

School: BASIS Chandler

Instructor: Theresa Gburek

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## Course Description

In 5th grade, Science is designed to prepare students for the intensive middle school science curriculum. Students will study the principles of chemistry, physics, biology, and space science. Scientific skills and principles will be taught with an emphasis on observation and on the scientific method. Organization, note-taking skills, and good study habits will also be emphasized.

## Grading Policy

Exams and quizzes: 70%

Assignments (homework, labs, projects, etc.): 30%

**Total: 100%**

All **exams** are multiple choice and will be announced no later than 5 days prior

All **quizzes** are unannounced (i.e. "pop" quizzes) and will be multiple choice, free response, or fill in the blank format. To optimize quiz performance, I encourage all students to stay current with their studies by reviewing their notes every night for a minimum of 10 minutes.

Grades can be rounded up at the end of the year based exclusively on effort, participation, and classroom behavior.

For more information regarding exams, quizzes, and assignments, please see the classroom policy section of this document. The grade for the course is calculated according to the rules established in the Parent-Student Handbook.

**Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.**

## Class Policy

**Assignments:** Homework is assigned to reinforce the concepts learned in class. Assigned work can be graded on completion or accuracy. I offer ample class time for students to work on their homework, lab assignments, and projects. In this manner, I am available to assist them with their work should they need help. Students should be taking home very little, if any, science homework. If a student is consistently bringing home large amounts of science homework it may be the case that they are not utilizing the class time provided in an efficient manner. Even if no homework is assigned, students are still expected to spend a minimum of 10 minutes each evening reviewing their notes from that day. This helps to reinforce the concepts they learned, keep them prepared for pop quizzes, and help them to identify concepts that they need additional help understanding.

**Exams and Quizzes:** Quizzes are meant to test the students present level of understanding. Students can expect a short 10 point quiz every Friday to test their understanding of the week's material. Students should review their notes for at least 10 minutes each night to stay current with their material. Exams occur 2 - 3 times per grading period and are announced no later than 5 days prior. Study guides are distributed no later than 3 days prior to exams.

**Exam corrections:** Students that score an 86% or lower on an exam may attend tutoring hours to correct their exam and earn partial credit back on their score. I chose 86% as the cut off to ensure that my tutoring hour is spent assisting students who are still struggling with the concepts they were tested on. Students that score an 86% or higher on their exams can improve their scores by participating in optional extra credit assignments.

**Extra credit:** There will be an extra credit assignment offered during each unit. All extra credit assignments are optional. Upon completion of an extra credit assignment the student will receive an extra credit ticket that they may then add to any exam, quiz, or assignment from the *current* grading period (e.g. students may not add extra credit to assignments from GP1 during GP2). However, extra credit slips do not expire so students may use them during a later grading period (e.g. students can use extra credit they earned during GP1 on an assignment during GP2). Extra credit slips cannot be reissued if they are lost.

**Attendance:** Attendance is essential to success. All students are expected to come to class prepared and make up work accumulated during an absence. If a student is absent, parents should follow the homework buddy procedure (see Parent-Student handbook) to obtain their students CJ entries and assignments from that day. Students will need to be proactive and schedule a time to make up any missed quizzes or exams upon their return to class. *NOTE: During this uncertain time absences and tardies may be unavoidable due to COVID. Therefore, this policy is subject to change to account for such instances.*

**Case-it/Accordion folder/Preparation:** Students are expected to have a "science" tab and/or "science" folder to store notes and assignments exclusive to science class. At the end of each unit, notes and assignments will be removed and stored at home to make room for new material. Students should come to class prepared each day with the CJ, a composition notebook exclusively for science, note packet for the current unit, pens, pencils, and at least one dry erase marker. Additional supplies may be required for some classes and students will note this in their CJs.

**Communication Journal:** Students must bring their Communication Journals each day. The Communication Journal is the primary method of communication between teachers and parents. Students are expected to write down homework assignments (HW), in class lessons (IC), and announcements. ***Parents, please review and sign your student's CJ to be informed of class assignments, activities, grades, and teacher notes.***

**Tutoring hours:** Tutoring hours for students will be held every Tuesday from 3:50pm - 4:50pm. Tutoring hours are not meant to "re-teach" a lesson. Students are encouraged to attend and do *not* need an invitation to do so, but they should come to tutoring hours prepared with specific questions or with an assignment they need help with. If students are unable to attend my tutoring hours they have the option to attend tutoring with our other Introduction to Science teacher Ms. Sanchez. Ms. Sanchez has tutoring hours on Tuesday from 7:30am - 8:20am.

**Parent hours:** I am available to meet with parents Wednesdays from 1:00pm - 1:50pm. Appointments must be made 24 hours in advance. Additional times are available upon request.

The Code of Conduct (see BASIS Charter Schools Parent/Student Handbook pages 17-29) and all school/classroom rules apply to online conduct in classes or activities where students use computer equipment to access the Internet, and when a student utilizes the School network to access the Internet. This includes compliance with the Technology Use Contract and Internet Safety policies and rules.

#### **Classroom expectations:**

- Be Respectful
- Be Responsible
- Be Safe
- Be Ready to Learn!

**Classroom discipline:** Students are expected to follow school rules in the Parent-Student Handbook as well as classroom rules set at the beginning of the year. Violation of school and/or classroom rules will result in one or more of the following consequences:

- Verbal Warning
- Note in the Communication Journal
- E-mail to notify parent/guardian
- Re-teaching of the rule on the student's time
- Exclusion from activities
- Changing of the seat assignment
- School service activity
- Referral to the Dean and/or School Director's office

**Lab experiments:** Laboratory activities and projects will occur frequently during our class. It is important for the safety of everyone to follow all instructions, written or verbal, when handling lab equipment or tools. ***Violations to rules may result in a failing grade for the activity and possible referral to the Dean and/or School Director for discipline violation.***

**Cell phones or electronic devices policy:** Cell phones are not allowed during school hours. They must be stored inside of the locker. Parents can reach students during an emergency through the school's office. Cell phones are not allowed for calculators. Smart watches are not allowed. Translating devices are permitted with teacher consent.

**Academic Integrity:** Plagiarism is the representation of another's words or ideas as one's own in any academic work. To avoid plagiarism, every direct quotation and paraphrase/summary must be identified with proper citations, which students will be taught.

Common forms of plagiarism may include:

- Copying from the internet,
- Copying from another student
- Failing to give credit for an author's ideas that you have quoted, paraphrased, or summarized in your own words
- Re-using your own work for multiple classes or assignments
- Knowingly misrepresenting quoted evidence

***Any suspicion of plagiarism may result in immediate referral to the Dean of Student Affairs and will be treated as a discipline violation (See Parent-Student Handbook).***

**Success in science:**

- **Review material nightly (at least 10 minutes) even if there is no official homework (super important!)**
- Use flashcards or other word-recall methods to learn vocabulary terms
- Have a folder and composition notebook dedicated exclusively to science
- Seek the help of the teacher during student hours
- Use the Communication Journal to write reminders or track progress on quizzes and tests
- Strive for **YOUR** best work at all times and always ask questions
- Parents should be checking the CJ daily for due dates and missing assignment notifications
- Most importantly; **HAVE FUN!!!**

**School supplies (for in-class students):**

- Tab and/or folder in the case-it or accordion folder dedicated exclusively to science class
- Composition notebook exclusively for science bell work
- Pencils, pens (at least 1 red pen), highlighters, and dry eraser markers
- Towel for cleaning dry erase boards (socks work great for this)
- 3X5 inch notecards (approximately 100 per grading period) to be left at home or in the locker until instructed to bring to class

**Requested donation/supplies:** We will be doing lots of experiments and hands-on activities. Therefore, we need lots of supplies for these activities and for cleaning up the enormous messes that we inevitable make (that's science for you)! The items we are currently most in need of are bolded in the list below. It is not required but GREATLY appreciated if every student could bring in one or more of the following items:

- **Paper towels**
- **Tissue boxes**

- **Clorox wipes**
- Disposable cups
- **Disposable plates/bowls**
- Disposable spoons
- Ziploc bags (all sizes)
- Hand sanitizer

## Instructional Materials

### Optional textbooks:

Type of Instructional Material: Optional Parent Purchase	
ISBN	9780328521005
Author	Scott Foreman
Title	Interactive Science, Grade 5
Publisher	Pearson Education Inc.
Strategy	Optional purchase

Type of Instructional Material: Provided by school	
ISBN	9780328455836
Author	Scott Foreman
Title	Science 2010 Edition, Grade 5
Publisher	Pearson Education
Strategy	Provided to students by school. Remains in the classroom

***The suggested textbooks will only supplement the teacher's notes, lab activities, and handouts provided in class. There is a classroom set of 'Science 2010 edition Grade 5' available to students at school but parents may choose to purchase a textbook to keep at home. The curriculum used in this course has been developed from several different academic resources by many Introduction to Science teachers throughout the years. Each unit has been carefully created to provide students with diverse and comprehensive resources consisting of a note packet, accompanying power point lecture, laboratory activities, and projects for them to refer to when preparing for their exams.***

*Additional software and online resources and videos will be utilized throughout the year including but not limited to:*

[www.brainpop.com](http://www.brainpop.com)

Various educational clips from Netflix and YouTube

*Planet Earth* segments

Bill Nye the Science Guy

## Other Information

### **Contact Information:**

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**Statement of assurance: This course is aligned to the Arizona Academic Standards. The topics covered meet or exceed the grade level standards for Strands 1, 2, 3, 4 (life science) and 5 (physical science)**

*\*This document is subject to change at the teacher's discretion.*

# Syllabus Outline Lesson Units

## Nature Of Science

Students will review and practice scientific methodology including the skills of: asking questions that can be answered scientifically, creating procedures for investigations, collecting fair, repeatable data, analyzing data (both conceptually and mathematically) and communicating the data using graphs and evidence-based writing.

## Biology

In the Biology Unit students will focus on learning the classification framework that scientists use to classify life forms. Students will learn the basics of cell structure and how cells have differentiated to perform different functions for living organisms. Students will study major plant groups and their survival strategies. They will also study animals with an emphasis on how learned vs inherited behaviors are adaptations to specific ecosystems. Finally, students will study human anatomy with an emphasis on learning the systems of the human body.

## Chemistry

Students will understand that the Universe is composed of substances built from the elements listed on the Periodic Table. They will acquire a working knowledge of the organization and predictive nature of the Periodic Table. They will begin describing substances both quantitatively and in terms of physical properties. Students will be able to describe and predict how substances might behave when combined.

## Physics

1. Students will learn the different forms of energy, the conversions between different energy types and how we harness these energies to make electrical energy.
2. Students will learn about how electricity and magnetism are related, and how we harness magnetic fields to generate electricity in society.
3. Students will apply their skills of dimensional analysis to convert between electrons, Coulomb's and Faraday's.
4. Students will learn about electricity and how to calculate voltage (Joules/Coulomb), amperage (coulombs/second), Resistance using Ohm's law ( $V=IR$ ), energy, power and how to calculate voltage, current and amperage of basic parallel and series circuits.
5. Students will learn how to use Newton's three laws and how to calculate balanced and unbalanced forces.
6. Students will use Joules law to calculate the work needed to move a load a certain distance ( $W = F \times d$ ), how simple machines exchange force for distance and how to calculate input forces, output distance and mechanical advantage of levers and pulleys.
7. Students will learn how to calculate the units of velocity, acceleration and momentum.
8. Students will finish of the physics unit with Frequency, wavelength and speed of light calculations ( $C = F\lambda$ )

## Space Science

Students will learn that the earth and its solar system are a small part of many galaxies in the Universe. Students will master the units of time associated with the relationships between planetary bodies such as the day, month and year. Students will learn how the force of gravity functions in our solar system. Emphasis will be on the patterns associated with the movement of objects in our solar system, including the seasons. Students will be able to use models to explain these relationships.

## State Testing Review

1. Students will learn and prepare for their state test in these two weeks.

## **BLT Review**

Students review for the BLT. Students will complete teacher led review as well as self-guided review.

## **Project Week**

Project Week is an opportunity to learn outside the normal classroom structure. Each school sets Project Week up differently.