STAAR Prep Grade 5 Science

by Dr. Jean Brainard
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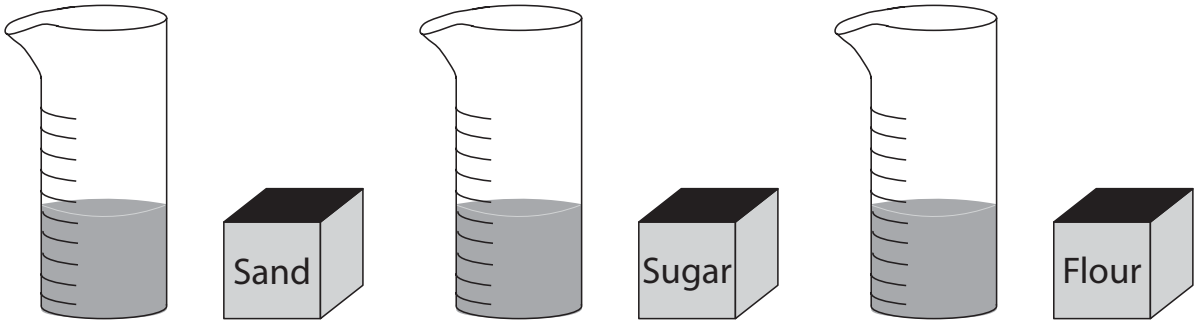
5.4 **Scientific investigation and reasoning.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to	Pages 232–236
A. collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums; and	Problems 649–667
B. use safety equipment, including safety goggles and gloves.	

Reporting Category 1: Matter and Energy

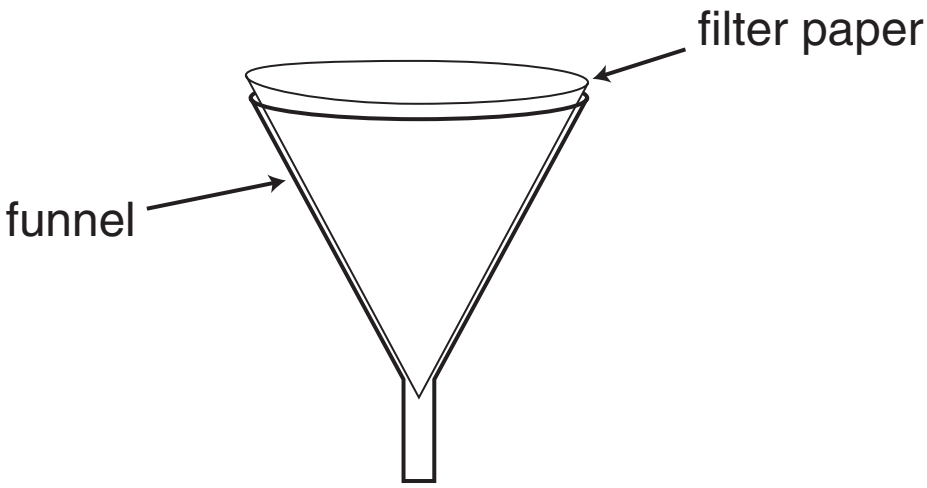
38. A student plans to mix a different material into each of these beakers of water.



Which material will dissolve in the water?

A. sand
B. sugar
C. flour
D. sugar and sand

39. This funnel contains a piece of filter paper.



The funnel and filter could be used to separate a

A. mixture of water and sand.
B. solution of water and sugar.
C. solution of water and oxygen.
D. mixture of water and carbon dioxide.

45. Which of these defines “condensation”?

A. A liquid changing to gas.
B. A solid changing to liquid.
C. A gas changing to liquid.
D. A gas changing to solid.

46. A student poured ice water into a glass and left it sitting on the kitchen table.

About 15 minutes after the student poured the ice water, the outside of the glass was wet. The outside of the glass was wet because

A. water vapor in the air evaporated.
B. liquid water in the air condensed.
C. water vapor in the air condensed.
D. liquid water in the glass evaporated.

47. What happens to an ice cube that is set on a table at room temperature for one hour?

A. It condenses.
B. It freezes.
C. It melts.
D. It boils.

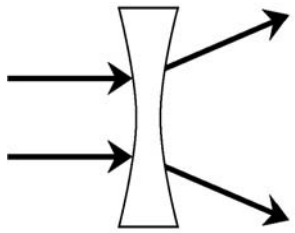
48. Which of the following is not an example of a change in state?

A. a puddle that dries up
B. dew forming on surfaces on cool mornings
C. melting ice
D. a burning log

Reporting Category 2: Force, Motion, and Energy

69. Which diagram best shows the property of reflection?

A.



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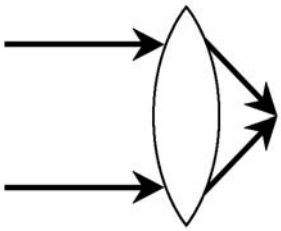

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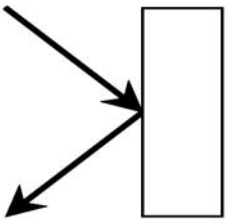
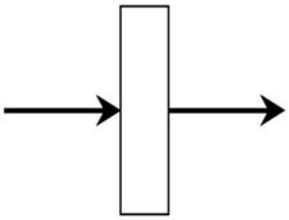
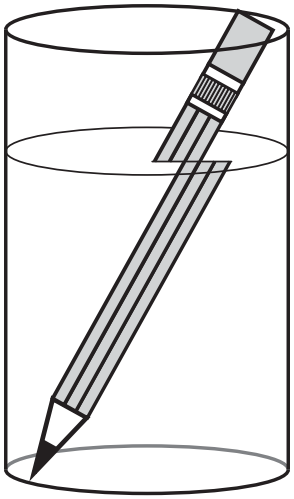


D.



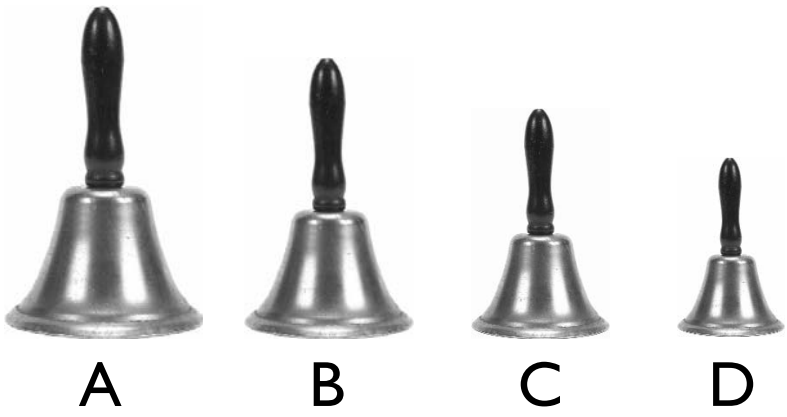
70. The drawing below shows a pencil in a glass of water.



What process causes the pencil to appear to be broken when viewed in this way?

A. refraction
B. reflection
C. radiation
D. conduction

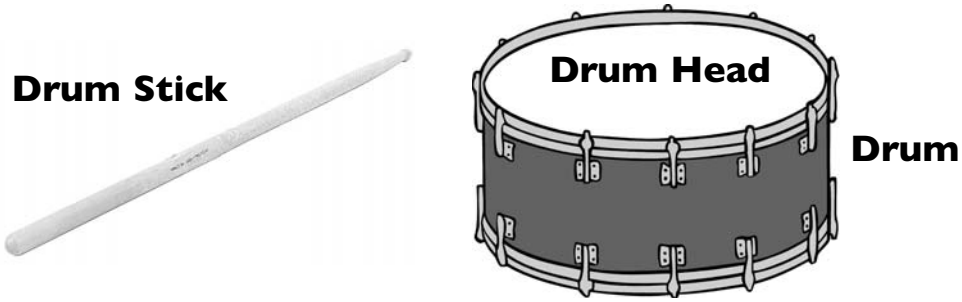
83. Bells like the ones shown here produce a ringing sound when you shake them. The bigger the bell, the lower the ringing sound it produces.



Which of the four bells vibrates slowest when you shake it?

A. bell A
B. bell B
C. bell C
D. bell D

84. Using a drum like this one, how could you test the hypothesis that producing a sound with greater force increases the loudness of the sound?



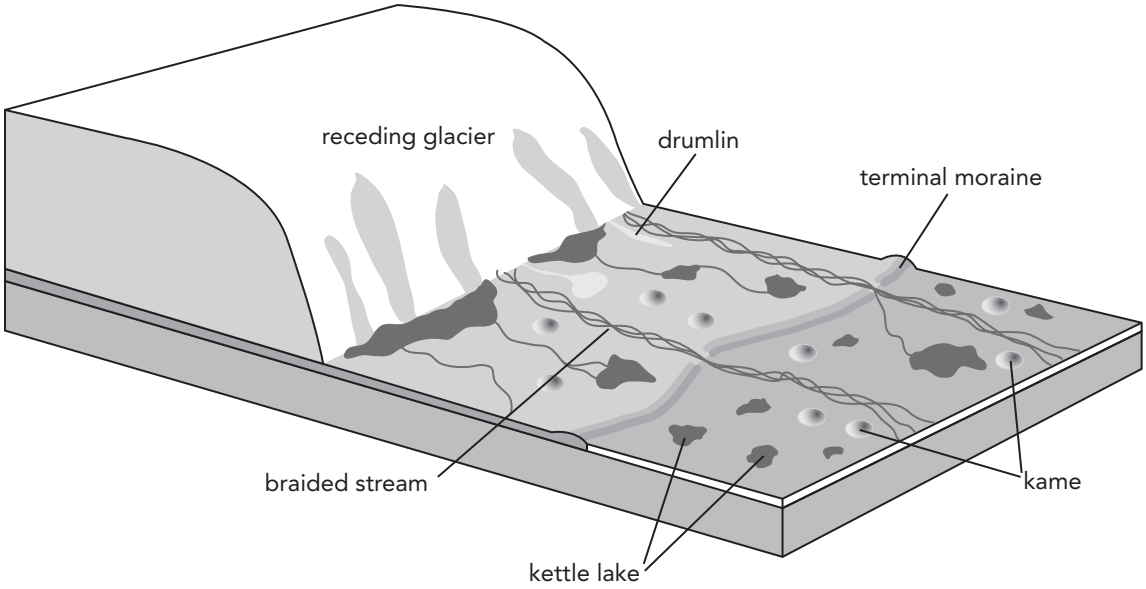
A. by hitting the drum harder with the stick
B. by hitting the drum slower with the stick
C. by hitting the drum with a smaller stick
D. by making the drum head tighter

171. Explain how wind can weather and erode rocks and deposit the pieces in other areas.

172. Explain how ice can weather and erode rocks.

Reporting Category 3: Earth and Space

The drawing below shows several landforms that were left behind when a glacier melted. Use the drawing to answer questions 173 and 174.



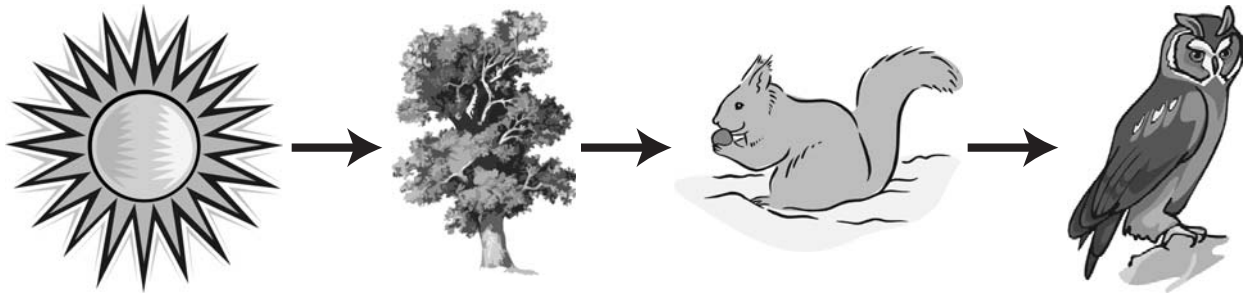
173. One type of feature formed when large chunks of ice were left behind by the receding glacier and these later melted. Which type of feature formed this way?

A. kettle lake
B. braided stream
C. drumlin
D. terminal moraine

174. Which process caused the kames to form?

A. deposition
B. sublimation
C. evaporation
D. condensation

Use the food chain below to answer questions 431 and 432.



431. Which role in the food chain does the oak tree play?

A. producer
B. consumer
C. predator
D. decomposer

432. What ecological role is NOT being filled in this food chain?

A. consumer
B. predator
C. decomposer
D. carnivore

433. What is one way that plants differ from animals in their interactions with the environment?

A. Plants take in water.
B. Plants take up soil nutrients.
C. Plants cannot be hosts of parasites.
D. Plants do not compete with each other.

434. Both people and pigs have the same ecological role in communities. What role is it?

A. producer
B. consumer
C. decomposer
D. none of the above

435. How do decomposers obtain nutrients from their environment?

A. by making their own food
B. by eating live animals
C. by breaking down dead organisms
D. by feeding on living plants

436. The leaves of most plants do all of the following EXCEPT

A. use light energy.
B. give off oxygen.
C. make food.
D. provide support.

437. Earthworms eat soil. Which component of soil gives earthworms energy?

A. water
B. minerals
C. carbon dioxide
D. bits of dead plants