Storms

Supercell thunderstorms last a long time compared to other thunderstorms because of favorable _____.

Student Response	Value
A. wind shear	100%
B. humidity in the boundary layer	
C. downbursts and gust fronts	
D. hail	
E. precipitation	

Score: 1/1

Dust storms are called _____.

Student Response	Value
A. tornadoes	
B. derechos	
C. gust fronts	
D. haboobs	100%
E. downbursts	

Score: 1/1

Which of the following does NOT help to strengthen hurricanes?

Student Response	Value
A. warm ocean water > 26 ℃	
B. a large pressure gradient between the eye and the outer part of the storm	
C. ocean spray from waves increasing the humidity near the centre of the storm	
D. mixing of colder deep ocean water with surface water by strong waves	100%
E. condensation of water within the eye wall	

Score: 1/1

Clouds that form along the leading edge of gust fronts are called _____.

Student Response	Value

A. altocumulus clouds
B. anvils
C. funnel clouds
D. mammatus clouds
E. arc clouds 100%

Score: 1/1

Which statement is FALSE?

Student Response	Value
A. Weather radar "listens" for the echo of energy bouncing off moisture in air.	
B. Thunderstorms can easily be recognized by their anvils.	
C. The altitude of stratiform cloud base is called the lifting condensation level.	100%
D. The dry adiabatic lapse rate is 9.8 ℃ / km.	
E. In the Northern Hemisphere, the Coriolis effect causes wind to curve towards the right of the direction of its motion.	

Score: 1/1

The following are all characteristic components of thunderstorms EXCEPT:

Student Response	Value
A. funnel cloud	100%
B. anvil	
C. updraft	
D. overshooting top	
E. flanking line	

Score: 1/1

Which statement is FALSE?

Student Response	Value
A. Temperature ultimately affects the buoyancy of air parcels; buoyancy differences create vertical winds.	
B. Temperature ultimately affects the pressure exerted on air parcels; pressure gradients create horizontal winds.	
C. Warmer air is less dense resulting in a net downward buoyancy force.	100%
D. The pressure gradient force is caused by a change in pressure across a distance.	

E. A buoyancy force results from the difference in density between an air parcel and the surrounding air.

Score: 1/1

When there is no heat transfer, the process is called _____.

Student Response	Value
A. isothermal	
B. isobaric	
C. isotropic	
D. baroclinic	
E. adiabatic	100%

Score: 1/1

One thunderstorm can spawn a daughter storm by ____.

Student Response	Value
A. creating a cold front to lift warm boundary level air off the ground	
B. creating a sea-breeze front to lift warm boundary level air off the ground	
C. creating a dry-line to lift warm boundary level air off the ground	
D. creating a gustfront to lift warm boundary level air off the ground	100%
E. forming near mountains causing warm boundary level air to rise	

Score: 1/1

If twice as much liquid water evaporates, then _____.

Student Response	Value
A. 4 times as much sensible heat is hidden as latent heat	
B. 2 times as much sensible heat is hidden as latent heat	
C. there is no change to latent heat	
D. 2 times as much sensible heat is released from latent heat	0%
E. 4 times as much sensible heat is released from latent heat	

Score: 0/1

Tornadoes usually _____.

Student Response	Value	Correct Answer
A. rise to merge with the rotating wall and funnel cloud		
B. are associated with calm, blue skies at the center of the storm		
C. arrive with the rain and hail		
D. come from the rotating wall cloud outside of the precipitation region	100%	☑
E. move from the southeast towards the northeast		

Score: 1/1

Tornadoes in North America generally move toward _____.

Student Response	Value	Correct Answer
A. mobile home parks		
B. mountains		
C. the northwest		
D. the northeast	100%	☑
E. the southeast		

Score: 1/1

Which statement is TRUE?

Student Response	Value	Correct Answer
A. Death or injury from lightning are highly preventable simply by avoiding certain locations during thunderstorms.		☑
B. In North America, lightning is found most frequently where it is driest.		
C. Stepped leaders reach up from the ground towards the sky.		
D. In North America most lighting deaths happen in January, when thunderstorms are most prevalent.		
E. Lightning strikes only in areas where thunderstorms are directly overhead.	0%	

Score: 0/1

A safe place to be during a lightning storm is _____.

Student Response	Value	Correct Answer

A. in a car		100%	✓
B. under a tree			
C. on a ridge top			
D. on the golf course			
E. under an umbrella			

Score: 1/1

Rank these storm features by the rate that they rotate (from slowest to fastest).

Statement	Response	Value	Correct Match
1 slowest	mesocyclone	Correct	mesocyclone
2	wall cloud	Correct	wall cloud
3 fastest	tornado	Correct	tornado

Score: 1/1

Hurricanes last long (days to 2 weeks) because _____.

Student Response	Value	Correct Answer
A. ocean surface temperatures in the tropical ocean exceed 26 ℃	0%	
B. they change the environment to continuously produce more fuel from the heat stored in the ocean		✓
C. they spiral counterclockwise in the N. Hemisphere and clockwise in the S. Hemisphere		
D. surface wind speeds increase as warm moist air approaches the eye wall		
E. warm surface ocean layers are thicker than 60 m		

Score: 0/1