

Chapter 11 Atmosphere

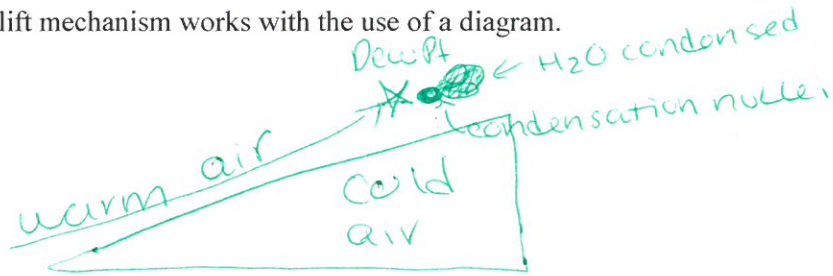
Part 2 Review Guide

1. Fill in the table below regarding cloud formation.

Ingredients to form clouds	How they help to form clouds
water vapor	provide water necessary to make clads
condensation nuclei	provides a surface for water to condense on.
lifting mechanism	to provide a way for air to cool so the water inside it can condense.

2. What lifting mechanism do we have to make clouds in Iowa? Frontal Wedging

3. Explain how the lift mechanism works with the use of a diagram.



4. Relate the following terms to cloud formation by filling out the table below:

Term	What is it? (Definition)	How does it relate to clouds?
Latent Heat	Energy absorbed or released during phase changes.	This is heat energy released when water condenses to form clouds. (Allows taller clouds to form) <small>Air keeps rising.</small>
Dew Point	Temperature air is cooled to before the water in it can condense out.	This is the temperature air must rise to before it can condense to make clouds
Relative Humidity	The ratio of water in air compared to the amount of water air can hold.	Both of these describe how high air needs to rise (be cooled) before the water inside it can condense.
umidity	The amount of water in air.	

5. Explain how you get rain from clouds using the following terms:

- a. Condensation -
- b. Condensation Nuclei -
- c. Precipitation -

Rain (precipitation) falls when enough water condenses to condensation nuclei and collects making the drop heavy enough to fall.

6. Fill in the table below regarding latent heat.

Phase Change	Particle Speed (Speeding up or Slowing down)	Energy (Do you need to ADD energy or LOSE energy)	Absorbing or Releasing Latent Heat
Melting	↑	Add	Absorb
Freezing	↓	Lose	Release
Evaporation	↑	Add	Absorb
Condensation	↓	Lose	Release

7. What is the water cycle? The cycling of water through different phases and places on Earth.

8. Fill in the table below regarding the water cycle.

Name of Step	Initial Phase of Matter (Solid, Liquid, or Gas)	Final Phase of Matter (Solid, Liquid, or Gas)	Example from life	Latent Heat (Release or Absorb)
Evaporation	liquid	gas	water turning into a gas	Absorb
Condensation	gas	liquid	gas turning into a liquid	Release
Precipitation	liquid	liquid	rain	X

9. Label the water cycle steps in the picture below.

