

Mira Mesa High School 2025-2026 Science Syllabus

Course Title: AP Environmental Science

Teacher: Mr. Dyson
Email: rdyson@sandi.net

Tutoring Hours: Monday and Tuesday from 7:50 to 8:30 AM
Phone: (858) 302-3600 Ext. 4227

Website:

<https://sites.google.com/view/mr-dyson-apes>

<https://apcentral.collegeboard.org/courses/ap-environmental-science/exam/past-exam-questions>

Course Description: This Advanced Placement (AP) course is designed to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study therefore students should have a background in both Chemistry and Biology. Advanced Placement courses are taught at an introductory college level, in order to be successful, students enrolling in this course should plan to spend between 5-10 hours each week outside of class reading the text, doing research, preparing laboratory reports and studying for exams.

The College Board (www.apcentral.collegeboard.com/) has provided a list of themes to provide structure for this course. These include:

- § Science as a process
- § Energy conversions underlie all ecological processes
- § Earth as an interconnected system
- § Humans alter natural systems
- § Environmental problems have a cultural and social context
- § Human survival depends on developing practices that will achieve sustainable practices.

Course Goals:

- v Students will be well-rounded and thoughtful problem solvers/scientists.
- v Students will command the scientific literacy and background to be well-informed and responsible citizens.

v Students will recognize the relevance of science to their lives.

v Every student will be enthusiastic about taking and passing the AP exam

Prerequisites: Passing grades in biology and chemistry

Textbook(s): Withgott and Laposata, Environment: The Science Behind the Stories, 5th edition

Supplies/Materials Recommended:

***3 ring binder -Loose-leaf paper - Calculator**
- Pencils - Highlighters - Black/Blue pens -Laptop or Tablet to access course materials

Student Fees:

The California Constitution mandates that public education be provided to students free of charge, unless a charge is specifically authorized by law for a particular program or activity.

This constitutional right of free access encompasses all educational activities, whether curricular or extracurricular, and regardless of whether credit is awarded for the educational activity.

The right of free access also prohibits mandated purchases of materials, supplies, equipment or uniforms associated with the activity, as well as the payment of security deposits for access, participation, materials or equipment.

Finally, a process that allows for a waiver process for an otherwise mandatory fee, charge or deposit does not render it constitutionally permissible.

Please see the Student Fee Guidelines on the San Diego Unified School District website for the completed list and additional information/resources.

Link to Student Fee Guidelines:

https://sandiegounified.org/about/policies_procedures/student_fees_donations_and_fundraising_guidelines/student_fee_guidelines.

Academic Honesty Policy:

All students are expected to abide by the Mira Mesa High School Academic Honesty Policy, which is clearly outlined in the Student & Parent Handbook as well as posted online with school registration forms for students and parents to review. **USE OF ARTIFICIAL INTELLIGENCE (AI):** The unauthorized use of artificial intelligence (AI) to complete school assignments is considered a form of academic dishonesty and will be treated as cheating. Submitting work generated by AI without permission misrepresents a student's own knowledge, skills, and effort. Just like copying from another student or using unauthorized notes during a test, using AI tools without teacher approval violates academic integrity policies. Consequences may include a failing grade on the assignment, disciplinary action, or further consequences in accordance with the school's discipline policy.

Class Expectations and Consequences:

1. Leaving the classroom without permission at any time will be considered a truancy. Whenever you leave class, you must have a pass or sign out via 5 star students. When you leave the classroom for the restroom, you have 6 minutes to return to class. Failure to follow this rule will result in a loss of restroom privileges. You may not go on a pass during the first 10 minutes of class. Please use the 5 star pass for restroom, nurse, and other passes to sign out of

class. This app is accessible on the iPad currently at the front of the class. Also, I won't let students out on passes while I am lecturing.

2. The teacher will assign lab groups and lab stations. Each lab group is responsible for the equipment at their lab station.

All equipment must be properly cleaned and checked after each lab for credit.

Students will be charged for careless breakage.

3. No open toed shoes allowed in lab.

4. No eating in class.

5. You are all expected to respect everyone in class and stay on task when an assignment is given.

6. Please follow all safety rules at all times. Failure to do so will result in a loss of laboratory privileges

7. Students will be required to pass a safety test in order to do labs. We will go over the safety rules in class. Students must turn in a signed safety contract as well in order to do labs.

8. All electronic devices (cell phones, mp3 players, etc.) must be put away during quiz or test times. If I see a student looking at or using a cell phone during a quiz or test then that student will earn a zero on that quiz or test. Also, San Diego Unified has adopted a phone free policy during the school day which I will follow. Here is a link to the steps that I will follow if I see your phone out during class:

https://drive.google.com/file/d/1mpdcPWzTuadPyc-1051MkkF9_oFMk8wE/view

*In alignment with district policy, the use of cell phones is prohibited during the instructional day and must remain silenced and stored out of sight during class. **Store your phones in your pockets or backpack.** Students may use phones before the first bell, during lunch, passing periods, and after school, as long as their use does not cause disruption. Exceptions may be made in cases of emergency, medical necessity, IEP/504 accommodations, or when a teacher explicitly authorizes use for instructional purposes. This policy is designed to support a focused, safe, and respectful learning environment for all students. For more information, please see our [Student and Family Handbook](#).*

Please use laptops or tablets during class time to access class materials and take notes or do work, etc.

9. Disruptions will not be tolerated. Disruptive students will be warned and spoken to after class. Continued disruptions will lead to parent phone calls, moving of seats, withholding of privileges, and assigning of detention. If students continue to disrupt, after those steps have been taken, then I will give out referrals.

10. During tests and quizzes, students must keep their hands where I can see them. Students may not place their hands under their desk or into their backpacks or other materials without permission from me. If students do not keep their hands where I can see them, during any quiz or test then that student will receive a zero on the exam. No exceptions.

Student Scientific Safety:

Science is a hands-on laboratory class. You will be doing many laboratory activities that require the use of hazardous chemicals. Safety in the science classroom is the #1 priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules has been developed and provided to you in this student safety contract. These rules must be followed at all times. Keep a copy of these rules in your binder as a constant reminder of the safety rules and lab expectations.

Please see the Flinn Scientific Contract below.

Academic Grading Policy:

Grading Scale:

Grades from this course are based on:

Labs/Projects – 20%

Quizzes- 15%

Tests-50%

Homework and classwork - 15%

*Bonus points added to labs that students turn in early!!

A – 90 - 100 %

B – 80 - 89.9%

C – 70 - 79.9%

D – 59.5 - 69.9%

F – Below 59.5%

Progress reports are issued every 6 weeks. Additionally, I will post students' grades so that you can check your progress. Grades will be posted after each quiz and test. You can also check your grades online at <https://powerschool.sandi.net/public>.

Tests and quizzes:

a. Tests will be given after the completion of each unit. Quizzes will be given at various points during the year

depending on how much material we cover. Tests and quizzes will be announced at least one

week before they occur. Please use the AP central past exam questions to find old FRQ to help you study for my exams and the AP exam. Here is the link:

<https://apcentral.collegeboard.org/courses/ap-environmental-science/exam/past-exam-questions>

b . A missed test or quiz due to an absence will be taken the next day in class. You have up to one week after the quiz or test to make it up otherwise the grade will be a zero.

Please pay attention to the quiz and test dates. Also, there will be a time limit on these quizzes and tests. Please be aware of them as well.

c. An absence the day before does not excuse you from taking a test or quiz.

d. Repeated absences on quiz or test days will be treated as a violation of the Academic Honesty Policy.

e. Tests will have two parts like the AP exam. One will be a multiple-choice section and the other will be a free response question. Tests will take two days to complete as a result.

f. **The AP exam is Friday May 15 at 8 am.**

Class assignments, Homework and Lab reports: Late work will not be accepted.

- a. Students will take notes in a spiral notebook on lecture & lab - It will be spot checked periodically.
- b. Homework will be assigned and checked for completion. Most homework assignments are available on the course webpage. Look for them there and complete them on a separate sheet of paper or print out that homework sheet. If they are not on the course webpage then you will receive a handout for them. Homework is due at the beginning of the period, **NO EXCEPTIONS (unless due to an absence)**, and completed homework will receive a stamp. Homework will be collected at the end of each unit and the stamps will be totaled for your homework grade. Please keep all homework in your notebook or binder.
- c. If you are absent, it is your responsibility to make-up the assignments. I keep a record of all assignments and you can get your missed work from your classmates. In order to receive credit, I must check your make-up work.

Grading Rubric:

Homework assignments: Each assignment is out of 4 points. An assignment that earns 4 points will have all homework problems completed and it will receive a stamp for credit. Students must show their work and efforts to solve the problem, even if they did not solve it completely. An assignment that earns 2 points has only some of the problems completed and will receive a half stamp for credit. An assignment that earns 0 points will have no stamp because the student completed very little or none of the assignment. Students must show their homework to me, at the beginning of the class period, in order to get a stamp for credit. Students will keep their homework assignments until the end of a unit and they show these assignments to me as a homework packet where I will tally all of the stamps and give them a homework score.

Lab reports: Labs are graded based on student completion of the in-class portion of the lab and the post-lab questions. In order to receive full credit, students must complete the in lab portion of the lab report. They must then correctly answer the post-lab questions, do all calculations correctly, have all sections of their lab report, and clearly show their data. Most labs are posted on the course webpage. Please print them out and bring them to class. If they are not on the course webpage then there will be printed copies for students. **There will be data posted for each lab as well and we will discuss that data on designated lab days.**

Make-up/late policy:

I do not accept late work. Late assignments will receive a score of a 0. Assignments are due at the beginning of the period. **I ACCEPT WORK UP TO TWO MINUTES AFTER THE BEGINNING OF THE PERIOD. Assignments are due by the due date posted. No exceptions!!** Daily attendance is essential for individual academic success in APES. Students who miss a day must make up the work that they missed. If you are absent, it is your responsibility to make-up the assignments. If you are absent and would like to attend class virtually then you will need to e-mail me at rdyson@sandi.net to let me know that you need to be online during class time. You will need to join my Google classroom using your district account. My join code is ajirul7. Then click on "join" for the under the Google meet link. That will take you to the virtual meeting for my class. **Do not turn in work on Google classroom unless you have made arrangements with me to do so.** I keep a record of all assignments and you can get your missed work from your classmates. In order to receive credit, I must check your make-up work. Any assignment missed (including tests) must be made-up within 2 days in order to receive credit. **If you are truant then you get a zero for the assignment, lab, or test that we do that day.**

Support Policy:

Please see the top of the syllabus for tutoring hours. Students, who are having issues in my class, can come during those times.

Online Grade Access:

Please see the school schedule for progress report dates. Additionally, I will post students' grades so that you can check your progress. Grades will be posted after each quiz and test. You can also check your grades online at <https://powerschool.sandi.net/public>. You will receive a password and username for this site from the school.

Citizenship Rubric: Citizenship will be evaluated using the Mira Mesa High School Citizenship rubric.

MIRA MESA HIGH SCHOOL CITIZENSHIP RUBRIC

Citizenship Rubric		
Mark	Explanation	Grading Scale
Exceeds (E)	Consistently exceeds expectations in work completion, preparation, and participation, and actively contributes to the learning experiences of their peers	4
Meets (M)	Consistently meets expectations: completes work on time, prepared to learn, participates regularly, shows respect for others, and contributes to building a positive community	3
Inconsistent (I)	Inconsistently meets expectations: occasionally completes work on time, not always prepared to learn, participates irregularly, and rarely works well with others	2
Unsatisfactory (U)	Does not meet expectations: work is habitually late, not prepared to learn, does not participate, and does not work well with others	1

PURPOSE

Science is a hands-on laboratory class. You will be doing many laboratory activities which require the use of hazardous chemicals. Safety in the science classroom is the #1 priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules has been developed and provided to you in this student safety contract. These rules must be followed at all times. Two copies of the contract are provided. One copy must be signed by both you and a parent or guardian before you can participate in the laboratory. The second copy is to be kept in your science notebook as a constant reminder of the safety rules.

GENERAL RULES

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask the instructor before proceeding.
3. Never work alone. No student may work in the laboratory without an instructor present.
4. When first entering a science room, do not touch any equipment, chemicals, or other materials in the laboratory area until you are instructed to do so.
5. Do not eat food, drink beverages, or chew gum in the laboratory. Do not use laboratory glassware as containers for food or beverages.
6. Perform only those experiments authorized by the instructor. Never do anything in the laboratory that is not called for in the laboratory procedures or by your instructor. Carefully follow all instructions, both written and oral. Unauthorized experiments are prohibited.
7. Be prepared for your work in the laboratory. Read all procedures thoroughly before entering the laboratory.
8. Never fool around in the laboratory. Horseplay, practical jokes, and pranks are dangerous and prohibited.
9. Observe good housekeeping practices. Work areas should be kept clean and tidy at all times. Bring only your laboratory instructions, worksheets, and/or reports to the work area. Other materials (books, purses, backpacks, etc.) should be stored in the classroom area.
10. Keep aisles clear. Push your chair under the desk when not in use.

11. Know the locations and operating procedures, where appropriate, for all safety equipment including first aid kit, eye-wash station, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and exits are located.
12. Always work in a well-ventilated area. Use the fume hood when working with volatile substances or poisonous vapors. Never place your head into the fume hood.
13. Be alert and proceed with caution at all times in the laboratory. Notify the instructor immediately of any unsafe conditions you observe.
14. Dispose of all chemical waste properly. Never mix chemicals in sink drains. Sinks are to be used only for water and those solutions designated by the instructor. Solid chemicals, metals, matches, filter paper, and all other insoluble materials are to be disposed of in the proper waste containers, not in the sink. Check the label of all waste containers twice before adding your chemical waste to the container.
15. Labels and equipment instructions must be read carefully before use. Set up and use the prescribed apparatus as directed in the laboratory instructions or by your instructor.
16. Keep hands away from face, eyes, mouth and body while using chemicals or preserved specimens. Wash your hands with soap and water after performing all experiments. Clean all work surfaces and apparatus at the end of the experiment. Return all equipment clean and in working order to the proper storage area.
17. Experiments must be personally monitored at all times. You will be assigned a laboratory station at which to work. Do not wander around the room, distract other students, or interfere with the laboratory experiments of others.
18. Students are never permitted in the science storage rooms or preparation areas unless given specific permission by their instructor.
19. Know what to do if there is a fire drill during a laboratory period; containers must be closed, gas valves turned off, fume hoods turned off, and any electrical equipment turned off.
20. Handle all living organisms used in a laboratory activity in a humane manner. Preserved biological materials are to be treated with respect and disposed of properly.

21. When using knives and other sharp instruments, always carry with tips and points pointing down and away. Always cut away from your body. Never try to catch falling sharp instruments. Grasp sharp instruments only by the handles.
22. If you have a medical condition (e.g., allergies, pregnancy, etc.), check with your physician prior to working in lab.

CLOTHING

23. Any time chemicals, heat, or glassware are used, students will wear laboratory goggles. There will be no exceptions to this rule!
24. Contact lenses may be worn provided adequate face and eye protection is provided by specially marked, non-vented safety goggles. The instructor should know which students are wearing contact lenses in the event of eye exposure to hazardous chemicals.
25. Dress properly for lab activities. Long hair, dangling jewelry, and loose or baggy clothing are hazardous. Long hair must be tied back and dangling jewelry and loose or baggy clothing must be secured. Shoes must completely cover the foot. No sandals allowed.
26. Lab aprons have been provided for your use and should be worn during laboratory activities.

ACCIDENTS AND INJURIES

27. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately, no matter how trivial it may appear.
28. If you or your lab partner are hurt, immediately yell out "Code one, Code one" to get the instructor's attention.
29. If a chemical splashes in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 20 minutes. Notify the instructor immediately.
30. When mercury thermometers are broken, mercury must not be touched. Notify the instructor immediately.

HANDLING CHEMICALS

31. All chemicals in the laboratory are to be considered dangerous. Do not touch, taste, or smell any chemicals unless specifically instructed to do so. The proper technique for wafting chemical vapors will be demonstrated to you.
32. Check the label on chemical bottles twice before removing any of the contents. Take only as much chemical as you need.

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33. Never return unused chemicals to their original containers.
34. Never use mouth suction to fill a pipet. Use a rubber bulb or pipet pump.
35. When transferring reagents from one container to another, hold the containers away from your body.
36. Acids must be handled with extreme care. You will be shown the proper method for diluting strong acids. Always add acid to water, swirl or stir the solution and be careful of the heat produced, particularly with sulfuric acid.
37. Handle flammable hazardous liquids over a pan to contain spills. Never dispense flammable liquids anywhere near an open flame or source of heat.
38. Never remove chemicals or other materials from the laboratory area.
39. Take great care when transporting acids and other chemicals from one part of the laboratory to another. Hold them securely and walk carefully.

HANDLING GLASSWARE AND EQUIPMENT

40. Carry glass tubing, especially long pieces, in a vertical position to minimize the likelihood of breakage and injury.
41. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated glass disposal container.
42. Inserting and removing glass tubing from rubber stoppers can be dangerous. Always lubricate glassware (tubing, thistle tubes, thermometers, etc.) before attempting to insert it in a stopper. Always protect your hands with towels or cotton gloves when inserting glass tubing into, or removing it from, a rubber stopper. If a piece of glassware becomes "frozen" in a stopper, take it to your instructor for removal.
43. Fill wash bottles only with distilled water and use only as intended, e.g., rinsing glassware and equipment, or adding water to a container.
44. When removing an electrical plug from its socket, grasp the plug, not the electrical cord. Hands must be completely dry before touching an electrical switch, plug, or outlet.
45. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
46. Report damaged electrical equipment immediately. Look for things such as

frayed cords, exposed wires, and loose connections. Do not use damaged electrical equipment.

47. If you do not understand how to use a piece of equipment, ask the instructor for help.
48. Do not immerse hot glassware in cold water; it may shatter.

HEATING SUBSTANCES

49. Exercise extreme caution when using a gas burner. Take care that hair, clothing and hands are a safe distance from the flame at all times. Do not put any substance into the flame unless specifically instructed to do so. Never reach over an exposed flame. Light gas (or alcohol) burners only as instructed by the teacher.
50. Never leave a lit burner unattended. Never leave anything that is being heated or is visibly reacting unattended. Always turn the burner or hot plate off when not in use.
51. You will be instructed in the proper method of heating and boiling liquids in test tubes. Do not point the open end of a test tube being heated at yourself or anyone else.
52. Heated metals and glass remain very hot for a long time. They should be set aside to cool and picked up with caution. Use tongs or heat-protective gloves if necessary.
53. Never look into a container that is being heated.
54. Do not place hot apparatus directly on the laboratory desk. Always use an insulating pad. Allow plenty of time for hot apparatus to cool before touching it.
55. When bending glass, allow time for the glass to cool before further handling. Hot and cold glass have the same visual appearance. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.

QUESTIONS

56. Do you wear contact lenses?
☐ YES ☐ NO
57. Are you color blind?
☐ YES ☐ NO
58. Do you have allergies?
☐ YES ☐ NO

If so, list specific allergies _____

AGREEMENT

I, _____ (student's name) have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to ensure my own safety, and that of my fellow students and instructors. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also closely follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory or misbehavior on my part, may result in being removed from the laboratory, detention, receiving a failing grade, and/or dismissal from the course.

Student Signature

Date

Dear Parent or Guardian:

We feel that you should be informed regarding the school's effort to create and maintain a safe science classroom/ laboratory environment.

With the cooperation of the instructors, parents, and students, a safety instruction program can eliminate, prevent, and correct possible hazards.

You should be aware of the safety instructions your son/daughter will receive before engaging in any laboratory work. Please read the list of safety rules above. No student will be permitted to perform laboratory activities unless this contract is signed by both the student and parent/guardian and is on file with the teacher.

Your signature on this contract indicates that you have read this Student Safety Contract, are aware of the measures taken to ensure the safety of your son/daughter in the science laboratory, and will instruct your son/daughter to uphold his/her agreement to follow these rules and procedures in the laboratory.

Parent/Guardian Signature

Date

Teacher: Mr. Dyson

Here is the link to the Google form to fill out ot sign my syllabus (you will need to log into your Google account):

https://docs.google.com/forms/d/e/1FAIpQLSddOFgyuzr2Ghm2blZobBE7Z251L-lxjAj5Zf6oChpyaEsYAw/viewform?usp=sf_link

Or make a copy of the syllabus then send the signed syllabus to rdyson@sandi.net or bring in a signed copy of the syllabus.

My signature below indicates that I have read and understand the policies and expectations of this class and will do my best to fulfill the requirements and expectations.

Student Name (**PRINT**): _____ Period: _____

Student Signature: _____ Date: _____

Parent/Guardian Name (**PRINT**): _____

Parent/Guardian Signature: _____ Date: _____

I prefer to be contacted by:

☐ Phone: _____
Preferred Contact Number(s)

☐ E-Mail: _____
Preferred Email Address

I also acknowledge that I have read and agree to abide by the rules outlined in the Flinn Scientific Student Safety Contract.

FLINN SCIENTIFIC STUDENT SAFETY AGREEMENT:

I, _____, have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to ensure my own safety, and that of my fellow students and instructors. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also closely follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory or misbehavior on my part, may result in being removed from the laboratory, detention, receiving a failing grade, and/or dismissal from the course.

Student Signature

Date

Student Access

Student Name: _____

Course ID: dyson06998

Teacher Name: Robert Dyson

Course Name: AP Environmental Science

How to register for MasteringEnvironmentalScience

For Withgott, Environment: The Science Behind the Stories 7th Edition

1. Get Ready:

- Ask your teacher for your Course ID: dyson91026
- Have your valid email address handy: _____
- Use this access code to register:

ACCESS CODE

SSSRCC-THUNK-MARCH-ABBAS-MERCY-TOUSE

NOT FOR RESALE: By using the access code printed above to register, you indicate that you have read, understood, and agreed to Pearson Education's License Agreement, which you will be prompted to read during the registration process.

2. Register

- 1. Go to: <https://mlm.pearson.com/northamerica/>
- 2. Under Register, choose Student.
- 3. Follow the on-screen instructions to complete your registration and create your personal username and password.
- 4. Once registered, follow the links within your on-screen confirmation to enter your instructor's MyLab[®] or Mastering[®] course.

3. Record your account information

- User name: _____
- Password: _____

4. Sign in to your course

- Go to www.MasteringEnvironmentalScience.com
- Make sure your computer is ready by checking the System Requirements
- Follow the instructions to “Join Your Teacher’s Course”, using the Course ID provided to you.

AP Classroom:

Period 3:

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Please join to register for the AP exam and to access review items