The Moon provides most of the light energy for the Earth, but the Earth does receive some light from the Sun and stars.
- C. The Sun provides most of the light energy for the Earth, but the Earth does receive some light energy from the stars and man-made objects.
- D. The Sun and Moon provide most of the light energy for the Earth, but the Earth does receive some light energy from the stars and man-made objects.