Expansion and Contraction Notes

When objects are *heated*, the particles *gain* energy, move *faster*, and need *more* space so the object *expands* – *increases* in volume "gets bigger"

When objects are *cooled*, the particles *lose* energy, move *slower*, and need *less* space so the object *contracts* – *decreases* in volume "gets smaller"

The amount objects expand and contract has been measured and calculated for a variety of materials.
Engineers must think about *expansion* and *contraction* before they *build* things because if they didn't, their *structures* would be *destroyed*. (e.g. bridges, railway ties, teeth fillings, etc.)

In which season would you expect the telephone lines to sag the most?
The least?
Why?