

# Sheldon High School



## Biology

### Table of Contents

Section A	Safety
Section B	Scientific Method & Characteristics of Living Things
Section C	Biochemistry
Section D	Cells & Microscope
Section E	Microbiology & Immune System
Section F	Cellular Transport & Homeostasis & Body Systems
Section G	Protein Synthesis
Section H	Cell Division & Gamete Formation
Section I	Genetics
Section J	Natural Selection
Section K	Ecology
Section L	Photosynthesis & Cellular Respiration
Section M	Biotechnology

## Science Department Agreement Forms

### Student Lab Contract

#### Academic Code of Conduct

The science staff of Smeiberg Middle School and Sheldon High School expects the highest standards of honesty and fairness from all students. Promoting the ideals of education, responsibility and self-discipline are essential. Therefore, to protect everyone's right to a fair and meaningful evaluation, this **ACADEMIC CODE OF CONDUCT** has been adopted.

\* A student who exhibits any behavior which in the judgment of the teacher indicates dishonesty while taking an examination, or quiz shall receive a zero for that exercise and the student's name will be turned over to the administration for further disciplinary action.

\* A student who copies an assignment from another student or students shall receive a zero for that assignment, and the student who allows an assignment to be copied shall also receive a zero.

\* A student who, for the purpose of cheating on an examination, enters a classroom carrying evidence of premeditation -- such as aids or notes not allowed -- shall receive a zero for that examination.

\* A student who is apprehended taking, without permission, another student's written assignment or project for personal use or academic credit shall receive a zero for that assignment and will be further disciplined under the provisions for theft in the student discipline policy.

\* A student who displays unethical behavior and/or is involved in any other activity for the purpose of cheating, altering, or falsifying records, removing or copying of any materials (student, teacher, or other), etc., shall be disciplined as follows.

a. A student enrolled in a course in which the infraction occurred, shall be immediately dismissed from that course with loss of credit and a grade of "F" for the semester in which the infraction takes place. The student will be suspended for five (5) days for attempting to alter state documents. Also, the infraction may affect any awards for honors the student may receive. This will be at the discretion of the committee (s) in charge of the awards.

b. A student NOT enrolled in a course, however, who is involved in such an infraction, shall be disciplined in accordance with the student discipline policy.

\* **PLAGIARISM** is defined as "to steal or use the ideas or writings of another as one's own" (American Heritage Dictionary) and is NOT tolerated.

#### I will:

\* Read the lab investigation before coming to class.

\* Wear personal protective equipment as directed to protect my eyes, hands, and body while conducting class activities.

\* Follow all instructions given by the teacher.

\* Conduct myself in a responsible manner at all times in a laboratory situation.

I understand I am financially responsible for damages to lab equipment supplies assigned to me.

I understand I will be referred to administration for disciplinary action intentional tampering with or damage of another student's project or work.

## INTERNET ACCOUNTS & OTHER INFORMATION TECHNOLOGY

### TERMS AND CONDITIONS FOR ELK GROVE UNIFIED SCHOOL DISTRICT - INSTRUCTIONAL TECHNOLOGY USE

The Elk Grove Unified School District is pleased to announce the EDUCATIONAL USE INTERNET accounts are now available. Each school in the district can receive an INTERNET account for each faculty member and student. One person at each site will be responsible for coordinating the assignment of accounts and passwords.

In general this requires efficient, ethical and legal utilization of all information technology resources. If a user violates any of these provisions, Internet account and access to other instructional technology will be terminated and future access may be denied. The signatures at the end of this document are legally binding and indicate the parties who signed have read the terms and conditions carefully and understand the significance.

#### INTERNET - Terms and Conditions

1) **Acceptable Use** - The use of your account must be in support of education and research consistent with the educational objectives of your school or department. Use of either organization's networks or computing resources must comply with the rules appropriate for that network. You will be responsible for assisting with monitoring the account. You will be asked to periodically report your experience using information technology access and privileges.

2) **Unacceptable Use** - Transmission of any material in violation of any US or state regulation is prohibited. This includes, but is not limited to: copyrighted material, threatening or obscene material protected by trade secret. Use for commercial activities is not acceptable. Use for product advertisement or political lobbying is also prohibited. Any transmission or reception of pornographic material is expressly prohibited and will result in the cancellation of all information technology access and privileges.

3) **Privileges** - The use of information technology is a privilege, and unacceptable use will result in a cancellation of those privileges. The system administrator may close an account at any time as required. The administration, faculty, and staff of any school may request the system administrator to deny, revoke, or suspend specific user accounts.

4) **Network Etiquette** - You are expected to abide by the generally accepted rules of network etiquette. These include (but are not limited to) the following:

- a) Be polite.
- b) Use appropriate language.
- c) Do not reveal your personal address or phone numbers of students or colleagues.
- d) Note that electronic mail (e-mail) is not guaranteed to be private. Messages relating to or in support of illegal activities may be reported to the authorities.
- e) Do not use the network in such a way that you would disrupt the use of the network by other users.

f) All communications and information accessible via the network should be assumed to be private property.

5) The Elk Grove Unified School District makes no guarantees of any kind, which are expressed or implied, for the service it is providing. The Elk Grove Unified School District will not be responsible for any damages you suffer. This includes loss of data resulting from data non-deliveries, misdeliveries, or service interruptions caused by its own negligence or errors or omissions. Use of any information obtained via the INTERNET is at your own risk.

6) **Security** - Security on any computer system is a high priority, especially when the system involves many users. If you can identify a security problem, notify Information System 686-7710 or e-mail at [immartin@egusd.k12.ca.us](mailto:immartin@egusd.k12.ca.us). Do not use another individual's account without written permission from an individual. Attempts to login to any network server system administrator will result in cancellation of user privileges.

7) **Vandalism** - Vandalism will result in cancellation of privileges. Vandalism is defined as any malicious attempt to harm or destroy data of another user, network, equipment, or any of the above listed agencies or other networks that are connected to the INTERNET. This includes, but is not limited to, the uploading or creation of computer viruses.

**Computer Room Conduct:** To ensure all students have an adequate environment in which to learn, it's extremely important that the following guidelines be established.

1. Students will not be allowed to eat or drink in class. Computer equipment is easily susceptible to food and liquid damage.
2. Students are to use only their assigned account. In addition, students should always log before leaving the room.
3. Students are expected to keep workstations clean and organized; no writing on desks or books, all scrap paper in the recycling box.
4. Chairs should be pushed completely under the workstations upon leaving class.
5. No outside disks are to be brought into the classroom. This will prevent problems, such as viruses and computer disk drive damage.
6. Students are expected to report (and may do so anonymously) any suspicious activity by other students to the teacher (i.e. equipment vandalism, writing on desks or in illegal copying, etc.).
7. While in the computer room, there is to be no roughhousing, running, or yelling.
8. Students are expected to be courteous and respect the rights of others (i.e. saying please and thank you, asking permission, staying in assigned seats, polite listening while are speaking, and being a productive and worthwhile participant in class room activities).
9. If any of these guidelines are not adhered to, students may face disciplinary action by teacher and/or the school Network Administrator.
10. Any student observed using another student's account, fraudulently copying software class work of another student, or trying to access unauthorized parts of the school network or the Internet will automatically have their network account revoked; face disciplinary action by school.

The user account will be assigned after the application form and completed tests are received.

## **BIOLOGY LABORATORY SAFETY GUIDELINES**

The science laboratory is an enjoyable, exciting place to work, but it can be dangerous if not approached with maturity and respect. Read and learn the safety rules below. Review the safety guidelines with a parent or guardian. When you are both comfortable in your knowledge of lab safety, sign at the bottom of the page. Before you begin working in the lab, you will need to pass a lab safety quiz with a score of 100%.

1. Follow all instructions carefully. Use special care when you see the word **CAUTION**.
2. Never do laboratory work unless you are being supervised by your teacher and never do unauthorized experiments.
3. Always follow the directions given in your laboratory manual and those given by your teacher.
4. Know the location of **ALL** safety equipment in the laboratory and familiarize yourself with the proper use of each piece of equipment.
5. Never run, push or engage in horseplay of any kind in the laboratory.
6. Never eat, drink, chew gum in the laboratory.
7. Do not comb hair or apply cosmetics in the laboratory.
8. Keep your work area clean and clear of unnecessary materials.
9. Dispose of materials as instructed by the laboratory manual and by your teacher. **NEVER** put solids down the sink!
10. Report any accident, spill, or breakage to your teacher immediately.
11. Always clean up your work area with the spray solution provided and return all equipment at the end of the laboratory period.
12. Clean up broken glassware with the broom and dust pan. Discard in the "Glass Disposal" box only.
13. Dress properly for the laboratory.
  - a) Always wear protective eyewear and clothing (apron) unless instructed otherwise by your teacher.
  - b) Roll long sleeves above the wrist.
  - c) Don't wear loose-fitting sleeves or bulky outerwear.
  - d) Tie back long hair.
  - e) Wear safety goggles when using dangerous chemicals, hot liquids, or burners.
14. Use care when working with microscopes.
  - a) Only use the scope assigned to your group. Return your scope to its assigned place.
  - b) **ALWAYS** use two hands when carrying the scope to your lab station.
  - c) Make sure the electrical cord is kept away from the edge of the table where it can get caught on people passing by.
  - d) Only use special lens paper provided by your teacher to clean glass lenses. Never touch the microscope lenses with your fingers.
  - e) Always store microscope with **LOW POWER** objective in place.

## 15. Be careful with heat or fire.

- a) Always use heat-resistant gloves or use tongs to handle hot containers, objects, or materials.
  - b) Never leave a hot plate, burner, or other hot object unattended. Always turn off burners and hot plates when not in use.
  - c) Notify your teacher of any burn.
  - d) Never point the mouth of a test tube toward anyone while heating it. Never heat a stoppered test tube.
16. Use extreme care when working with chemicals. Always read the label before using any chemical.
- a) Never taste substances in the laboratory.
  - b) Never touch or smell substances in the laboratory without specific instructions on how to do so.
  - c) Use materials only from containers that are clearly and properly labeled.
  - d) Never mix any substances unless instructed to do so.
  - e) Never return unused chemicals to stock (reagent) bottles (the bottle you get the chemicals from). Do not put any object into a stock (reagent) bottle, except the dropper with which it may be supplied.
  - f) Wash your hands thoroughly after using chemicals. If you should spill any chemicals on your skin with running water or use the eye wash (15 minutes minimum) and notify your teacher immediately.
  - g) Notify your teacher of any chemical spills.

## 17. Treat all animals with respect. NEVER tap on the glass or put anything in a tank unless instructed to do so by your teacher.

18. Always prepare for an experiment by reading the directions in the text or lab manual and writing up the experiment before coming to the laboratory. Follow the instructions carefully and intelligently noting all precautions and safety rules.

I understand that I am financially responsible for the replacement of any equipment or materials that are damaged or broken as a result of violating one of the above stated safety rules.

\_\_\_\_\_  
Parent /guardian signature

\_\_\_\_\_  
Student signature

