# Mr. Nobbe’s Syllabus: 8th grade science

**Overview:**

Welcome to the wonderful and exciting world of scientific exploration. We will be investigating several big ideas in science. During the first semester you will learn how to investigate scientifically, gain a deep understanding of scientific knowledge, and evaluate the properties of matter, human impacts on earth, and how life has changed over time. Second semester you will take a journey into understanding genetics and inheritance of your traits, as well as the process of evolution.

| **1st semester:**  1st 9 weeks:   * Scientific practices and investigations * Chemical and Physical Changes * Matter and basic chemistry   2nd 9 weeks:   * Weather and Climate * Ecology: Human impact on earth | 2nd semester:  3rd 9 weeks:   * Protein Synthesis * Genes and Heredity   4th 9 weeks:   * Evolution and Natural Selection * Taxonomy |
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**Textbook:**

Each student will be provided with their on physical copy Elevate Science by Savvas

The online version can be accessed by the link provided on google classroom

Chromebooks need to be in class and fully charged every day.

**Warrior Way:**

**Be present:**

* Please be in the classroom door before the tardy bell starts to ring.
* Have all your supplies for class
* Be attentive, participate, and be prepared

**Be Pro-Active:**

* Ask questions, raise your hand, participate, and don’t be afraid to ask for help.

**Be respectful:**

* Respect other students and their personal space
* Refrain from interrupting others, talking out of turn, spraying unwanted perfume and deodorizers in the classroom, writing notes, dropping books, making fun of others, or making noises
* Use school appropriate language and gestures
* Stay in your seat unless you have permission from the teacher to get up
* Always treat others the way you want to be treated
* Get to know each other and strive to work together

**Be responsible:**

* Bring all materials to class (textbooks, writing utensil, science notebook and binder, highlighter, and erasers).
* Write down agenda and due dates of assignments
* Turn in all work on time, study for tests and quizzes, ask for help and stay for tutoring if you don’t understand, and let the teacher know if there is a problem
* Take responsibility for your actions, good and bad.

**Be positive:**

* Always look for ways to be better, productive, helpful, and studious.

**Behavior consequences:**

Please refer to your student handbook for all expectations:

On the third log of breaking the rules, or not following any of the expectations, a phone call home or email will occur. This includes tardiness, late work, poor grades, and attitude as well.

**Grading:**

1. **Redo’s:**
   1. At teacher discretion
   2. Student has to show sincere effort(completing assigned work) in preparing for the assessment
   3. The original test score will be averaged with the retake, and that score then replaces the original.
   4. In order to retake, students will need to do corrections, get extra help through FIT or homeroom and be prepared to do better
   5. Retakes will need to be redone in a timely fashion
2. **Late work:**
   1. Is accepted until the final assessment of the current EL
   2. The teacher reserves the right to make exceptions based on individual student circumstances
3. **Absences: (Almost all assignments,assessments, and bellwork will be posted on google classroom)**
   1. All assignments missed during an absence must be made up
   2. Assignments that are due the day you missed will be due the next class period you attend
   3. If work was assigned while you were absent you will have as many class periods as you missed to turn in your work.
   4. If you need to leave school early before this period it is your responsibility to get all assignments before you leave.
4. **Extra credit:**
   1. Will not be offered
5. **Assessment Weights:**

| **Minor (30%)** | **Major (60%)** |
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| * Vocab quiz * Exit tickets * Graphic organizers * Bellwork * Below/Approaching Proficiency Quiz * Quizzes * In-class minor projects   + Ex. Meiosis Models * Labs/ in class Activities * In class group work * Content Literacy | * Unit Tests * Own experiment, results and graphing assessment * Mystery Powder Lab * Balancing Chemical equations assessment * Human Impact assessment * Develop and make own Cladogram * Darwin RACE paragraph * Natural Selection Case Study * Epidemic Persuasive Essay * Hela Cells RACE * Trisomy Disorder assessment * Punnett Square story problems * Major Projects |

* EL % breakdown by semester:

| 2023-24 Semester 18th Grade Science: Essential Learning Concepts | | | |
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| Physical Science | | | |
| **EL** | **Weight** | **Standard** | **Description** |
| **1** | 25% | MS.PS1.2  MS.PS1.4  MS.PS1.3 | **Chemical and Physical Changes/Properties**: (**Chemical Reactions)** Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. Develop a model that predicts and describes the changes in particle motion, temperature, and state of matter when thermal energy is added or removed. |
| **2** | 25% | MS.PS1.1  MS.PS1.5 | **Atoms, Chemical Reactions, and Conservation of Mass**: Develop models to describe the atomic composition of simple molecules and extended structures. 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 (Balancing Chemical Equations) |
| **Earth and Space Science** | | | |
| **3** | 15% | MS.ESS2-4.  MS-ESS2-5  MS-ESS2-6 | **Weather and Climate Change:** Compare and contrast data in relation to the theory of climate change. Collect data to provide evidence  for how the motions and complex interactions of air masses results in changes in weather conditions.Develop and use a model to  describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. |
| **4** | 20% | MS.ESS3.3  MS.ESS3.4  MS.ESS3.5  6-8.ETS1-1. | **Human Impact**  Compare and contrast data in relation to the theory of climate change. Research and construct an argument of how human consumption of finite natural resources and human activities have had an impact on the environment. |
| **Literacy** | 5% | Content Literacy | |

| Life Science | | | |
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| **EL** | **Weight** | **Standard** | **Description** |
| **5** | 25% | MS-LS3.1 | **Genetic Coding and Protein synthesis (DNA, Mutations, and Protein Synthesis)** : Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins, and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. |
| **6** | 25% | MS-LS3.2  MS-LS1.5 | **Genes and Heredity** Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation (mitosis, meiosis, and mendelian genetics) |
| **7** | 25% | MS-LS1.4  MS-LS1.5  MS-LS4.1  MS-LS4.3  MS-LS4.4  MS-LS4.5  MS-LS4-6. | **Evolution and Natural Selection:** Constructing an argument and explanation using empirical evidence, fossil record data, embryological evidence, population genetic variation, and anatomical evidence to show some individuals probability of surviving and reproducing in a specific environment. |
| **8** | 10% | MS.LS4.2  MS.LS4.3 | **Taxonomy and Anatomical Structures:** Construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships. |
| **Literacy** | 5% | Content literacy | |

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1. **Grading scale:**

A 92.5-100

A- 92.4-90

B+ 89.5-86.5

B 86.49-82.5

B- 82.49-79.5

C+ 79.49-76.5

C 76.49-72.5

C- 72.49-69.5

D+ 69.49-66.5

D 66.49-62.5

D- 62.49-59.5

F 59.49 and under

1. Grades can be accessed by going to CPMS web page

**Supplies**

| **Supplies Needed by Monday August 1st:**   1. Pens/pencils (pencil bag) 2. Science notebook    1. **1 needed each semester** 3. Highlighter 4. Glue sticks, color pencils or markers 5. scissors 6. ruler 7. Calculator 8. **Wired headphones** | **Supplies form each period:**   * 1st period: 2-3 tissue boxes * 2nd Period: 2-3 tissue boxes * 4th Period: 2-3 tissue boxes * 5th Period: 2-3 tissue boxes |
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**Contact information:**

Email address: [nnobbe@cpcsc.k12.in.us](mailto:nnobbe@cpcsc.k12.in.us)

Phone number: 535-2025 ex:6686

Website: mrnobbe.weebly.com