Lesson #14: Temperature, Heat, and Thermodynamics				
Topics	**Frank's Lecture Videos & PDFs**	**Hewitt Drew It Videos**	**Khanacademy Videos**	**Solution Videos**
Temperature, Heat, Heat Transfer, & Calorimetry	Temp & Heat - Part 1 Temp & Heat - Part 2 Temp & Heat - Part 3 Temp & Heat - Part 4	None	None	THERMO_35 THERMO_37 THERMO_41
Ideal Gas Law & Kinetic Theory	Gas Law - Part 1 Gas Law - Part 2 Gas Law - Part 3 Gas Law - Part 4 (Calorimetry)	Video 65 Video 66	Thermodynamics (part 1) Thermodynamics (part 2) Thermodynamics (part 3) Thermodynamics (part 4) Thermodynamics (part 5)	None
Laws of Thermo-dynamics and PV Diagrams	Ch 18 - Part 1 Ch 18 - Part 2 Ch 18 - Part 3 Ch 18 - Part 4 Ch 18 - Part 5 Ch 18 - Part 9 Ch 18 - Part 10 Ch 18 - Part 11		Macrostates and Microstates Quasistatic and Reversible Processes First Law of Thermodynamics/ Internal Energy More on Internal Energy Work from Expansion PV-diagrams and Expansion Work Proof: U=(3/2)PV or U=(3/2)nRT Work Done by Isothermic Process	THERMO_50 THERMO_52_PART1 THERMO_52_PART2 THERMO_52_PART3 THERMO_53_PART1 THERMO_53_PART2
Heat Engines & Refrigerators	Ch 18 - Part 12 Ch 18 - Part 13		Carnot Cycle and Carnot Engine Proof: Volume Ratios in a Carnot Cycle Efficiency of a Carnot Engine Carnot Efficiency 2: Reversing the Cycle Carnot Efficiency 3: Proving that it is the most efficient	THERMO_62
Entropy			Proof: S (or Entropy) is a valid state variable Thermodynamic Entropy Definition Clarification Reconciling Thermodynamic and State Definitions of Entropy Entropy Intuition Maxwell's Demon More on Entropy	THERMO_68
Using Thermo-dynamics		None		