

2018 Summer AP Chemistry Workshop

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Each participant will receive ...

Electronic copy of the Lab manual TE
Hard copy of the Lab Manual SE
Curriculum Framework
Access to my Google Drive
Guided Inquiry Supplement
Flash Drive with most of the files for this workshop
Many Freebies from Different Publishers

Participants bring:

Syllabus
Laptop
Current labs/Activities
Items to share

Day 1 (Mon)

- Introductions
- College Board Announcements -
- 10 Most Common Areas of Trouble
 - What are the Challenge Areas in AP Chemistry?
- AP Audit
- Curriculum Framework
 - Format (Big Idea → Learning Objectives)
 - How to read
 - Science Practices
 - CB created labs vs. teacher created labs
 - What are Exclusions?
- The AP Coordinator - an invaluable resource
- Designing an AP Chemistry Test
- The New Syllabus Requirement
 - Examine a Syllabus
- The Textbooks
- AP Community
- Lab/Activity #1: Spectrophotometry
- New Test Equation Sheet

Day 2 (Tues)

- Sig. Figs for addition, subtraction, multiplication, division, and logs
- Lab/Activity #2: Sulfur Clock Rx

- Lab/Activity #3: Radioactive Decay - without the misconception
 - Pre-AP level
 - AP Level
- Lab/Activity #4: Kinetics: What is the Rate Law?
 - Zero-Order and Second-Order Activities
 - Misconception - Radioactive Decay

Day 3 (Wed)

- Best Practices
- **Specific Topic to discuss - Mechanisms**
- **Specific Topic to discuss ... Kinetics to Equilibrium**
- Lab/Activity #5: Dueling Graduated Cylinders
 - Inquiry - Look at the activities
 - Teacher Prep
 - What is INQUIRY?
 - Inquiry and potential problems
 - Prior Knowledge
 - Different ways to Model Introductions - who you are and where you teach
- **Specific Topic to discuss ... Acid/Base**
- **Specific Topic to discuss ... Equilibrium/Acid/Base/Titration Curve**
- Lab/Activity #6: Ka of a Weak Acid - Inquiry
- Lab/Activity #7: Equilibrium: Can we Make the Colors of the Rainbow?
- **Specific Topic to discuss ... Solubility**
 - Trouble of the 2
 - Why the Ksp is not a good indicator of solubility

Day 4 (Thurs)

- Best Practices
- Building a Lab from the ground floor
- Virtual Labs
- **Specific Topic to discuss ... Thermodynamics**
 - Heat Capacity - how important is it?
- **Specific Topic to discuss ... Intermolecular Forces - *Not Van der Waal Forces***
- Lab/Activity #8: The Evaporation of 3 Liquids
- Lab/Activity #9: Lab $\text{NH}_4\text{OH} + \text{HCl} \rightarrow$
- **Specific Topic to discuss ... ElectroChem (Electrolytic and Galvanic)**
- New to AP Chemistry
 - Mass Spec
 - PES
- Equity/Access
 - Go over the 2017 test
 - Sample Responses