

Biology Brain-iacs Class Syllabus
Biology
2008-2009
Ms. B. Thomas
Jean Ribault High School

Class website: sciencewithmsthomas.com

"The most active role in education is not the teacher's but the student's."

Leonard Nash

General Course Description

Biology is the science of life, it deals with all forms of life, including their classification, physiology, chemistry, and interactions. During this course we will focus on the study of living things and the processes that sustain them. Biology opens the door to lifetime understanding and appreciation of the marvels of the natural world. In addition to learning the subject of biology, each student will learn proficient skills such as critical thinking, creative thinking, reading comprehension, writing, research, presentation, and collaborative group skills. The intent is to improve each student's high level thinking skills that are essential to the development of science literacy. Students will also attain an awareness that will allow them to be a responsible consumer of our world and its resources.

This course requires that all students utilize a computer to conduct research and to produce various products outside of class time. Therefore all students must have access to a computer and email account. Since the public libraries and school library all have word processing software and internet access available, it is expected that all students without home computers make time in their schedules to frequent these libraries.

This is a laboratory based course that investigates:

- Structure and function of living things
- Universality and diversity of living things
- Equilibrium within living systems
- Theory of evolution

Course objectives and goals

During this course you will be expected to demonstrate your learning in each of the areas:

Member of the scientific community

- Each student will accept personal responsibility for learning and seek to learn from and empower other members of the class.
- Each student will prepare for and participate in class activities.
- Each student (when necessary) will revise and work in response to feedback from me and/or your classmates

Systems and Models

- Each student will be able to analyze processes, objects, and events in "systems".
- Each student will be able to use models to communicate and clarify your understanding.

Scientific learning

- Each student will engage in the creative process of experimental design and analysis.
- Each student will be able to formulate investigable questions to advance your understanding and carry out controlled experiments to address your questions.
- Each student will be able to use logic and evidence to form conclusions and communicate these findings clearly.

Science literacy and concepts

- The single most important goal of this course is that each student attain a basic understanding of the natural world - that you attain science literacy.
- Science literacy is an understanding of the nature and processes science engages in. Attaining scientific literacy in biology means that you seek to understand, apply, and explain critical concepts as they pertain to the subject of biology.

Required Text Book:

Miller & Levine. "Biology", Pearson Prentice Hall. 2006. Saddle River, New Jersey 07458

Supplies:

Students will need the following items for class (*if any student is unable to purchase these supplies please see me during before the next class*):

- 1 large 3 ring binder (2-3 inches)
- Lined college rule paper
- Pen/pencils
- 1 pack of dividers (you need 12 dividers)
- 1 packs of stick on permanent index tabs (for composition & lab notebook)
- 3 x 5 note cards with rubber band (2 packs is a good start)
- Small sticky notes
- Gummed reinforcers (3 hole punch reinforcement stickers)
- Small stapler
- Small zipper case to put your supplies
- Chemistry Book (provided by school)

Strongly recommended Supplies:

- **Travel drive** to keep a copy of all files on. (great deals are available for travel drives. Price ranges start at \$5.00. You can get great storage for \$10-15 dollars.) * Lost/Deleted files will not be an acceptable excuse for missing/late assignments, it is to your benefit to have a travel drive so you can keep all your files in one place, and with you!
- **Note card box.** You will quickly accumulate many note cards, it may be useful to purchase note card box. However a small shoe box will also suffice.

Tentative Detailed Learning Schedule

Semester 1 (August 08 - December 08)

Unit	Lecture and Lab Titles	Readings	Time Frame *tentative	Important Dates *tentative
1	Molecular Biology Part 1 <ul style="list-style-type: none"> • Class Intro • How scientist Work • Properties of Water • Organic Molecules <i>Lab: Properties of Water</i> <i>Lab: Dehydration Synthesis Slime</i> <i>Lab: Are foods acidic or basic?</i> <i>Lab: Factors Affecting Enzymes</i> <i>Project: Brochure</i>	Chp.1 p.1-22 Chp.2 p.34-53 Chp.38 p.970-977, 981	10 class periods (4 weeks)	
2	Molecular Biology Part 2 <ul style="list-style-type: none"> • Biogeochemical cycles • The laws of Thermodynamics <i>Lab: Investigating chemical cycles in the biosphere.</i> <i>Lab: The water cycle in action</i> <i>Project: Narrative</i>	Chp.3 p.62-85	7 class periods (2 weeks)	
3	Cellular Biology Part 1 <ul style="list-style-type: none"> • Plant Anatomy • Photosynthesis • Cellular Respiration <i>Lab: Investigating plants using the microscope</i> <i>Lab: Photosynthesis</i> <i>Lab: Cellular Respiration</i> <i>Lab: ATP and ATP cycles</i>	Chp.23 p.578-605 Chp.8 p.200-215 Chp.9 p.220-235	11 class periods (4 weeks)	
4	Cellular Biology Part 2 <ul style="list-style-type: none"> • The Cell Membrane • Cell Communication <i>Lab: Osmosis and Diffusion</i> <i>Lab: Modeling permeability in cells</i> <i>Lab: The Nervous system and Reflexes</i> <i>Project: Presentation</i>	Chp.7 p.168-195 Chp.35 p.890-915 Chp.39 p.996-1025	11 class periods (5 weeks)	
Mid term Review			3 days	

Semester 2 (January 09 - June 09)

Unit	Lecture and Lab Titles	Readings	Time Frame *tentative	Important Dates *tentative	
5	Cellular Biology Part 3	<ul style="list-style-type: none"> • Cell Growth and Division • Mendelian Genetics • Human Inheritance • DNA, RNA, and Protein Synthesis • Genetic Technology <i>Lab: Variations on a Human Face</i> <i>Lab: Growing one-celled organisms (tentative)</i> <i>Lab: Karyotyping</i> <i>Lab: How do cells interpret DNA</i> <i>Lab: DNA extraction (tentative)</i> <i>Lab: Simple Cat Genetics (tentative)</i> <i>Project: Grant Application for Genetic Disorder Research</i>	Chp. 10 p.240-257 Chp. 11 p.262-281 Chp. 12 p.286-313 Chp. 13 p.318-335 Chp. 14 p.340-361	16 Class periods (6 weeks)	
6	Environmental Biology Part 1	The scientific Theory of Evolution Population Evolution The History of life Classification <i>Lab: Shaping up Classification key</i> <i>Lab: Modeling Adaptation</i> <i>Lab: Modeling Camouflage and Natural Selection.</i> <i>Lab: Comparing Primates</i> <i>Project: Brochure on past and present animals in Florida</i>	Chp. 15 p.368-387 Chp. 16 p.392-411 Chp. 17 p.416-441 Chp. 18 p.446-465 Chp. 32 p.820-842 Chp. 33 p.848-865	16 Class periods (6 weeks)	
7	Environmental Biology Part 2	Population Biology Human Impact on the Environment <i>Lab: Effect of Food supply on Fruit Fly Density</i> <i>Lab: The Survival Ability of Dandelions (tentative)</i> <i>Lab: The effect of soil pH on plant growth (tentative)</i> <i>Lab: Ecological Sampling</i> <i>Project: Environmental Awareness magazine article</i>	Chp. 3 p.62-81 Chp. 4 p.86-113 Chp. 5 p.118-133 Chp. 6 p.138-163	10 Class periods (4 weeks)	
	End of Term Review			5 days	

List of Labs and Projects

#	Tentative list of Lab Titles (Labs may be subject to change)
1	<i>Lab: Properties of Water</i>
2	<i>Lab: Dehydration Synthesis Slime</i>
3	<i>Lab: Are foods acidic or basic?</i>
4	<i>Lab: Factors Affecting Enzymes</i>
5	<i>Lab: Investigating chemical cycles in the biosphere.</i>
6	<i>Lab: The water cycle in action</i>
7	<i>Lab: Investigating plants using the microscope</i>
8	<i>Lab: Photosynthesis</i>
9	<i>Lab: Cellular Respiration</i>
10	<i>Lab: ATP and ATP cycles</i>
11	<i>Lab: Osmosis and Diffusion</i>
12	<i>Lab: Modeling permeability in cells</i>
13	<i>Lab: The Nervous system and Reflexes</i>
14	<i>Lab: Variations on a Human Face</i>
15	<i>Lab: Growing one-celled organisms (tentative)</i>
16	<i>Lab: Karyotyping</i>
17	<i>Lab: How do cells interpret DNA</i>
18	<i>Lab: DNA extraction (tentative)</i>
19	<i>Lab: Simple Cat Genetics (tentative)</i>
20	<i>Lab: Shaping up Classification key</i>
21	<i>Lab: Modeling Adaptation</i>
22	<i>Lab: Modeling Camouflage and Natural Selection.</i>
23	<i>Lab: Comparing Primates</i>
24	<i>Lab: Effect of Food supply on Fruit Fly Density</i>
25	<i>Lab: The Survival Ability of Dandelions (tentative)</i>
26	<i>Lab: The effect of soil pH on plant growth (tentative)</i>
27	<i>Lab: Ecological Sampling</i>
#	Projects
1	<i>Project: Brochure</i>
2	<i>Project: Narrative</i>

3	<i>Project: Presentation</i>
4	<i>Project: Grant Application for Genetic Disorder Research</i>
5	<i>Project: Brochure on past and present animals in Florida</i>
6	<i>Project: Environmental Awareness Magazine Article</i>

Grade Policies and Expectations:

"Learning is not attained by chance; it must be sought for with ardor and attended to with diligence."

Abigail Adams

In my class, I will hold you, the student, to an academic standard considered by many to be "high." I consider the academic standard appropriate. In fact, I am completely convinced that the academic standard choices I make in my class are in your best interest, both short-term and long-term.

When it comes to getting the grade you desire, you have to meet **my standards for grades** and please be advised that I will hold you to high standards at all times. You may certainly disagree with my choices but, absent my disobedience to district guidelines or the law, I get to have the final choice on grade standards.

Evaluation/Grading scale:

Your grade in this class will be a combination of your Science Notebook, class participation, labs (including lab write-ups), quizzes, homework, projects, portfolios, and exams. The grading scale will go as follows:

Grade Scale

Percent	Grade	Percent	Grade
100-93	A	77.9-73	C
92.9-90	A-	72.9-70	C-
89.9-88	B+	69.9-68	D+
87.9-83	B	67.9-63	D
82.9-80	B-	62.9-60	D-
79.9-78	C	Below 59.9	F

Grade Breakdown

% of Grade	Activity type
40%	Exams <ul style="list-style-type: none"> • Exams • announced Quizzes
25%	Labs and Projects <ul style="list-style-type: none"> • Class Labs • Unit Projects
20%	Homework <ul style="list-style-type: none"> • Assigned Homework • Reading Activities
15%	Participation <ul style="list-style-type: none"> • Group activity • Daily contributions/class activities • Pop quizzes

Grade

Grades will only agree there is a part. If you feel

Modifications

be modified if I mistake on my you have a claim,

then make your case (after school, not in class) and cite your evidence, then let me think it through. **Confrontational tactics, especially in public, serve no good purpose.**

Tender Teacher-Student Moment

1. *Student: "What is my grade at this moment?" Teacher: "See me after school."*
2. *Student: "I want to see my test." Teacher: "See me after school after EVERYONE has taken the test."*
3. *Student: "I think you should discuss the test in class." Teacher: "Thank you for sharing your opinion."*
4. *Student: "You made a mistake on my lab report grade." Teacher: "Thank you. Write an explanatory note and give it to me along with the assignment."*
5. *Student: "You made a mistake on my test score." Teacher: "Thank you. I'll check into it and get back to you with my decision and an explanation."*

Extra Credit

"The bitterness of poor quality is remembered long after the sweetness of low price has faded from memory."

.Generally I give no extra credit, if on rare occasions I do give extra credit opportunities it will be offered to the whole class. Extra credit WILL NOT BE USED FOR REMEDIATION OF A GRADE. I believe your grade should reflect your effort over the entire semester. If you feel you will need extra credit to help your grade, then I advise you to earn those points by working extra to score higher on tests and labs during the semester, rather than engaging in a demeaning scramble for "extra credit" at the end of the semester. Aren't these points earned during the semester extra points for the extra work needed to earn them? You will have plenty of opportunities to earn points during the semester. Please take advantage of them during the semester as opposed to some frantic effort to replace them at the very last minute.

Classroom Policies and expectations

Class room rules and student responsibilities are a necessary part of any classroom. They are designed to help you be a successful student. Some of the most important lessons students learn in the course of growing up are the lessons of good work habits, how to be organized, and how to be responsible for a task. Students who learn good work habits, organizational skills and accept responsibility become successful students. Successful students become successful people.

Class Room Rules are:

1. Be Responsible: Be on time for class and come with all materials. This means, coming to class everyday with your assignments completed, working during work times, and following directions immediately.
2. Be Respectful of yourself and your peers keep your hands feet and objects to yourself.
3. Exercise restraint: Think First! Always be aware of the consequences of your actions.
4. FOLLOW ALL LAB SAFETY RULES DURING LAB ACTIVITIES
5. Due to lab safety issues and the risk of contamination NO FOOD OR DRINK WILL BE ALLOWED IN CLASS.

Basic Student Responsibilities

1. Attend class every day on time!
2. Think! Think about what you know and how it relates to what you're learning.
3. Keep track of your Science Notebook and bring it to class daily

4. Listen to your peers and wait your turn to speak
5. Read instructions and attempt work before asking for help
6. Take responsibility for learning and practicing classroom routines
7. Take responsibility for grades and organizing your time and school work

Academic Honesty

All students will be required to write and sign the honor code during formal assessments such as exams. Plagiarism, cheating (allowing and/or receiving) or dishonest work will yield the following consequences:

- 1st offense - phone call home, and/or referral, and a zero on the assignment.
- 2nd offense - parent/teacher conference, referral, and a zero on assignment.
- 3rd offense - referral, zero for the assignment and failure for the semester.

Absentee/Late/Missing Work:

- Any assignment turned in late will receive an immediate 10% deduction.
- No assignment will be accepted beyond 3 days late.
- Students who have more than 3 late or missing assignments will have families informed.
- No more than 3 late assignments will be accepted during a quarter.
- For excused absences all exams/quizzes and homework must be made up within the same amount of days a student was absent for and must be done before or after school.
- Students are responsible for getting notes/activities for any missed days.
- Reports must be done to supplement any missed labs.
- **Note: The 3 day policy is for all schedules, 4x4, 6 or 7 period days, and A/B day - it doesn't matter what school schedule you have 3 school days.**
- *There are three ways to check for assignments: on the class web site, in the class assignment binder and assignments will be posted per week on the board...So there is no excuse for not keeping track of your assignments.*

Tardy Policy:

In my class bell to bell learning/instruction is the expectation. Tardiness causes interruptions in the flow of our learning. To help alleviate the disruptiveness of

being tardy, I have a simple policy that all students are expected to adhere to. **Grandiose entrances are unacceptable.** As long as you do not make a scene when entering my class tardy, I will not publicly chastise you in front of your peers. When you are tardy, (for whatever reason) it is your goal and responsibility to quietly enter the room. When you enter the room you fill out the tardy sheet by the door, you then drop your pass (if you have one) in the tardy pass bin by the door. You then go to your seat, quietly whip out your materials and jump right in to the learning activity. Your study buddy will update you at the appropriate time with the information you missed. I will at some point during class examine your reason for being tardy and deal with it accordingly in private conversation with you. I want to reinforce, that during my class time, I want you in my room, if you come in late, you are expected to make a quiet entrance and jump right in with the rest of class. If your tardy is a valid tardy, with the supporting evidence of a legitimate pass, your tardy will be excused.

- The unexcused tardy policy follows:
 1. Warning
 2. Parental Contact
 3. Detention (can include weekend detention)
 4. Referral/Suspension (in school suspension)

Consequences:

So in summary, being unprepared, sleeping or having your head down on desk, inattention, reading magazines or novels, signaling to another, running anywhere to beat a tardy to my class, sitting other than in your assigned seat, cleaning out your notebook during class, throwing away trash during class, eating food in class, leaving trash around your seat or in sink, listening to your CD, MP3, or IPOD player, letting me see your cell phone, using your cell phone in class (including texting), packing up early, grooming yourself, grooming another, looking at pictures, playing games on your graphing calculator or PSP or any other game console, logging onto inappropriate sites in the computer lab, etc. Is this a great list or what?

Pretty much a list of silly stuff, but the above will get in the way of you (and others) doing our class work. If I determine that you consistently cannot make the correct behavioral choices, then I will take steps to convince you to make those choices. Students choosing not to meet the class room expectations and policies may be warned, detained after class, detained after school, assigned Saturday morning detention, require a parent teacher conference, or referred to the appropriate administrator. *****Please be advised students violating lab safety procedures may lose their lab privileges for the school year.** You are expected to adhere to the student code of conduct by Duval County Schools, and class/lab

management rules. Consequences for not adhering to the student code of conduct by Duval County Schools, and Class and Lab rules will be swift and immediate

There is an item not on the above list. That missing item is doing another subject's homework in my class without permission. Do not bring out ANYTHING except biology to work on. When you do bring other class work to my class you risk losing all the papers involved: handouts from the teacher, your written work (and the written work of the person you were copying, if applicable). The bottom line is that you know that, in a given class, it is inappropriate to use any materials other than the ones pertinent to that class.

Classroom Rituals and Routines

The purpose of classroom routines is to provide guidance to help students be successful. The following are routines I require because they maximize classroom learning and time and when followed regularly, help students do well in school.

1. Be on time. Be in your seat with materials when the bells ring to be on time.
2. Get started Right away. There will be a warm up and wrap up every class session (with the exception of exam days and lab days) the warm up is usually timed, so being late or unprepared impacts your ability to complete it.
3. Homework. Homework is designed to give you practice on something we've learned. For this reason most homework will be due on our next class day in order to give you immediate feedback
4. Work from bell to bell. The bell does not dismiss you, I do. Not being in your seat with your area cleaned up will delay you when I dismiss class. Never pack up early, unless I instruct you to do so.
5. Job Duties/Class officers. You are just as responsible for running the class as I am; EACH student will at some point have a job duty/Class officer assignment. It is expected that you fulfill all of your job duties for the entirety of assignment time. Job duties are further discussed in detail in the extended explanation portion of the class handbook.

Expectations and Guidelines for Success:

"Every day you don't practice means you're a day farther from getting good. "

-- Ben Hogan

"Every worthwhile accomplishment has a price tag in terms of hard work, patience, faith, and

endurance."

Ted Engstrom

Study, Study, Study, Learn, Learn, Learn

I bet, down deep in your heart, where no one else goes, you already know this. The secret to doing well in any area of study is to put in quality time, lots of it. The question is: Will you actually do the work needed? Will you actually sit down and do the processes that you need to do in order to master the material? Or will you minimize your work until the very last moment? Will you work at a minimal level, but claim you're working "really, really hard" and then start up the litany of "too hard" or "too much work" after a poor test score? Or will you continue to work at enlightenment, even when you are so frustrated you just want to burst? Are you able to go back and "do it again," unfazed by past struggles? Are you confident enough to never give up, knowing that success will come? Helen Keller once said "We can do anything we want to, if we stick to it long enough." Do you believe her? I do. It is important enough to me to emphasize the point: you can't understand the material in this class (or any other class) until **YOU** do the work.

What I am telling you is that you have an important role to play in your education, something you already know. Your education is not "inflicted" on your mind because I "taught" you. You have to spend actual, precious time doing hard intellectual work. I want you to give your education the full attention it deserves.

Study Buddies

Success in our class room is dependent on a collaborative efforts made by each student. Each student will be assigned a study buddy at the beginning of each term. Most likely your study buddy will be your lab partner(s). Your study buddy will be responsible for making sure you get the notes, activities, handouts, and homework in case of your absence. In turn you will do the same for your study buddy in the case of their absence. Study buddies will be required to exchange contact info and encouraged to study together outside of class time. Your study buddy should be a source of encouragement and reliability as you should also reciprocate the same characteristics. Study buddy/Lab partner list will be generated during the first week of class and may be subject to change.

Study Clinics with Ms. Thomas

Whenever a student is not achieving academically in a course, he or she needs to know that help is available.

If a student is having difficulty learning the materials presented in a course, it is usually due to one of the following factors:

- a. The student is not using proper study techniques.
- b. The student is not interested in the material.

- c. The student is experiencing problems in his or her personal and/or home life.

All three of these factors demand that a student needs personalized attention. The Study clinic mini-course provides an opportunity to do so. Although the mini-course is designed to help a student who is not using proper study techniques, if there is a lack of student interest or personal problems are involved, I will attempt to address them in the text of the mini-course.

The personalized attention given during the mini-course is often the catalyst for renewed student effort.

Study clinics will be offered twice a week, Tuesdays and Thursday. Other study clinic times must be made by appointment and depend on availability.

Study clinics are encouraged for students who:

- a. Scored poorly on a quiz and/or project.
- b. Would like to go over a concept they are confused about or a "little shaky" on the details of.
- c. Study better with a study group/partner and need a place to study after school.

Study clinics are mandatory for students who.

- a. Received a below average score on an exam/test (D+ and below)
- b. Overall class grade is below average (D+ or below)
- c. Missed an exam/quiz that needs to be made up (students have one week to make up a missed exam/quiz)

All students should plan to attend at least 2 study clinics a year to perform a "Problem Diagnosis and Remedy" workshop. When students attend a study clinic they will receive a copy of the "Initial Problem and Diagnosis and Remedy" (Fleming 2002) that describes the process of the diagnosis and remedy for exams/quizzes

Study Clinic Hours

Study clinics are held in Ms Thomas' classroom

Tuesday 2:30 - 4:30pm

Thursday 2:30 - 4:30pm

(Students do not have to stay the time if it is not necessary)

***Study Clinic Hours are tentative and may change or be postpone in the event of teacher meetings, illness, or other situations that call for me to leave campus.

*** Study Clinics for Ms Thomas' class has been adapted from *Biology Teachers Survival Guide* by Michael F. Fleming © John Wiley and Sons, Inc 2002.

Grade Recovery with Ms. Thomas

Grade recovery is a last resort and there are strict guidelines as to who qualifies for grade recovery. It is in your best interest to avoid getting failing grades!

All grade recovery is done through a program named *Compass Odyssey* and is entirely computer based.

The program is a rigorous program in which students must complete all of the following:

Vocabulary exercises
Watch Lecture videos
Take and pass quizzes
Complete Lab assessments
Take and pass exam

Note students must complete the activities listed above for each unit/lesson deemed necessary by teacher. Grade Recovery often covers multiple units/lessons.

Students may also have to complete:

Any online content deemed necessary by teacher

Journal activities deemed necessary by teacher

Practice homework deemed necessary by teacher

Further details will be given on a personal basis for those needed grade recovery.

Class Web Site: www.sciencewithmsthomas.com

ALL students are encouraged and at times will be required to use our class website. On the site the following information can be accessed

- Class Information
- Syllabus

- Lab safety
- Assignment tracker
- Grades
- Class Documents (worksheets, periodic tables etc)
- Unit Documents and Outlines
- PowerPoint Lectures (skeleton lectures)
- Citation Styles Handbooks
- Biology Course Info
- Chemistry Course Info
- Earth Space Science Info
- Great Science Internet Resources
- Class Pictures
- Info on IB Program
- Info on E.C Program
- CPT info
- SAT info
- ACT info
- Info on Jean Ribault H.S.
- Duval County Public Schools Homepage
- FAQ's
- Surveys
- Ms. Thomas' bio information page(s)
- Ms. Thomas' contact information

Communication

Teacher Contact Info:

Students, Parents or guardians are encouraged to contact me regarding questions about materials, assignments and/or any concerns for this class. I recognize that students and/or parents may need to speak with me outside of normal school hours; this is especially true when it comes to homework/project questions. With this in mind, I do have a line set up for students and parents to call outside of school hours. The times this line should be utilized are between 2:30pm - 8:30pm Monday - Friday and 8:30am - 8:30pm Saturday - Sunday. I can not guarantee I will be available to answer the phone every time a student or parent calls, however the line is set up with voicemail, so if I am unable to answer the phone please leave a message clearly stating your name, issue, call back number and a good call back times and I will return the call at my earliest convenience. My student/parent line has been set up for years and I've never had any issues, however if I do experience problems with the abuse or misuse of my student/parent phone line, I reserve the right to terminate it.

I can be reached at school or by calling my student/parent line, all request for parent conferences must be scheduled through guidance.

Jean Ribault Senior High School # : (904) 924-3092 (ask for guidance)

Ms Thomas' Student and Parent Phone #: (904) 704-7604

Ms. Thomas' Email address:

*I highly recommend students and parents use email to contact me.

thomasb3@duvalschools.org

thomas@sciencewithmsthomas.com

*****Be sure to check out the class website: sciencewithmsthomas.com for class info, assignments, contact info, lecture downloads, and other great information!!!**

Class officers/Roles

Ms. Thomas' Class Officers Responsibility List

President

- The president is responsible for performing special tasks that the teacher needs completed, such as taking materials to office when needed.
- The president will also monitor all other officers to ensure their responsibilities are taken care of.
- The president will note concerns of fellow students and make sure they are communicated to the teacher.
- **The president is responsible for aiding the substitute upon Ms. Thomas' absence.**
- The president is responsible for holding special hearing sand elections at the request of the teacher.

Vice-President

- **The vice-president assumes all the responsibilities of the president when the president is absent.**
- **Performs the duties of any officer when they are absent.**
- Responsible for aiding the teacher in technology set ups when necessary.
- And all other duties as assigned by teacher.

Secretary

- Is responsible for keeping notes on special announcements teacher has.
- Is responsible for making "appointments" on behalf of class mates in the class appointment book.
- Is responsible for keeping the class notebook updated daily.
- **Is responsible for keeping daily agenda, standards, and homework recorded in class notebook.**

Sergeant at Arms

- Responsible aiding teacher in classroom management.
- Sergeant at arms politely reminds class when the volume has risen to unacceptable levels, and aids teacher in getting students attention when students need to focus on the teacher for special instructions.

Environmental Specialist

- This person is responsible for walking around the class and making sure class is clean.
- Environmental specialist will walk around and survey class 2 minutes before class is over and observe if all supplies are back in place, paper and miscellaneous trash are picked up off the floor, and check tables to make sure they are clean.
- **Students may not leave class until their area is clean... Students will be responsible for cleaning up their own areas to ensure they pass inspection.**

Distribution Manager

- Is responsible for distributing and collecting materials upon teacher's request.

Efficiency Manager.

- This student will follow the time line guides given by the teacher wand will use non-verbal communication to indicate to teacher when it is time to wrap up an activity.
- The teacher ultimately makes the final decision for time management; however the efficiency

manager will help the teacher remain on a tentative time frame.

Lab Safety Guidelines/Agreement

Lab Safety Student Safety Agreement Duval County (FL) Public Schools

The purpose of this document is to provide you with information and instructions about general safety procedures for science laboratory activities. You are expected to read, understand, and follow the safety rules below. Your parent or guardian is asked to read and sign also so he or she knows what the safety expectations are for your science class.

I shall:

1. Follow all instructions given by the teacher, including safety procedures.
2. Use only materials, equipment, and directions authorized by my teacher.
3. Not play around in the lab.
4. Protect eyes, hands, face, and body while conducting lab activities.
5. Wear approved safety goggles when lab activities involve chemicals, glassware, heat, and/or projectiles. (This includes those who wear glasses or contact lenses.)
6. Never enter the chemical storage area.
7. Never remove chemicals or equipment from the classroom or lab area.
8. Know the location and proper use of safety equipment: fire blanket, eyewash, safety shower, spill containment materials, and fire extinguisher. (Tampering with safety equipment is not allowed.)
9. Know the proper exit route in case of a fire or fire drill.
10. Never run if clothing should catch fire. (Smother the flame with a fire blanket or use the safety shower.)
11. Notify the teacher if there is a safety hazard.
12. Report any accident, injury, spills, or glass breakage immediately to the teacher. (Do not try to clean up broken glass yourself.)
13. Pull back and secure long hair and long sleeves.
14. Wear proper clothing and shoes for lab work (no open toe shoes, bulky winter coats, or long hanging jewelry).
15. Not chew gum or consume food or beverages in lab unless they are part of the planned activity and I have the teacher's approval to do so.
16. Never taste or sniff chemicals or touch chemicals with my bare hands. (If a lab requires you to detect the odor of a chemical and you are not allergic to it, use the wafting method taught to you by your teacher.)
17. Be careful when using a hot plate or Bunsen burner and not reach across an open flame. (Turn them off when not in use and do not leave them unattended.)
18. Point the open end of a test tube away from myself and others when heating it.
19. Not touch glassware that may still be hot. (Hot glass looks the same as cold glass.)
20. Be sure that electrical cords from hot plates, microscopes, computers, or other equipment are not in or near water or obstructing walking through the lab area.
21. Never work alone in the lab.
22. Clean my work area when finished and return supplies and equipment to designated places.
23. Wash my hands after lab activities.
24. For science projects, know which kinds of projects require prior approval from the Regional Science Fair committees (IRB/SRC) and which kinds of project should not be done at home.

IF YOU WEAR CONTACT LENSES, CHECK HERE: _____

LIST ALL ALLERGIES TO A SUBSTANCE OR ORGANISM HERE: _____

I have read, understand, and agree to follow the safety procedures stated above. I also agree to follow other written or verbal safety procedures specific to a particular lab activity.

Printed student name

Student signature

Date: _____

I have read the above safety procedures and discussed them with my student.

Printed parent or guardian name

Parent or guardian signature

Date

Lab Template

Use the following guidelines when ever you submit a formal Lab Write Up. A complete lab write up will include all of the following components:

Lab Report Template

Title:

** a brief, concise, yet descriptive title*

Statement of the Problem:

** What question(s) are you trying to answer?*

** Include any preliminary observations or background information about the subject*

Hypothesis:

** Write a possible solution for the problem.*

** Make sure this possible solution is a complete sentence.*

** Make sure the statement is testable.*

Materials:

** Make a list of ALL items used in the lab.*

Procedure:

** Write a paragraph (complete sentences) which explains what you did in the lab.*

** Your procedure should be written so that anyone else could repeat the experiment.*

Results (Data):

** This section should include any data tables, observations, or additional notes you make during the lab.*

** You may attach a separate sheet(s) if necessary.*

** All tables, graphs and charts should be labeled appropriately*

Conclusions:

** Accept or reject your hypothesis.*

** EXPLAIN why you accepted or rejected your hypothesis using data from the lab.*

** Include a summary of the data - averages, highest, lowest..etc to help the reader understand your results*

** List one thing you learned and describe how it applies to a real-life situation.*

**Discuss possible errors that could have occurred in the collection of the data (experimental errors)*

Aknowledgements:

I've read lots of books, talked with fellow educators, had many enlightening conversations with my students, and visited many educator websites to get ideas to help build my classroom culture and foundation. Below I have attempted to cite sources where I have found useful techniques and/or information pertinent to classroom logistics, management, and organization used in my classroom.

Curriculum and books

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Duval County Public Schools Science Curriculum/Department Team
Michael F. Fleming - Biology Teachers survival guide

Websites

Martin Teachworth <http://www.teachworth.info>

Bethune Science www.schoolscience.nice.edu/duker/thompson/board.html

Programs

CHAMPS management program

AVID Program (Science Strand 1)

Classroom expectations and models

Mrs. T Whitehurst's Pre-IB Biology Course

Mrs. Ellingson's Pre-IB Biology Course