

# Sharyland North Jr. High 8th Grade Science/PreAP Science 2020-2021

## 8th Grade Science

Sharyland North JR. HIGH

2020-2021

**Instructor: Marina Aguilar**

**Class Schedule: Monday-Friday**

**Office: 5100 Dove Ave, Rm. # 121**

**1<sup>st</sup>- Science Reg.**

**5<sup>th</sup>- Science Inclusion**

**Phone: 686-1415 (Ext: 3567)**

**2<sup>nd</sup>- Science Reg**

**7<sup>th</sup>- Science Reg**

**HW website: [www.Sharylandisd.org](http://www.Sharylandisd.org)**

**3<sup>rd</sup>-Science Pre-AP**

**8<sup>th</sup>- Science Pre-AP**

**E-Mail: [maguilar@sharylandisd.org](mailto:maguilar@sharylandisd.org)**

**4<sup>th</sup>- Conference**

**9<sup>th</sup> – Science Reg**

### Course Overview:

Grade 8 science is interdisciplinary in nature; however, much of the content focus is on earth and space science. National standards in science are organized as multi-grade blocks such as Grades 5-8 rather than individual grade levels. In order to follow the grade level format used in Texas, the various national standards are found among Grades 6, 7, and 8. Recurring themes are pervasive in sciences, mathematics, and technology. These ideas transcend disciplinary boundaries and include change and constancy, patterns, cycles, systems, models, and scale. Strands in 8th grade science are the following:

(A) Scientific investigation and reasoning.

(B) Matter and energy. Students recognize that matter is composed of atoms. Students examine information on the Periodic Table to recognize that elements are grouped into families. In addition, students understand the basic concept of conservation of mass. Lab activities will allow students to demonstrate evidence of chemical reactions. They will use chemical formulas to identify substances.

(C) Force, motion, and energy. Students experiment with the relationship between forces and motion through the study of Newton's three laws. Students learn how these forces relate to geologic processes and astronomical phenomena. In addition, students recognize that these laws are evident in everyday objects and activities. Mathematics is used to calculate speed using distance and time measurements.

(D) Earth and space. Students identify the role of natural events in altering Earth systems. Cycles within Sun, Earth, and Moon systems are studied as students learn about seasons, tides, and lunar phases. Students learn that stars and galaxies are part of the universe. In addition, students use data to research scientific theories of the origin of the universe.

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Students will illustrate how Earth features change over time by plate tectonics. They will interpret land and erosional features on topographic maps and satellite views. Students learn how interactions in solar, weather, and ocean systems create changes in weather patterns and climate.

E) Organisms and environments. In studies of living systems, students explore the interdependence between these systems. Students describe how biotic and abiotic factors affect the number of organisms and populations present in an ecosystem. In addition, students explore how organisms and their populations respond to short- and long-term environmental changes, including those caused by human activities.

[Texas Education Agency: Middle School Science](#)

## Timeline:

Scientific investigation and reasoning are taught and tested throughout all instructional units.

1st Grading Period: Atomic Structure, Periodic Trends

2nd Grading Period: Chemical Reactions, Measuring & Describing Motion, Laws of Motion

3rd Grading Period: Plate Tectonics, Topographic Maps, Changes to Landforms

4th Grading Period: Climatic Interactions, Sun, Earth, & Moon Systems, Characteristics of our Universe, Theories & Evidence of our Universe,

5th Grading Period: Interdependence of Living Systems, 7th grade gap content\*, Spiral Review

6th Grading Period: Spiral Review, Experimental Design

PreAP: Students in the preAP course will have additional independent work designed to develop skills in research and the writing of scientific reports. This additional work will occur throughout the school year and be embedded in all instructional units.

## Required Materials:

- Technology with internet access
- Headphones
- Access to school Google Accounts

- 1 single subject notebook
- Colored pencils
- Highlighters
- Glue

**Grading Procedures:** Please reference SISD grading policy. Academic dishonesty will result in a failing grade for the assignment. Missed deadlines may result in point penalties. Students must follow teacher directions for reteach tutorials and or mini-lessons prior to being re-tested.

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Class participation is an important part of this course. Participation occurs in class dialogue, shared writing and speaking exercises, and safely conducted science investigations. Attendance is key to making the most of this course.

An interactive digital science notebook will be kept for each unit and all notebooks should be filed within a folder titled "My Digital Science Notebooks". Reference back to these notebooks will be a key part of end of school instructional units and spiral review activities.

\*7th grade gap content will be determined by pre-tests and teacher observations. All gaps in student learning will be addressed throughout the year, but during spiral review we will focus on gaps that are still evident in student learning.

## Science Safety Contract

Please follow the link provided above. Read, fill in blanks, sign, and return the safety contract prior to any science investigations done either at school or at home. Specific deadlines will be announced in your scholar's Google Classroom.

### Classroom and Lab Policies & Procedures

#### A. Major Assignments: 60%

##### I. Tests & Projects:

A. Test will be given upon completion of a chapter or unit.

B. Ample time will be allowed in class to review the test.

C. Reteaching and retesting will be done according to District/school policy.

D. Retesting does not apply to class work, homework, lab work, projects, and quizzes.

#### B. Minor Assignments: 40%

##### II. Class work & Homework:

A. Class work & Homework may include any other activity the teacher chooses to label as Class work.

B. Assignments are due at the beginning of the class.

C. Late work will be accepted according to the district's grading policy.

D. The policy for accepting the late work due to excused absences follows the District/school policy.

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**Parents/Guardians:** Please review the information above and sign off on the following items. Reach out to me through your student if any of these items are not true for you or do not make sense to you at this time.

1. I have read the Science Safety Contract and understand the basics of keeping my scholar safe, and holding my scholar accountable for staying safe, during a science investigation.
2. I can provide the materials required for this course. I understand that my scholar's campus will provide any needed technology, including a wi-fi hotspot, as needed for use during this academic school year.
3. I know that my scholar will be keeping digital science notebooks throughout the school year, and that my scholar will need to be able to access these digital notebooks after they have completed them.
4. I know that my child will need a single subject notebook OR a folder to place hard copies of study aides that will be needed throughout the year and to provide an option to digital work on some occasions.
5. I know how to view my student's Google Classroom summaries.
6. I know how to reach my student's teacher through email or Remind.

I, \_\_\_\_\_ (Full Name of Legal Parent/Guardian) understand items 1-6 listed above.

OR

I still need help with item(s): 1 2 3 4 5 6 (circle please)

The best way to reach me if my scholar needs extra help is:

