Earth and Space Science Syllabus

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Earth Science is the study of the Earth and its neighbors in space. Nearly everything we do each day is connected in some way to Earth: oceans, atmosphere, plants and animals. This course will focus on the four basic areas of Earth Science: geology, oceanography, meteorology and astronomy. This is an exciting science with many interesting and practical applications, which we will look at in more detail. Students will explore scientific method, structure and models of the Earth, properties of the ocean floor, atmospheric forces dealing with climate and weather, as well as the night sky as it relates to our solar system. This year will be filled with a variety of venues to challenge and support the student, as well as to develop and solidify a passion for the scientific world.

- Earth and space science is a year long, general education, science lab course. There is an SOL Test.

Goals:
- Expand our understanding of Earth and its history and dynamics.
- Provide an interactive, collaborative and productive work environment that supports the learning of the four disciplines: geology, oceanography, meteorology and astronomy.
- Strengthen verbal, non-verbal, written and visual communication skills by way of projects, presentations, and group work.

Schedule:

Unit 1: (September – January) SOL Standards- ES.1, 2, 4, 5, 6, 7, 8, 9, 10, 12
- Scientific method & design - measurements
- Studying the Earth- models, systems, mapping
- Composition of the Earth- chemistry, minerals, rocks, resources and energy
- Geologic history of the Earth- the rock record, absolute and relative dating
- Dynamic Earth- plate tectonics, earthquakes, volcanoes, Virginia geology
- Reshaping the crust- weathering and erosion, rivers, groundwater, glaciers, wind

Unit 2: (February – March) SOL Standards- ES.1, 2, 5, 7, 10
- Oceans- properties of the ocean floor, water movement, currents waves and tides.

Unit 3: (March – April) SOL Standards- ES.1, 2, 11, 12
- Atmospheric Forces- characteristics of the atmosphere, layers of the atmosphere, circulation, precipitation, weather, air masses and fronts, instruments for weather study, climate.

Unit 4: (April – June) SOL Standards- ES.1, 2, 3, 13
- Astronomy- studying space, the night sky, history, planets, the solar system, the sun, stars, galaxies and the Universe

*Note: Order, timing and content subject to reasonable revisions.

Materials:
For this class, you will need the following items:
- 1.5 inch three ring binder for handouts, tests and quizzes
- College-ruled notebook
- Notebook paper
- Pencils or Pens

Being prepared for class with the required materials will contribute towards your class participation grade.

Grading:
- Class work/Participation: 35%
- Labs/Projects: 30%
- Tests/Quizzes: 25%
- Homework: 10%

*Student grades reflect student achievement and not student behavior.

Year Grade: 20% for each quarter and 20% for the final exam. Students with a grade of an “A” for all four quarters will be exempt from the final exam.

Late work: after due date, but within one week will be counted for half credit, after one week will count as a zero. Work missed due to an excused tardy or absence can be made up with a one-week grace period for full credit. It is the responsibility of the student to pick up missing work from the classroom.

The Arlington Public Schools Grading Scale:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentages</th>
<th>Quality Points (GPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
<td>4.0</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>3.5</td>
</tr>
<tr>
<td>B</td>
<td>80-86</td>
<td>3.0</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>2.5</td>
</tr>
<tr>
<td>C</td>
<td>70-76</td>
<td>2.0</td>
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<tr>
<td>D+</td>
<td>67-69</td>
<td>1.5</td>
</tr>
<tr>
<td>D</td>
<td>60-66</td>
<td>1.0</td>
</tr>
<tr>
<td>E</td>
<td>0-59</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Quarterly grades will round up when the percentage is .5 or higher.

In addition to achievement, work habits as noted in the report card comments will be evaluated for each course using the following symbols:
- + - Surpasses Expectations
- # - Meets Expectations
- ^ - Approaching Expectations
- N - Needs Improvement

The final grade is required to be calculated using the quality points and not percentages, letter grades, number or point systems.
Expectations:
It is the responsibility of the student to come in and ask questions if there is any confusion with assignments or material. Be prompt, be prepared, be polite, be respectful, and be productive.

Academic Integrity:
In this course, collaboration among students is encouraged for labs and class activities. However, copying another’s work or allowing your work to be copied is not acceptable and is a violation of Yorktown’s academic integrity policy. Students will be asked to sign an honor pledge for each major assignment. By signing the pledge, students acknowledge their understanding of the honor policy and that they have not violated that policy in any way. The pledge states either:
“On my honor, I pledge that I have neither given nor received information on this assignment.”
or
“On my honor, I pledge that I have given (received) information on this assignment to (from) the following individual(s)...”

Help Sessions:
Students are encouraged to come in before school, during lunch or after school to review and refine their understanding of the material. Students are encouraged to use this time to ask questions that may have not been covered in class, seek clarifications on assignments, or have an opportunity to complete work in a quiet environment with the opportunity to ask for help from the teacher. After school help will be made available every Monday in room 365, so please take advantage of this.

I look forward to a fantastic year with each of you!! These procedures are in place to ensure a maximum amount of learning and success for each student. If there are any concerns with these expectations, please return a note from the parent/guardian specifying the student need.

I have reviewed the attached syllabus and understand what is expected of me in Earth and Space Science.

Student Name: ___________________________________________ Period: ________

Student Signature: ___________________________________________ Date: __________

Parent/Guardian Name: ____________________________________________

Phone Number: __________________________ Email Address: ____________________________

Parent/Guardian Signature: ___________________________ Date: ________________