

# Foothills Composite High School

Science 10

### Teacher: Mr. K. Jones

**Quarter:** Fall Quarter

**School Year:** 2020-2021

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**Science 10 Unit Overviews and General Outcomes**

Unit: A **Energy and Matter in Chemical Change (Text Unit 1)**

1. Describe the basic particles that make up the underlying structure of matter, and investigate related technologies
2. Explain, using the periodic table, how elements combine to form compounds, and follow IUPAC guidelines for naming ionic compounds and simple molecular compounds
3. Identify and classify chemical changes, and write word and balanced chemical equations for significant chemical reactions, as applications of Lavoisier's law of conservation of mass

Unit: B **Energy Flow in Technological Systems (Text Unit 2)**

1. Analyze and illustrate how technologies based on thermodynamic principles were developed before the laws of thermodynamics were formulated
2. Explain and apply concepts used in theoretical and practical measures of energy in mechanical systems
3. Apply the principles of energy conservation and thermodynamics to investigate, describe and predict efficiency of energy transformation in technological systems

Unit: C **Cycling of Matter in Living Systems (Text Unit 3)**

1. Explain the relationship between developments in imaging technology and the current understanding of the cell
2. Describe the function of cell organelles and structures in a cell, in terms of life processes, and use models to explain these processes and their applications
3. Analyze plants as an example of a multicellular organism with specialized structures at the cellular, tissue and system levels

Unit: D **Energy Flow in Global Systems (Text Unit 4)**

1. Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of humans and other species
2. Analyze the relationships among net solar energy, global energy transfer processes - primarily radiation, convection and hydrologic cycle - and climate.
3. Relate climate to the characteristics of the world's major biomes, and compare biomes in different regions of the world

**Tentative Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| Text Unit | Units of Study | Approximate # of Classes | Final Weighting (%) |
| A | Energy and Matter in Chemical Change | 14 | 21 |
| B | Energy Flow in Technological Systems | 11 | 21 |
| C | Cycling of Matter in Living Systems | 9 | 21 |
| D | Energy Flows in Global Systems | 2 | 7 |
|  | Final Test |  | 30 |

**Course Evaluation**

**Unit Evaluation**

Topic assignments, quizzes, performance tasks, projects

Unit assignments, etc 50%

Unit Exams 50%

**Internet Resources**

**Class Website**: <http://science10jones.weebly.com/>

**Remind:**

To: 403-409-1225

Message: @hhedkee

App Code: rmd.at/hhedkee

**Google Classroom Access code:**

tw4qkxj

Extra help can be obtained outside of class time if needed. Here is where you can find it.

* Your Teacher – Talk to me to schedule extra help sessions or try stopping by the classroom before or after school, or at lunchtime to see if I am available on short notice.
* Other Teachers – Other teachers in the science department are often available for extra help if I am not. Please do not hesitate to ask other teachers for help.
* Flex Block