

SCIENCE SCENARIO

MULTIPLE-CHOICE ITEMS

Directions: Use the information presented on pages 24 and 25 to answer questions 19 through 22.

A.2.2.3

19. When the student's parent heard about the cloud project, the parent gave the student a barometer and explained that it can help the student make weather predictions. How can this instrument help the student make weather predictions?

- A It measures pressure changes. *
- B It measures temperature changes.
- C It measures cloud precipitation.
- D It measures wind speed.

- A *Key: Barometers are used to measure air pressure, and changes in air pressure generally indicate changes in the weather.*
- B *Temperature changes are measured using thermometers.*
- C *Precipitation is measured using rain gauges.*
- D *Wind speed is measured using an anemometer.*

A	B	C	D
47%	14%	20%	20%

D.2.1.3

20. According to the student's observations, on which days would precipitation **most likely** have occurred?

- A Monday and Tuesday
- B Monday and Thursday
- C Wednesday and Thursday
- D Wednesday and Friday *

- A *The clouds on Monday are cirrus clouds followed by light cumulus clouds on Tuesday. Neither of these is likely to cause precipitation.*
- B *Both Monday and Thursday are clear days with some cirrus clouds, so rain is not likely.*
- C *Slow rains seem likely for Wednesday, but the cirrus clouds on Thursday would not cause noticeable precipitation.*
- D *Key: Wednesday is likely to have slow rains, while Friday is likely to have thunderstorms.*

A	B	C	D
6%	11%	9%	74%

SCIENCE SCENARIO

Directions: Use the information presented on pages 24 and 25 to answer questions 19 through 22.

D.1.3.1

21. Which physical process caused the clouds observed by the student to form from water vapor in the air?

A condensation *

B distillation

C evaporation

D sublimation

- A *Key: Water vapor is invisible. Condensation is required for droplets to form that make up clouds.*
- B *Distillation is a method used to separate mixtures of substances with different boiling points.*
- C *Evaporation forms water vapor, which is an invisible gas.*
- D *Sublimation is a process that causes a solid to change to a gaseous state without going through the liquid phase. If sublimation occurred within a cloud, it would become invisible water vapor.*

A	B	C	D
42%	7%	45%	6%

A.2.2.2

22. On a particular day, the student notices that the sky is filled with clouds of many different sizes. The student counts the number of big clouds, medium clouds, and little clouds, and records the number of each type. According to which quantity did the student organize the clouds?

A elevation

B water content

C temperature

D relative volume *

- A *In order to organize the clouds, by elevation, the elevation above the land would have to be measured.*
- B *The darkness of the clouds might indicate water content, but the darkness was not recorded.*
- C *The temperature of the clouds would have to be recorded with some type of aerial probe in order to group the clouds by temperature.*
- D *Key: Because the student recorded size, this is an indication of relative volume.*

A	B	C	D
18%	24%	8%	49%