

ES106 Lab Video Review Exercise – Atmospheric Lifting

NAME _____

Watch the youtube video posted below, and answer the following review questions. Grand Junction Science Briefing - National Weather Service; Atmospheric Lifting Mechanisms <https://www.youtube.com/watch?v=NaTOdq0K-c>

1. What are the two ingredients for creating atmospheric precipitation?
2. How many lifting mechanisms of air exist?
3. What types of water bodies serve as sources of atmospheric moisture?
4. Why is atmospheric lifting important for condensation of water?
5. What is the difference between cloud droplets and rain droplets?
6. What is dynamical lift?
7. What are the three types of atmospheric conditions that lead to dynamic lift.
8. What is the jet stream?
9. How fast does the jet stream flow? What altitude is it located?
10. What is the ultimate cause of the jet stream?
11. How does the location of the jet stream change with the seasons in the northern hemisphere?
12. Which direction does the jet stream flow across the U.S.
13. True or False: Low pressure systems lead to converging and rising air, with precipitation
14. True or False: High Pressure systems lead to diverging and sinking air, with clear skies
15. Puffy cotton-ball clouds are termed _____ clouds.
16. Which direction do low pressure systems rotate in the northern hemisphere: clockwise or counter clockwise?
17. What is an occluded front?
18. Which direction do high pressure systems rotate in the northern hemisphere: clockwise or counter clockwise?
19. What type of air pressure is associated with “cyclonic” systems?
20. What type of weather is associated with low pressure systems?
21. Draw a cross section sketch of a cold front.
22. Draw a cross-section sketch of a warm front.
23. True or False: all weather fronts are characterized by more dense cold air rising above less dense warm air.
24. Draw and label a sketch of convective lift? Why are these types of storms dangerous?
25. What is orographic lifting? Draw a sketch of the process.
26. True or False: mountain ranges cause air to rise, cool and precipitate.
27. True or False: orographic lifting is an important process in western Oregon because of the location of the Oregon Coast Range and Cascades.