

Tips for the New Exam

1. Graphing
 - a. Graph the correct type of graph
 - b. Interpret error bars – see hand out
 - c. Find data points to answer questions
 - d. Analyze for patterns
 - e. Connect to science concepts
 - f. Obviously, correctly label axis WITH UNITS and title
 - g. Calculate rates – for requested time periods
 - h. Basic math applications used in graphical analysis (differences)
 - i. If you connect the points, only connect the data points (don't always start at the origin) and use a key – especially if there are multiple lines.
2. Math
 - a. Get familiar with equations sheet
 - b. Get familiar with four function calculator (don't forget to order them)
 - c. Practice using Grid-In template – handout and email
 - d. Apply in as many places as possible
 - i. Chi square – several labs. Which ones?, genetics
 - ii. Hardy Weinberg – straight problems but also application to evolutionary events.
 1. How do you use p and q to determine that evolution has occurred.
 2. The key to solving HW problems is going through q squared.
 3. YOU CANNOT USE the equations if it is not in equilibrium.
 4. I coach my students – if you can count alleles to determine p and q, do so.
 - e. Surface Area and volume of cells (make sure students know how to plug and chug using the formulas and a FOUR FUNCTION CALCULATOR – practice test item)
3. Know your verbs – they are the science practices. Describe, Connect, Design, Analyze, Explain, predict, refine, justify
4. Science practice one could result in a question describe a model that... or refine a model – what is a model?
5. Designing an experiment
 - a. Guaranteed long FRQ dealing with Inquiry science practices. (2,3,4,5)
 - b. Know how to write a hypothesis
 - c. ID and use independent and dependent variables
 - d. ID and use a control
 - e. ID and use “maintain other variables constant” but don't just say that – explain it.
 - f. How will you describe your results? Graphs, stats
 - g. How will you analyze your results?
 - h. Drawing conclusions – Claim, evidence, reasoning, rebuttal (CERR)
 - i. Replication
6. Practice reading long descriptions followed by questions
 - a. Experiments in text books – have them cover up conclusions and ask them to draw the conclusion based on the data – once again under a time constraint.
7. Genetics–
 - a. Use pedigrees to determine inheritance – all types. If not in CF give them the information
 - b. Normal problems
 - c. Connections – genetics and... _____
8. Evolution
 - a. Look out for Lamarck
 - b. Populations evolve, not individuals
 - c. It's an entire big idea!!!
 - d. Cladograms
 - e. Application of HW (repeat, I know)
9. ATFQ
10. Time – bring a watch
 - a. Approximately 20 min for long (2), 6-7 or short FRQ's (6) ~ 39 + 40 = 79
 - b. Strategize use of reading period
 - c. MC – just under 1 minute and 20 seconds per question but remember some questions could include calculations so you may want to pace a little faster.
 - d. How will you stay focused? Underline action verbs and circle what is else is critical.
11. http://apcentral.collegeboard.com/apc/members/exam/exam_information/219291.html
12. Bozeman Biology on youtube.com for review of learning objectives (video essentials) and science practices.