Severe Weather Video Notes

Natural Phenomena: Hurricanes, Tornadoes, and Other Weather

1. The three basic ingredients of storms are:
   1. \_\_\_\_\_\_\_\_\_\_ energy—the fuel of the storms
   2. Differences in air pressure
   3. \_\_\_\_\_\_\_\_\_\_
2. Hurricanes need a huge amount of \_\_\_\_\_\_\_\_\_\_.
3. Tornadoes need a sharp contrast between the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The ultimate source of the heat energy is the \_\_\_\_\_\_\_\_\_\_.
5. As air warms, it expands, grows lighter, and \_\_\_\_\_\_\_\_\_\_.
6. Hurricanes carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of water.
7. Heat increases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (3:00)
8. Heated air has \_\_\_\_\_\_\_\_\_\_ air pressure.
9. Cool air contracts, grows heavy, and \_\_\_\_\_\_\_\_\_\_ toward the \_\_\_\_\_\_\_\_\_\_.
10. Hurricanes (aka typhoons or cyclones) always start over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, usually in the tropics, growing from strong thunderstorms called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (5:15)
11. Life cycle of a thunderstorm:
    1. Hot, humid, low pressure air swirls \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the sky.
    2. \_\_\_\_\_\_\_\_\_\_ air is drawn in to replace the rising air.
    3. As the air rises and cools, water vapor molecules condense into \_\_\_\_\_\_\_\_\_\_, releasing \_\_\_\_\_\_\_\_\_\_.
    4. The released heat then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    5. Rain falls along with cool air called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, lowering temperatures around the storm.
    6. The storm draws in the \_\_\_\_\_\_\_\_\_\_ air instead of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ air.
    7. The storm then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, effectively putting itself out.
12. A tropical storm has many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acting together, and downdrafts \_\_\_\_\_\_\_\_\_\_ enough to stop it. (6:50)
13. Hurricanes:
    1. To become a hurricane, a tropical storm must be aided by an anticyclone located \_\_\_\_\_\_\_\_\_\_ it.
    2. The anticyclone carries rising air away from the storm, allowing it to draw in huge volumes of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ air, increasing the storm’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    3. If the storm’s winds reach \_\_\_\_\_\_\_\_\_\_, it becomes a hurricane.
    4. Closer to the \_\_\_\_\_\_\_\_\_\_, the winds pick up speed. (7:45)
    5. In the very center of the hurricane is the \_\_\_\_\_\_\_\_\_\_ where the weather is \_\_\_\_\_\_\_\_\_\_ with \_\_\_\_\_\_\_\_\_\_ skies.
    6. Just outside the eye lies the \_\_\_\_\_\_\_\_\_\_ of the storm where conditions are the \_\_\_\_\_\_\_\_\_\_ & the energy is most concentrated. (8:30)
    7. Winds of \_\_\_\_\_\_\_\_\_\_ are common and destroy \_\_\_\_\_\_\_\_\_\_ mostly.
    8. 9 out of 10 deaths are from \_\_\_\_\_\_\_\_\_\_.
    9. Torrential rain causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but the deadliest water is the ocean swell called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and may be \_\_\_\_\_\_\_\_\_\_ high.
    10. In theory, hurricanes could last \_\_\_\_\_\_\_\_\_\_, but most only last a few \_\_\_\_\_\_\_\_\_.
    11. Once hurricanes leave warm tropical oceans, they no longer get enough \_\_\_\_\_\_\_.
14. Tornadoes (10:15):
    1. Whirl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around an eye and squeeze down into a vortex
    2. Tend to be \_\_\_\_\_\_\_\_\_\_ violent than hurricanes
    3. Develop in very unsettled air when sharply divided \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ air masses meet
    4. Tornado alley in the south central US is the most famous site of formation: \_\_\_\_\_\_\_\_\_\_\_ air rushing south meets \_\_\_\_\_\_\_\_\_\_\_\_ air from the Gulf of Mexico.
    5. Conditions for formation:
       1. Begins with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and over warm air, trapping the \_\_\_\_\_\_\_\_\_\_ air below.
       2. Eventually a burst of \_\_\_\_\_\_\_\_\_\_ air pushes up through the cold air, and it begins to \_\_\_\_\_\_\_\_\_\_.
       3. A high speed wind \_\_\_\_\_\_\_\_\_\_ above the ground then strikes the spiral and makes it spin even faster, which could then reach the \_\_\_\_\_\_\_\_\_\_.
    6. Most only last a few \_\_\_\_\_\_\_\_\_\_.
    7. Like hurricanes, need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for energy
    8. Inside the vortex is an area of extremely low \_\_\_\_\_\_\_\_\_\_ that acts like a giant straw sucking objects into the sky and also holds the tornado together.
    9. Winds could reach \_\_\_\_\_\_\_\_\_\_.
    10. Natural purpose
        1. Release atmospheric tension between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
        2. Distribute \_\_\_\_\_\_\_\_\_\_ between the equator and the poles.
15. At the end of summer, hurricanes move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ away from the tropics.
16. Hurricanes \_\_\_\_\_\_ animals like sea birds that need beaches clear from growing \_\_\_\_\_\_.