**Challenger Middle School Course Syllabus Course Name: \_\_Science Grade: \_\_7th\_**

**Quarter 3 Start Date: January 31, 2024 Quarter 3 End Date: April 12, 2024**

**Quarter 4 Start Date: April 15, 2024 Quarter 4 End Date: June 14, 2024**

**7th Science**

**District Course Code:** Q700SC2

**CEDARS Course Code:**

**Certificated Teacher:** Angela Tice

**Grading:** A, B, C, D, F

**Course Description:**

***Chemical Superpowers Unit -*** Unit Driving Question - How can we use chemistry superpowers to solve a local problem?

**Module 1 -** In the first module, students are introduced to the unit and project. They investigate characters with superpowers and explain whether their superpowers can be explained by science - or science fiction.

**Module 2 -** In this module, students learn about chemical reactions and the unobservable and observable signs that help determine whether a reaction has taken place.

**Module 3 -** In this module, students research synthetic materials to design their superhero outfit and create the final project products that they’ve been working towards in the previous modules.

**Final Project -** Students create an online comic or animation to share their chemistry superpowers with the community.

***Habitat Wanted Unit -*** Unit Driving Question - After a habitat is destroyed, what do animals need to survive in a new place?

**Module 1 -** In this module, students will begin thinking about the needs of organisms as they learn about animals that were displaced in Hurricane Harvey in August 2017.

**Module 2 -** In this module, students begin making connections among several factors in an ecosystem. They explore matter and energy and investigate food webs as a model of how matter and energy move through an ecosystem.

**Module 3 -** In this module, students use their existing knowledge of ecosystems and explore the impacts of humans on ecosystems. They will explore new ecosystems and identify patterns of interactions within them.

**Module 4 -** In this module, students synthesize, reflect upon, and share what they have learned. They will revisit the bats of the Houston overpass and create their final explanatory models.

**Final Project -** In the role of habitat experts, students design a habitat plan for animals displaced by a natural disaster.

**Text/Resources Provided:**

Course materials in class canvas course and supplies required for each lesson.

**Online resources:**

Class Canvas Course.

**Common Core Standards Addressed In This Course :**

**Quarter 3: Priority Standards**

| **MS-PS1: Matter and Its Interactions** | |
| --- | --- |
| **MS-PS1-1** | Develop models to describe the atomic composition of simple molecules and extended structures. |
| **MS-PS1-2** | Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. |
| **MS-PS1-4** | Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. |
| **MS-PS1-5** | Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. |
| **MS-PS1-6** | Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. |

**Quarter 4: Priority Standards -**

**MS-LS2-3** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts

of an ecosystem.

**MS-LS2-5** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

**Course Objectives:**

To pass this course, the student will demonstrate mastery of standards through assignments, projects and/or assessments:

**Quarter 3:**

Chemistry Superpowers -

Module 1: What superpowers can be explained by physical changes?

Module 2: How can we explain superpowers with our knowledge of chemical reactions?

Module 3: What's our superpower solution to a local problem - and how will we tell the story?

**Quarter 4:**

Habitat Wanted -

Module 1 - How can understanding systems help us save our animal?

Module 2 - How can understanding matter & energy help us provide our animal with what it needs?

Module 3 - How can we predict how living things will act in new systems or in different

circumstances?

Module 4 - How can we share our learning about habitats & ecosystems with others?

**COURSE GRADE REQUIREMENTS**

**Standards-Based Grading:**

Grading will be standards based. All assignments are expected to be completed to standard; this is a "B". "A" is exceeding standards; demonstrating a deeper and extended understanding of the material. If tests/projects do not meet standard they will need to be revised within the grading period.

**Formative Assessment – 20%:** This includes assignments that assess student learning of a concept and may be a worksheet, team projects, or a quiz.

**Summative** **Assessment- 80% of grade:** Students **CANNOT** pass without passing the assessments. Included are: tests, essays, and projects. Assessments are directly tied to one or more standards.

**Make up/Retake policy**: All tests can be retaken until the student demonstrates mastery of the content. Retake opportunities may require extra preparation.

**Grading Scale: This year we are transitioning to a 4 point standards based scale, similar to what is used in elementary school.**

| **22-23 CHALLENGER MIDDLE STANDARDS-BASED GRADING SCALE** | | | |
| --- | --- | --- | --- |
| **SBG SCORE** | **DESCRIPTION** | | **LETTER ALIGNMENT** |
| **4** | **Exceeding Standards -** Consistently meets requirements for exceptional work related to course standards and demonstrates a deep level of knowledge and skill | | A  80-100 |
| **3** | **Meeting Standards -** Consistently meets most requirements for proficient work related to course standards and demonstrates grade level knowledge and skills | | B  60-80 |
| **2** | **Approaching Standards -** Consistently meets some requirements for proficient work related to course standards and demonstrates some grade level knowledge and skills | | C  40-60 |
| **1** | **Attempting Standards -** With or without consistent support student is making limited progress towards standards - progress report meeting required | | D  20-40 |
| **0** | **Insufficient Evidence -** With consistent help, no  demonstration of key standards - progress report meeting required | | F  0-20 |

**Academic Honesty:**

We are here to learn and grow as scholars and as such strive to produce our best original work. We will be exploring the concepts of plagiarism, cheating, and academic integrity throughout our courses.

Progress and course assignment/project completion will be evaluated at least monthly by the teacher.

**Classroom Expectations and Norms:**

**Expectation:**

If what you are doing: INTERFERES with learning, HURTS someone's heart, PREVENTS you from being your best self… You shouldn’t be doing it!

**Norms:**

* Everyone has the right to be heard.
* Be respectful while still being critical.
* No name calling.
* One person speaks at a time.
* Hold yourself and each other to high standards of excellence at all times.
* Have the humility to recognize that you do not know everything and that everyone can stand to improve.
* Recognize that everyone will start from different bases of knowledge.