

Quiz
3/5/2026:

Weather Theory

Question 1

Moisture is added to air by

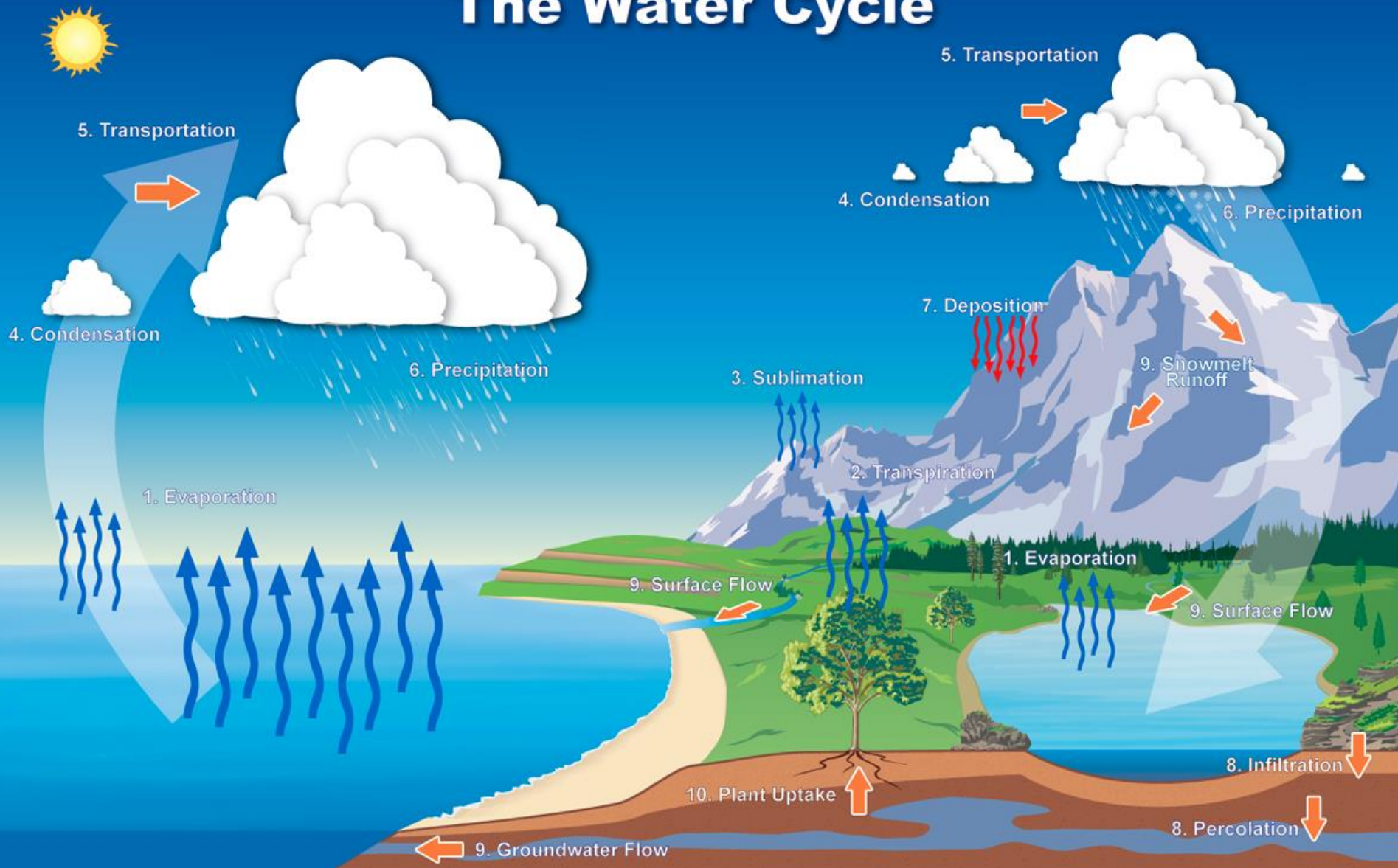


evaporation and sublimation.

sublimation and condensation.

evaporation and condensation.

The Water Cycle



Question 2

What is meant by the term 'dewpoint'?



The temperature at which condensation and evaporation are equal.

The temperature at which dew will always form.

The temperature to which air must be cooled to become saturated.

Question 2

The dewpoint temperature defines the temperature which a parcel of air would need to be cooled at constant pressure and constant moisture content in order for the vapor pressure and saturation vapor pressure of the parcel to be equal. In other words, it's the temperature at which a parcel of air would be saturated (i.e., 100% relative humidity).

The "dew will always form" answer is incorrect because the term "dewpoint" refers to a more general phenomenon than the somewhat specific notion of "dew", which we associate with a sort of morning moisture. Yes, "dew" might be one of the possible outcomes of a parcel of air having been cooled to its dewpoint, but this is not really the best answer here.

Question 3

When there is a temperature inversion, you would expect to experience

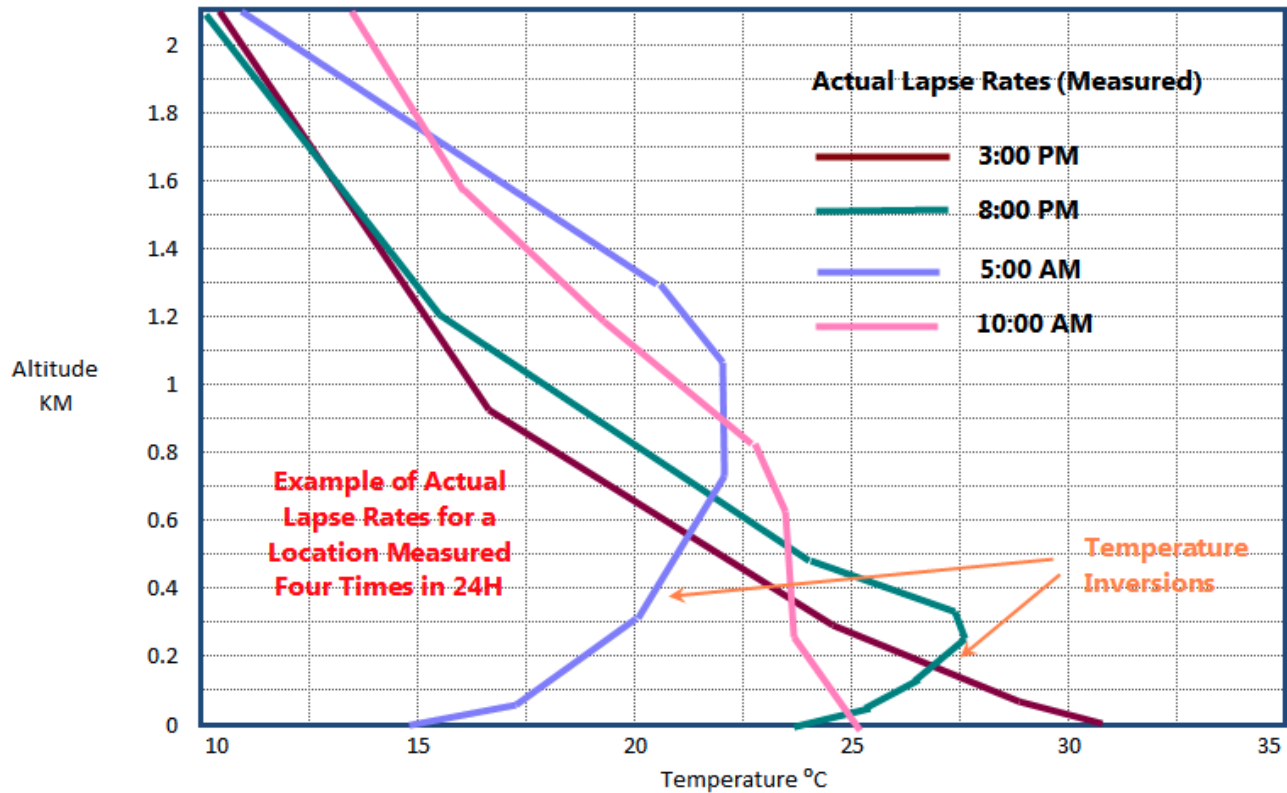


clouds with extensive vertical development above an inversion aloft

good visibility in the lower levels of the atmosphere and poor visibility above an inversion aloft.

an increase in temperature as altitude increases.

As air rises and expands in the atmosphere, the temperature decreases. There is an atmospheric anomaly that can occur; however, that changes this typical pattern of atmospheric behavior. When the temperature of the air rises with altitude, a temperature inversion exists. Inversion layers are commonly shallow layers of smooth, stable air close to the ground. The temperature of the air increases with altitude to a certain point, which is the top of the inversion. The air at the top of the layer acts as a lid, keeping weather and pollutants trapped below. If the relative humidity of the air is high, it can contribute to the formation of clouds, fog, haze, or smoke, resulting in diminished visibility in the inversion layer.



Question 4

During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?

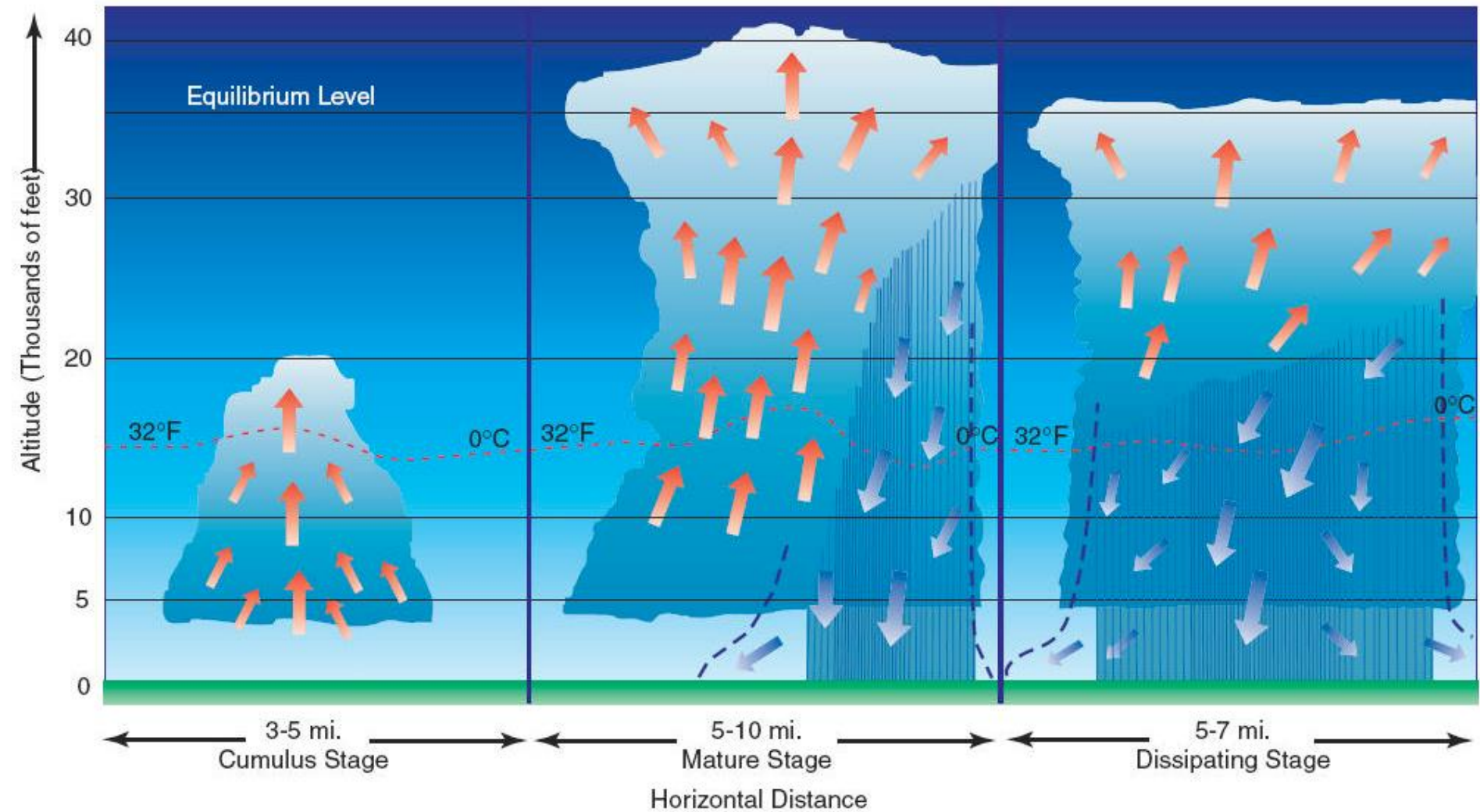


Cumulus.

Mature.

Dissipating.

Question 4



Question 5

The boundary between two different air masses is referred to as a



front.

frontolysis.

frontogenesis.

CIRRUS

CIRROSTRATUS

ALTOSTRATUS

NIMBOSTRATUS

COLD AIR

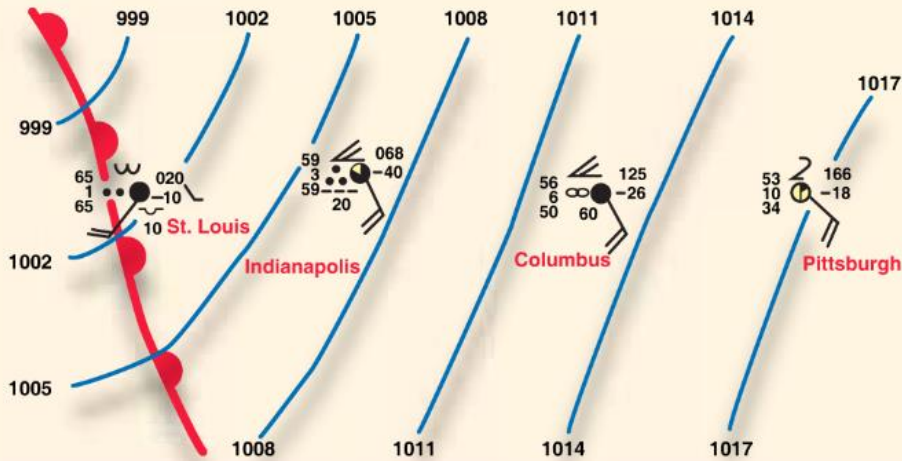
WARM AIR →

St. Louis

Indianapolis
200 miles

Columbus
400 miles

Pittsburgh
600 miles



METAR	KSTL OVC010	1950Z	21018KT 18/18	1SM A2960	-RA
METAR	KIND BKN020	1950Z	16012KT 15/15	3SM A2973	RA
METAR	KCMH OVC060	1950Z	13018KT 14/10	6SM A2990	HZ
METAR	KPIT SCT150	1950Z	13012KT 12/01	10SM A3002	