

## UTC AP Chemistry Schedule

### Subject to change

#### Monday

- 8:15 – 10:15 Introductions / Discussion of Itinerary & Objectives / Material on the flash drive  
Discussion – objectives of the workshop  
Lab Safety Review / Review of use of Analytical Balances (?)  
Locker inventory (check lab set-up) / Discussion of iron complex salt lab  
**LAB: Synthesis of iron complex crystal / drying crucibles & covers (Tab #2)**  
Discuss the “hydrate” part of the lab – options
- 10:15 – 10:30 BREAK**
- 10:30 – 11:15 Discussion: Kinetics (Tab #1)  
Input from teachers – successful strategies / labs / problem set
- 11:15 – 11:45 Discussion of changes in the AP curriculum – Part I
- 11:45 – 12:00 **[Demo: “Burning Hand”]**
- 12:00 - 12:30 LUNCH**
- 12:30 - 1:15 Discussion: Gaseous Equilibrium - LeChatelier’s Principle (Tab #1)
- 1:15 - 1:45 LAB: Recrystallization of iron complex salt (Tab #2)**
- 1:45 – 2:30 Discussion: Gaseous Equilibrium - Sample Problems (Tab #1)
- 2:30 – 2:45 BREAK**
- 2:45 – 3:15 Discussion: the “Exclusion Statements”  
Discussion: Developing a new syllabus for the audit
- 3:30 – 4:30 **LABS: (1) Molar Volume of a Gas Metal (Tab #3)**  
**(2) Prep column for Green Crystal Lab (Tab #2)**
- Homework: Read the Lab – Percent Copper in Brass / Do Thermo Problem Set**

#### Tuesday

- 8:00 – 8:15 **Elephant Toothpaste Demo**
- 8:15 – 8:45 LAB: Collecting iron complex salt crystals (Tab #2)**
- 8:45 – 9:00 Equity & Access Discussion (Handbook – pp.11-12)
- 9:00 – 10:00 Discussion: Thermochemistry **[Demo – “Whoosh” Bottle]**
- 10:00 - 10:15 BREAK
- 10:15 - 11:15 LAB: Heat of Reaction - micro (Tab #3)**
- 11:15 – 12:00 AP Inquiry Lab: Determining the % Cu in Brass (Spec Lab)**
- 12:00 – 12:30 LUNCH**
- 12:30 – 1:15 Lab: Run Green Crystals through Column / check pH meter**
- 1:15 - 2:30 Discussion: New AP Exam / Discuss the Grading Process
- 2:30 - 2:45 BREAK**
- 2:45 – 4:30 Lab – Iodine Clock Reaction (including calculations) (Tab #3)**

**Homework: Read the Titration Part of the Green Crystal Lab / Do A.B. Problem Set**

## Wednesday

**8:00 - 8:30 LAB: Determining the Percent Hydrate of Green Crystal – 2<sup>nd</sup> weighing (Tab #3)**

8:30 – 10:00 Discussion: Acid-Base Equilibrium – Part I  
-  $K_w$ , three acid-base theories, pH, pOH, strong vs weak  
- indicators, salt hydrolysis, polyprotic acids  
- work on problem set

**10:00 - 10:15 BREAK**

**10:15 – 10:30 LAB: Weighing Anhydrous Crystals – 3<sup>rd</sup> time (Tab #3)**

10:30 – 11:00 “Common Mistakes Students Make (from a Reader’s Perspective)”

11:00 - 11:15 Class Discussion – Formative vs. Summative Assessments – Handbook – p.37  
Do Checklist – pp. 42-43 Techniques of Assessment

11:15 – 12:00 Work on Salt Hydrolysis / Buffer Problem Set

**12:00 – 12:30 LUNCH**

12:45 - 2:30 Discussion: Acid-Base Equilibrium – Part II  
- buffers, titrations & titration curves  
- work on problem set(s)

**2:30 – 2:45 BREAK**

2:45 – 3:00 “What can I do to be a more Effective AP Teacher?”

**3:00 – 4:30 LAB: Determination of the Percentage of Potassium & Iron (Tab #3)**  
- collect titrant & run titration  
- do graphical analysis of the data

**Homework: Read through the Calorimetry Lab – “Designing a Hand Warmer”**

## Thursday

8:00 – 9:30 Limited Solubility &  $K_{sp}$

9:30 – 10:00 Discussion: Electrochemistry - Galvanic Cells vs. Electrolytic Cells & Electrolysis (Tab #1)

**10:00 – 10:15 BREAK**

10:15 – 10:45 Finish notes - Electrochemistry

**10:45 – 12:00 LAB: Determination of the Percentage of Oxalate in the Green Crystal (Tab #3)**  
**Do all calculations for the “Green Crystal” Lab**

**12:00– 12:45 LUNCH**

**12:45– 1:45 LAB: Designing a Hand Warmer (Tab #3)**

1:45 – 2:00 Discussion: Green Crystal Calculations (Tab #2)

2:00 – 2:30 Discussion of pros & cons of Inquiry vs. Guided Labs

**2:30 – 2:45 BREAK**

2:45 – 3:45 Discussion of PES notes / Types of Spectroscopy

**3:45 – 4:00** Fill out evaluation forms

4:00 – 4:30 Ideas to Share / Reflection / Wrap up / Evaluation