

This Science Notebook Belongs to _____

PHONE # _____

EMAIL: _____

COURSE OVERVIEW

The PreAP biology class is a rigorous pre-university course of studies, that will prepare students for the STARR End of Course (EOC) examinations and will prepare students to enter both AP and IB biology. **This Science Notebook will help organize and take charge of your learning.**

WHY BIOLOGY?

Biology is the science of life. Biologists study the structure, function, growth, origin, evolution and distribution of living organisms. It is important to study biology for many reasons including:

- Protection and sustainability of ecosystems, endangered species and natural resources
- Social health—Biology helps us to understand major health issues and how they affect our bodies
- The biological sciences are some of the fastest growing areas of science in business and industry, including but not limited to:
 - In vitro Fertilization
 - Cloning
 - Antibiotics and other pharmaceuticals
 - Genetically Modified Organisms and Food
 - Nanotechnology

TEACHER INFO

NAME: _____

ROOM/S: _____

TUTORIAL TIMES: _____

PHONE: _____

EMAIL: _____

WEBSITE: _____

LAB PARTNERS

NAME: _____

PHONE #: _____

EMAIL: _____

NAME: _____

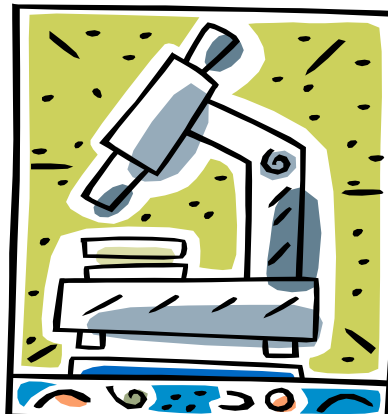
PHONE #: _____

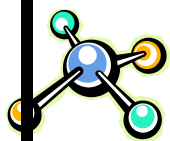
EMAIL: _____

NAME: _____

PHONE #: _____

EMAIL: _____

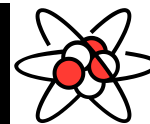




Stony Point High School

BIOLOGY Policies

2017-2018



STUDENT EXPECTATIONS

1. RESPECT

- Peers – Be kind in your words and actions
- Teacher – They are here to help you be successful
- Classroom- Practice all safety rules and keep it clean

2. RESPONSIBILITY

- Come to class on time and every day.
- Be prepared with all your materials
- Phone is put away during class
- (Notebook, pen, pencil etc)
- Act maturely

3. PRESENCE

- Participate actively / **HAVE FUN!**
- Dress appropriately
- Ask questions
- Ask help when you need it

4. INTEGRITY

Your integrity is when you choose your actions based on values and not your own personal gain.

- Do your own work / Don't plagiarize
- Phones turned off during quizzes and tests
- Do not lie, own your mistakes

TEACHER RESPONSIBILITIES

1. Provide instructional leadership /tutorials.
2. Return tests, quizzes and assignments in a timely manner.
3. Provide a safe and welcoming classroom environment for all students.

4. **HAVE FUN!**

SUPPLIES – Bring Every Day!

2 Composition Notebooks – College Rule
Pens and pencils / Color Pencils
Glue Stick and/or tape

GRADING POLICIES

Unit Evaluation 30%

Tests & Projects

Formative Assessments 20%

Labs 20%

Daily Work 30%

Classwork, Writing, Activities & Homework

LATE WORK POLICY

On Time = 100% max.

Late Work= 70% max.

After 10 calendar days = not accepted

CONSEQUENCES

The following represent a minimum response to violations of our health and safety policy:

1. Visual or verbal warning
2. Student/teacher conference
3. Parent Contact
4. Referral to Assistant Principal

Suspected Cheating = retest (new assignmt)

Proven Cheating

1st time = retake for 50%, detention, parent

2nd time = zero referral, parent contact

REDO/RETAKES

Students who do not master an assignment, quiz, have 10 calendar days from the time the grade is entered into the gradebook to complete the following

- Attend tutorials and/or re-teach assignment
- Complete the redo/retake
- The max grade for a redo is 70%

ABSENT / TARDY POLICY

- Check your email and print out any work your teacher sends you /
- Students who have an excused absence have the number of days they missed to make up their assignments. (RRISD Policy)
- Students who are out for a school related policy should send an email informing their teacher of their absence at least 3 days before the absence.
- Students who are more than 10 minutes late to class will be counted absent.
- You are tardy if you enter class after the bell rings. Three (3) tardies equals 1 absence.

INTERVENTION PLAN

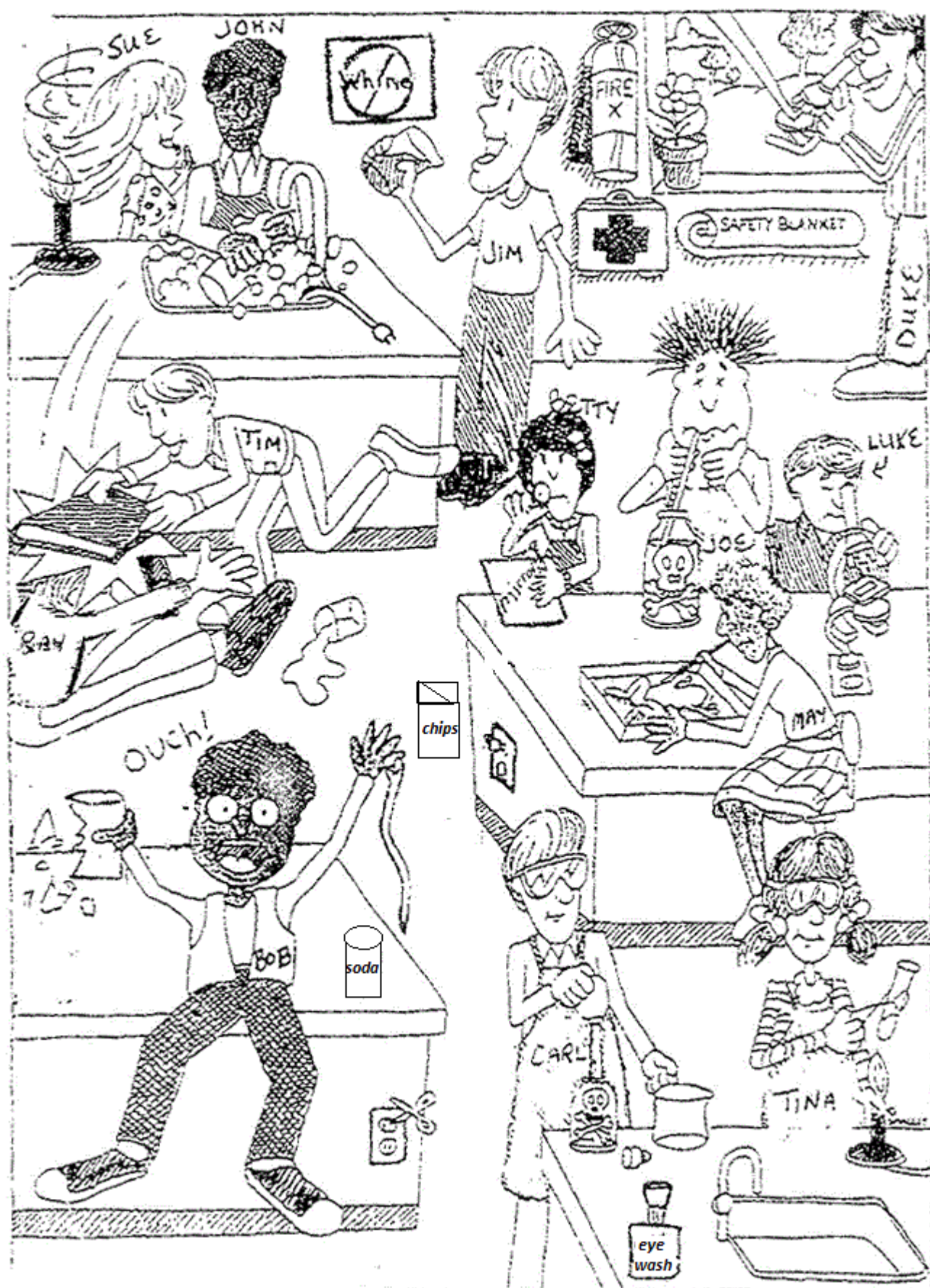
Students scoring below a 70% on any marking period will be put on a mandatory intervention plan and will be required to attend tutorials every week until their grade is passing.

BATHROOM POLICY

Please do your business before and after class. If you must go during class, please do not ask to go during these times:

- 20 minutes **after & before** the bell
- During classroom instruction

Only go if teacher gives you permission. Be back in 5 minutes or less.



Lab Safety Contract

1. I will read and follow lab instructions.
2. I will conduct myself in an appropriate manner in the lab. I will not engage in horseplay, shoving, hitting, throwing or practical jokes.
3. I will wear appropriate clothing during the lab as necessary including an apron, lab coat, goggles etc.
4. I will ask questions if I do not understand what to do.
5. I will not taste, eat, drink, or breathe in anything used in our science activities and experiments unless I am told to do so.
6. I will report any accident, injury, spillage or breakage to my instructor immediately.
7. I will not remove any chemical or material from the classroom.
8. I will work hard to keep other students and myself safe from harm.



I agree to follow the rules on the Lab Safety Contract and will be held accountable if I do not.

Student Signature: _____

SYLLABUS / TEKS TRACKER FOR _____ PERIOD _____

Unit 1: Biomolecules (4 Blocks)

*9A compare the structures and functions of different types of biomolecules, including carbohydrates, lipids, proteins, and nucleic acids

9D analyze and evaluate the evidence regarding formation of simple organic molecules and their organization into long complex molecules having information such as the DNA molecule for self-replicating life

9C identify and investigate the role of enzymes

10C analyze the levels of organization in biological systems and relate the levels to each other and to the whole system.

Unit 2: Cell Structure and Processes (6 Blocks)

4A compare and contrast prokaryotic and eukaryotic cells

*4B investigate and explain cellular processes, including homeostasis, energy conversions, transport of molecules, and synthesis of new molecules

7G analyze and evaluate scientific explanations concerning the complexity of the cell

Unit 3: Cell Energy (5 Blocks)

*4B investigate and explain cellular processes, including homeostasis, energy conversions, transport of molecules, and synthesis of new molecules

9B compare the reactants and products of photosynthesis and cellular respiration in terms of energy and matter

12E describe the flow of matter through the carbon and nitrogen cycles and explain the consequences of disrupting these cycles

Unit 4: DNA and the Cell Cycle (6 Blocks)

*6A identify components of DNA, and describe how information for specifying the traits of an organism is carried in the DNA

6B recognize that components that make up the genetic code are common to all organisms

*5A describe the stages of the cell cycle, including deoxyribonucleic acid (DNA) replication and mitosis, and the importance of the cell cycle to the growth of organisms

5D recognize that disruptions of the cell cycle lead to diseases such as cancer

Unit 5: Protein Synthesis and Gene Expression (8 Blocks)

6C explain the purpose and process of transcription and translation using models of DNA and RNA

*6E identify and illustrate changes in DNA and evaluate the significance of these changes [mutations]

6D recognize that gene expression is a regulated process

5C describe the roles of DNA, ribonucleic acid (RNA), and environmental factors in cell differentiation

*4B investigate and explain cellular processes, including homeostasis, energy conversions, transport of molecules, and synthesis of new molecules

Unit 6: Animal Systems (5 Blocks)

5B examine specialized cells, including roots, stems, and leaves of plants; and animal cells such as blood, muscle, and epithelium

*10A describe the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals

10C analyze the levels of organization in biological systems and relate the levels to each other and to the whole system

11A describe the role of internal feedback mechanisms in the maintenance of homeostasis

11C summarize the role of microorganisms in both maintaining and disrupting the health of both organisms and ecosystems

Unit 7: Plant Systems (6 blocks)

5B examine specialized cells, including roots, stems, and leaves of plants; and animal cells such as blood, muscle, and epithelium

*10B describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in plants

10C analyze the levels of organization in biological systems and relate the levels to each other and to the whole system

11A describe the role of internal feedback mechanisms in the maintenance of homeostasis

11C summarize the role of microorganisms in both maintaining and disrupting the health of both organisms and ecosystems

12E describe the flow of matter through the carbon and nitrogen cycles and explain the consequences of disrupting these cycles

Unit 8: Genetics (8 Blocks)

6G recognize the significance of meiosis to sexual reproduction

*6E identify and illustrate changes in DNA and evaluate the significance of these changes [nondisjunction]

6H describe how techniques such as DNA fingerprinting, genetic modifications, and chromosomal analysis are used to study the genomes of organisms

*6F predict possible outcomes of various genetic combinations such as monohybrid crosses, dihybrid crosses and non-Mendelian inheritance

Unit 9: Evidence and Mechanisms of Evolution (7 Blocks)

*7A analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental

7B analyze and evaluate scientific explanations concerning any data of sudden appearance, stasis, and sequential nature of groups in the fossil record

7C analyze and evaluate how natural selection produces change in populations, not individuals

7D analyze and evaluate how the elements of natural selection, including inherited variation, the potential of a population to produce more offspring than can survive, and a finite supply of environmental resources, result in differential reproductive success

*7E analyze and evaluate the relationship of natural selection to adaptation and to the development of diversity in and among species

7F analyze and evaluate the effects of other evolutionary mechanisms, including genetic drift, gene flow, mutation, and recombination

12B compare variations and adaptations of organisms in different ecosystems

Unit 10: Viruses and Taxonomy (6 blocks)

*4C compare the structures of viruses to cells, describe viral reproduction, and describe the role of viruses in causing diseases such as human immunodeficiency virus (HIV) and influenza.

8A define taxonomy and recognize the importance of a standardized taxonomic system to the scientific community

*8B categorize organisms using a hierarchical classification system based on similarities and differences shared among groups

8C compare characteristics of taxonomic groups, including archaea, bacteria, protists, fungi, plants, and Animals

Unit 11: Interdependence in Ecosystems (7 Blocks)

*12C analyze the flow of matter and energy through trophic levels using various models, including food chains, food webs, and ecological pyramids

*12A interpret relationships, including predation, parasitism, commensalism, mutualism, and competition among organisms

11C summarize the role of microorganisms in both maintaining and disrupting the health of both organisms and ecosystems

12E describe the flow of matter through the carbon and nitrogen cycles and explain the consequences of disrupting these cycles

Unit 12: Population Ecology (9 Blocks)

10C analyze the levels of organization in biological systems and relate the levels to each other and to the whole system.

8C compare characteristics of taxonomic groups, including archaea, bacteria, protists, fungi, plants, and animals [overview only]

12D recognize that long-term survival of species is dependent on changing resource bases that are limited

*12F describe how environmental change can impact ecosystem stability

11B investigate and analyze how organisms, populations, and communities respond to external factors

*11D describe how events and processes that occur during ecological succession can change populations and species diversity

12E describe the flow of matter through the carbon and nitrogen cycles and explain the consequences of disrupting these cycles