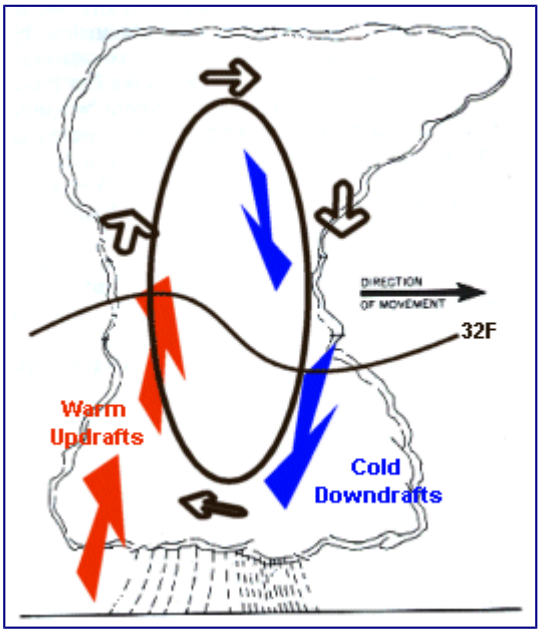
How does hail form?



- Inside of a thunderstorm are strong updrafts of warm air and downdrafts of cold air.
- If a water droplet is picked up by the updrafts it can be carried well above the freezing level. With temperatures below 32F the water droplet freezes.
- As the frozen droplet begins to fall, carried by cold downdrafts, it may thaw as it moves into warmer air toward the bottom of the thunderstorm
- The small half-frozen droplet may then again get picked up by another updraft carrying it back into freezing temperatures. With each trip above and below the freezing level our frozen droplet adds another layer of ice and so gets larger.
- Finally the frozen water droplet, with many layers of ice much like the rings in a tree, falls to the ground as hail.
- The presence of hail indicates strong updrafts and downdrafts within the thunderstorm. This can also an indicator of tornadic activity.
- Often large hail is observed immediately north of a tornado track, however the presence of hail does not always mean a tornado and the absence of hail does not always mean there is not a risk of tornadoes.
- There is no positive way to look at a thunderstorm in the distance and tell if it will produce hail.
- Meteorologists use weather radar to “look” inside a thunderstorm for hail. This is possible since hail reflects more energy back to the radar than raindrops.