

**McGraw-Hill Science © 2000, Texas Edition
TAKS Practice Test**

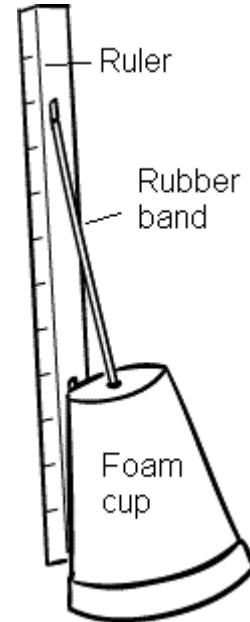
**Grade 5, Chapter 5
Sound**

Name _____

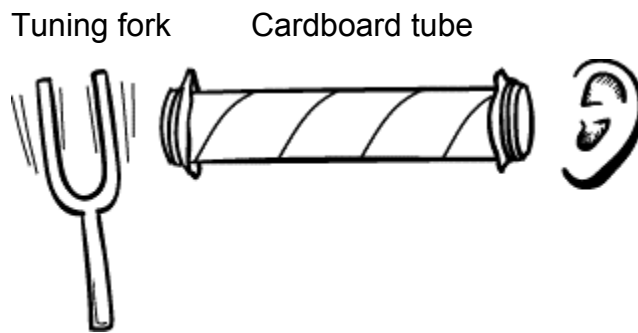
Date _____

Use the illustration and your knowledge of science to answer Questions 1 to 3.

- 1 Why does the rubber band make a sound when it is plucked?
- A All kinetic energy makes sound.
 - B Plucking magnetizes the rubber band.
 - C The rubber band conducts sound waves well.
 - D The rubber band moves back and forth quickly, a motion called vibration.
- 2 After plucking the rubber band, what would be one way to stop it from making sound?
- A Place the end of the foam cup in water.
 - B Wet the rubber band with water.
 - C Hold the middle of the rubber band against the ruler.
 - D Stop the rubber band from moving.
- 3 What if an astronaut took the cup guitar to outer space?! Would she be able to hear its sounds? Why or why not?
- A Yes. The cup guitar would work in outer space just as it works on Earth.
 - B Yes. The sounds from the cup guitar would be even louder without air.
 - C No. The rubber band could not move in outer space.
 - D No. Sounds travel through air, and there is no air in outer space.



Use the illustration, text, and your knowledge of science to answer Questions 4 to 7.



A tuning fork makes a sound when it is struck. In an experiment, a tuning fork is struck against one end of an empty cardboard tube. A student listens to the tube at its other end.

This procedure is repeated with the cardboard tube filled with glass marbles, with steel ball bearings, and with cotton balls.

- 4** What does this experiment test or measure?
- A** How sound changes when it travels through different materials.
 - B** How fast sound travels in different materials.
 - C** How the ear hears sound.
 - D** How the size of a tuning fork changes the sound it makes.
- 5** What fact would the results of this experiment help to explain?
- A** The clothing people wear to a concert can change the sounds they hear.
 - B** Aquarium walls are made of glass, never steel or cotton.
 - C** Musicians use tuning forks to test the sounds of their instruments.
 - D** Clothing often is made of cotton, but usually not glass or steel.

- 6** A group of three students each recorded different observations when they heard the tuning fork through the glass marbles. What do these observations mean?
- A** Sounds travel differently through glass marbles than through other materials.
 - B** The tuning fork must be broken.
 - C** The students may hear sounds differently from one another.
 - D** Only one student hears sounds correctly.
- 7** A new invention raises sounds of 60 decibels to sounds of 90 decibels. The invention's size is about the size of a pea.
- How might this invention be used best?
- A** In hearing aids, to help people who can't hear low sounds
 - B** In hearing aids, to help people who can't hear high sounds
 - C** In hearing aids, to help people who can't hear soft sounds
 - D** In ear plugs, to help muffle sounds
- 8** A man claims to own a dog whistle. Dogs can hear the whistle, but humans cannot. Is such a whistle possible? Why or why not?
- A** Yes. Dogs can hear softer sounds than humans can hear.
 - B** Yes. Dogs can hear sounds of higher frequency than humans can hear.
 - C** Yes. Dogs are lower to the ground, where sounds travel faster.
 - D** No. Humans and other animals all hear the same sounds.

Use the text below and your knowledge of science to answer Questions 9 and 10.

The people of the town of Talia are worried about birds. Over the past six years, they have noticed fewer and fewer birds in their neighborhoods.

This year, a team of scientists counted the birds in Talia. Such a count is called a census. The census showed that the populations of robins, blue jays, and cardinals each dropped by 40% from 1990.

What caused the drop in the bird population? The mayor blames the airport that opened in 1992. He says that noise from airplanes is harming the birds. They cannot hear one another, so they leave the area or die without leaving young behind.

The mayor is urging the city council to allow only the quietest airplanes to land at the airport.

- 9** If 120 robins lived in Talia in 1990, about how many live there now?
- A** 40 robins
 - B** 48 robins
 - C** 72 robins
 - D** 100 robins
- 10** What information would be most useful in deciding whether quieter airplanes would help the birds of Talia?
- A** The 1990 census of Talia's birds
 - B** This year's census of Talia's birds
 - C** A bird census from another city near an airport
 - D** A report from a scientist who investigates how birds react to sounds

- 11 The circles represent sound waves. The sound waves come from the ringing bell.

If the drawing were part of a cartoon or movie, how would the circles move to best model sound waves?

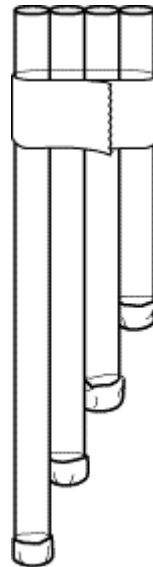
- A Each circle should grow larger, moving it away from the bell.
- B Each circle should grow smaller, moving it toward the bell.
- C Each circle should move in a clockwise direction.
- D Each circle should move in a counterclockwise direction.

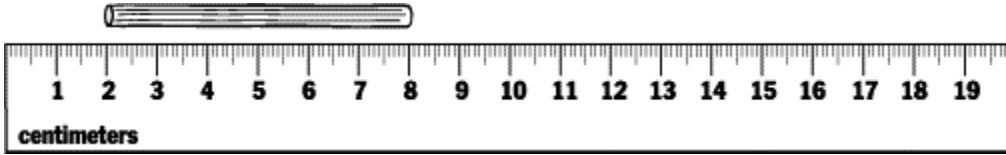


- 12 Compared to the sounds from short straws, sounds from loud straws _____.

- A have higher pitch
- B have lower pitch
- C are louder
- D are softer

An Instrument Made of Drinking Straws and Tape





- 13 What is the length of the straw shown above, in centimeters?
Round your answer to the nearest centimeter. Record and bubble in your answer.

①	①	①	
②	②	②	
③	③	③	
④	④	④	
⑤	⑤	⑤	
⑥	⑥	⑥	
⑦	⑦	⑦	
⑧	⑧	⑧	
⑨	⑨	⑨	

ANSWER KEY and CORRELATIONS:

Question	Answer	TAKS	McGraw-Hill Science Grade 5 textbook
1	D	5.8D	p. 195
2	D	5.8D	p. 196
3	D	5.7A	p. 201
4	A	5.7A, 5.2A	p. 200
5	A	5.2C	p. 221
6	C	5.2C	p. 210
7	C	5.3B	p. 210
8	B	5.3B	p. 209
9	C	5.2C	-
10	D	5.3A	-
11	A	5.3C	p. 198
12	B	4.6A	p. 207
13	006	5.4A	p. R11