**Model Idea tracker**

1. Evaporation of water at the surface is important for clouds/storms
2. Evaporation happens because of heating from sunlight
3. Clouds form when water condenses
4. The surface is warmer than the air above it
5. Air near the surface is warmer than air where clouds form
6. Rising temperature and rising humidity are good conditions for a storm to form
7. A source of humidity/moisture is needed to have a stormy day
8. Warm air rises and cool air sinks
9. Warm air can take in more water vapor than cool air
10. Temperatures are warmer before a cold front and cooler after.
11. Humidity is higher before a cold front and lower after.
12. Air masses can be different temperatures (warm, cold).
13. Air masses can have different amounts of moisture (a lot or a little).
14. When a cold air mass meets a warm air mass, the cold air will push the warm air up in the atmosphere.
15. As the warm air mass moves up, it cools and moisture in the air condenses, forming clouds, which can lead to precipitation.
16. Air moves from high to low pressure
17. Areas of high pressure are usually behind the cold front, while areas of low pressure are around the front at the northern end.
18. In the Colorado storm, three areas of high pressure “trapped” the front causing it to stall.
19. In the Colorado storm, areas of low pressure kep pulling in moisture from the Gulf of Mexico and the Pacific Ocean.
20. Sunlight (solar radiation) is more concentrated at the equator and more spread out at the poles.
21. Air temperature increases in places with more concentrated solar radiation (the equator) and decreases in places with less concentrated solar radiation.
22. Warm air rises at the equator, creating an area of low pressure.
23. Cool air is sinking at 30N and 30S, creating areas of high pressure
24. Horizontal movement of air across the surface is wind
25. Convection happens on a global scale
26. Convection causes air to move towards the equator in the tropics, and towards the poles in the midlatitudes.
27. Air deflects across the surface due to the Earth’s rotation (east to west in the tropics, west to east in the midlatitudes)