

# 2017 AP Biology APSI Agenda

This is our tentative schedule for the week. We can always change it or move things around to best suit your needs. We will NOT be doing all the labs in the lab manual, but we will review and critique as many as possible

## DAY 1: BIG IDEA 1 EVOLUTION

**AM** Introductions and Overview (classroom norms & partners)  
DROPOBOX  
Nature of Science Activity 1  
Updates on AP Curriculum, Labs, and/or Exam (Visit to AP Central)  
Curriculum Framework Activities:  
    Big Ideas & Enduring Understandings (bulletin board idea)  
    Learning Objectives  
  
Data Nuggets Review Assignment

### **LABS: (laptop needed for 2 & 3) (\* = discuss and/or do)**

Investigation 1: Artificial Selection (discussion only)  
Investigation 2: HWE Mathematical Modeling\*  
Investigation 3: BLAST\*

### **Power Words**

### **2016 Exam debrief part 1: FRQ #1**

### **PM Set up or Prep for:**

Natural Selection in Brine Shrimp lab  
Investigation 11: Transpiration lab (whole plant version)  
Investigation 4: Diffusion and Osmosis  
Investigation 8 and/or 9: Biotechnology\*  
Alternative Labs for Big Idea 1

Using Models and Representations:

*POGIL*  
Case Study  
*Using the Scientific Process to Study Human Evolution (HHMI)*  
*Sea Shell Biodiversity & Phylogeny (HHMI)*  
*Biology of Human Skin Color activities (HHMI)*

Resources for teaching evolution:

Rock Pocket Mice or Stickleback Evolution virtual lab (HHMI)  
Fishy Frequencies  
Evolution by Natural Selection (Serendip)  
What did T. rex Taste Like? (UCMP)  
Peppered Moths Simulation - <http://peppermoths.weebly.com>

Classroom Activities to Share - Quantitative Skill Modules

Reflections

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## DAY 2: BIG IDEA 2 CELLULAR PROCESS: ENERGY & COMMUNICATION

**AM** Nature of Science Activity 2  
Diversity in the Classroom: Equity & Access  
Searching for the Science Practices  
Introduction to Evidence-based Claims

**LABS: (\* = discuss and/or do)**

Investigation 4: Diffusion and Osmosis  
Investigation 4 Extension: Water Potential set up (w/inquiry)  
Dog Evolution (set up) (**alternative to Investigation 9**)

**Using Probes to Uncover Student Misunderstandings**

**2016 Exam debrief part 2: FRQ #2**

**PM LABS:**

Natural Selection in Brine Shrimp lab – Day 2  
Investigation 11: Transpiration – Day 2  
Investigation 5: Photosynthesis – mini posters with I<sup>2</sup> strategy  
Investigation 6: Cell Respiration (**alternative**)

Using Models and Representations:

*POGIL*  
Case Study  
Coral Bleaching Interactive video (HHMI)  
Cell Respiration Model

Alternative Labs for Big Idea 2

Classroom Activities to Share

Reflections

## DAY 3: BIG IDEA 3 GENETICS AND INFORMATION TRANSFER

**AM** Unpacking Illustrative Examples and Exclusion Statements

Classroom Activities to Share

**2017 Exam debrief part 3: FRQ #3, #4, and #5**

**LABS: (\* = discuss and/or do)**

INVESTIGATION 11: Transpiration – Day 3  
INVESTIGATION 8: Biotechnology - Bacterial Transformation\*  
INVESTIGATION 9: Biotechnology – Restriction Enzyme Analysis of DNA\* (**See below.**)  
Incorporating Inquiry into Big Idea 3 Labs 8 & 9

**PM** Using Models and Representations:

Case study  
*POGIL*  
James Bond: Cellular Spy  
Modeling an Operon  
Cell Communication Activities

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## **LABS: (\* = discuss and/or do)**

Natural Selection in Brine Shrimp lab – Day 3

Investigation 4: Water Potential results (Groups will share results)

Dog Evolution lab (**alternative to Investigation 9**)

Alternative Labs for Big Idea 3

## **2017 Exam debrief part 4: FRQ #6, #7, and #8**

## **2017 AP Exam Results - (Importance of the Science Practices)**

### **AP Instructional Planning Report (APIPR)**

Teaching Students How to Answer Free Response Questions

Tips for Grading Free Response Questions

## **Scientific Argumentation in AP Biology**

Reflections

## **DAY 4: BIG IDEA 4 INTERACTIONS**

### **AM Participant Presentations - Data Nuggets**

AP Insight

AP Audit and Curriculum planning time

## **LABS: (\* = discuss and/or do)**

INVESTIGATION 10: Energy Dynamics\*

INVESTIGATION 11: Transpiration – Day 4 (final results)

INVESTIGATION 12: Animal Behavior \*

INVESTIGATION 13: Enzyme Activity (Explanation Tool)

### **PM LABS:**

INVESTIGATION 8: Bacterial Transformation (results)\*

Alternative Labs for Big Idea 4

Using Models and Representations:

*POGIL*

Food Chain and Food Web Activity (HHMI)

HHMI Short Film – Some Animals are More Equal than Others

Bean Biodiversity Activity\*

Wrap Up Unfinished Business from Earlier in the Week

Review & Summary

Evaluations - CB consultant number: 0204

Door Prizes

**Final Reflections – THANK YOU!!!**

**HAVE A SUPER SUMMER VACATION!!! BE HAPPY!! ☺**

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**CB consultant number: 0204**