Syllabus

v-sci

Teacher Information: Greg Veayo
Room: #21
Email: gveayo@mtbluersd.org
Website www.v-sci.com

Learning Target Calculation (mean)

Course Score Calculation (mean)

Late Work Procedures:

- For late/missing formative and summative assignments:
  - A zero will be entered for the score (NM for the learning target) **and** a missing and/or late assignment symbols.
  - Zero will act as a placeholder until the assignment is passed in.
  - Formative and summative assignments will be accepted within three class periods.
  - After three class periods have passed and assignment is still not completed, a final grade of 50 and Not Met for the learning target on the specific assignment will be given.
  - Extensions beyond the three class period rule will be at the teacher's discretion on a case-by-case basis.

Reassessment and Revision Procedures:

- If a student wishes to retake or resubmit a summative assessment (major project or test):
  - Students must complete a mutually agreed upon reassessment and revision plan with their teacher.
    - Plans created with teacher will include deadlines, necessary steps to show improved learning, and appropriate setting (PASS, learning lab, etc.).
    - Opportunities to retake or revise will be available for three class periods after the assessment has been returned to the student.

- Reassessment and revision opportunities will be given at the discretion of the teacher and are not guaranteed.

Habits of Work Expectations:

- ❏ You will need a (MPM) on Habits of Work (HOW) for each class to be eligible to participate in co and extracurricular activities.
- ❏ Habits of work in this class will look like:

	Exceeds	Meets	Partially Meets	Not Met
Work Ethic	Perform above expectations.	Complete the assignment fully.	Make an attempt to truly complete an assignment.	
Communication				
Learner Focus				

Content Standards* and Learning Targets

Grade 7

SCI. 6-8.LS.01.01					
Life Science : Cells : I can describe the structure and function of cells at the cellular level					
Learning Target 1 : I understand common structures found in cells.					
4 Rigor:	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Comprehension	2 Rigor: Comprehension	1

Student understands the functions of organelles in plant and animal cells (mitochondria, nucleus, etc.)		I understand common structures found in cells.	Student understands the term organelle and the names of the organelles found in a cell. Understands the differences between plant and animal cell organelles and is able to label a diagram of a plant and animal cell	With support student understands the term organelle and the names of the organelles found in a cell. Understands the differences between plant and animal cell organelles and is able to label a diagram of a plant and animal cell	With support student is unable to recall the terms or label.

SCI. 6-8.LS.01.02					
Life Science : Cells : I can describe the structure and function of cells at the cellular level					
Learning Target 2 : I understand that cells are the smallest units of life that perform all of the functions of living things.					
4 Rigor:	3.5 Rigor: Analysis	3 Rigor: Analysis	2.5 Rigor: Comprehension	2 Rigor:	1
	Independently: **Understand** the differences between multicellular and unicellular organisms.	With support: Has 3.5 content	Independently: **<u>Understands</u>** the cell is the basic unit of structure in all living things. **<u>Knows the terms:</u>**	With support: meets the 2.5 content	Does not have: The 2.0 content even with support

	Understand the differences between prokaryotic and eukaryotic		multicellular, unicellular, prokaryotic and eukaryotic		

SCI. 6-8.LS.02.01					
Life Science : Human Bodies : I understand the organization of the human body and the relatedness between structure and function					
Learning Target 1 : I understand that the human body strives to achieve a stable internal environment and is in a constant state of change.					
4 Rigor:	3.5 Rigor:	3 Rigor: Analysis	2.5 Rigor: Comprehension	2 Rigor: Comprehension	1
	Independently: Understand how body systems interact to maintain homeostasis and keep a human alive	With support: Has the 3.5 content	Independently: Understands the term homeostasis	With support: meets the 2.5 content	Does not have: The 2.5 content even with support

SCI. 6-8.LS.02.02					
Life Science : Human Bodies : I understand the organization of the human body and the relatedness between structure and function					
Learning Target 2 : I understand that the human body is made up of systems that work together to maintain homeostasis. **(Grade 7)**					
4 Rigor:	3.5 Rigor:	3 Rigor	2.5 Rigor:	2 Rigor: Retrieving	1 Rigor: Retrieving
	Independently: Will explain what happens	With support: Has the 3.5 content	Independently: Will construct a presentation that	With support: Has the 2.5 content	Does not have: The 2.5

	when the body is not in homeostasis and what the body will need to do to get back to this state		shows how 2 body systems working together can maintain homeostasis		content even with support

SCI. 6-8.LS.03.01					
Life Science : Ecology : Describe and analyze the interactions, cycles and factors that affect ecosystems					
Learning Target 1 : I understand that living and nonliving factors impact ecosystems. **(Grade 7)**					
4 Rigor:	3.5 Rigor:	3 Rigor	2.5 Rigor	2 Rigor	1
	Independently: Understand all biological systems from cells and organisms to populations, communities and ecosystems are affected by complex biotic and abiotic interactions involving exchange of matter and free energy	With support: has the 3.5 content	Independently: Students understand the complexity of webs and cycles (nitrogen cycle, food web, food chain, water cycle, and photosynthesis), Producer, consumer, decomposer, herbivore, omnivore, carnivore	With support: has the 2.5 content	Does not have the 2.5 content even with support

SCI. 6-8.LS.03.02
Life Science Standard: Ecology : Describe and analyze the interactions, cycles and factors that affect ecosystems

Learning Target 02: Understand that the world contains a wide variety of biomes that have different characteristics. These characteristics meet the needs of both living and nonliving parts of that biome.					
4 Rigor:	3.5 Rigor:	3 Rigor	2.5 Rigor	2 Rigor	1
Predict what would happen to a biome if there were an extreme temperature change in the span of 20 years.	Independently: Understands how the biome uses the below terms to create a symbiotic system. (biodiversity, competition, invasive species, niche, non-native, population, community, carrying capacity and population density)	With support: has the 3.5 content	Independently: Understand that biomes have different characteristics. (predator/prey; habitat, abiotic/biotic, mutualism, commensalism, parasitism, symbiosis, limiting factors	With support: has the 2.5 content	Does not have the 2.5 content even with support

Grade 8

SCI. 6-8.PS.01.01					
Physical Science Standard : Matter : I understand the organization, properties, and arrangement of matter					
Learning Target 1 : Organization : Matter Students will understand ways the Periodic Table is organized. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor: Comprehending	2.5 Rigor: Comprehending	2 Rigor: Comprehending	1
Student is able to organize elements on the periodic table based on physical and chemical properties and	Student is partially able to organize elements on the periodic table based on physical and chemical	Student understands ways the Periodic Table is organized.	Independently, the student is able to state or identify the various parts of the periodic	The student is able to state or identify the various parts of the periodic table with support.	With support is not able to state or identify the various parts of the periodic table with

matter.	properties and matter.				support.

SCI. 6-8.PS.01.02					
Physical Science Standard : Matter : I understand the organization, properties, and arrangement of matter					
Learning Target 2 : Properties : Students will understand that atoms are arranged in different ways. **(Grade 8)**					
4 Rigor: Using	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Comprehending	2 Rigor: Retrieving	1
Student is able to create a model that represents an element and explains the behavior of each part.	Student is partially able to create a model that represents an element and explains the purpose of each part.	Students will understand that atoms are arranged in different ways.	Student understand the terms electrons, protons, neutrons, valence electrons, and nucleus.	With support student understand the terms electrons, protons, neutrons, valence electrons, and nucleus.	With support the student is unable to understand the terms electrons, protons, neutrons, valence electrons, and nucleus.

SCI. 6-8.PS.01.03					
Physical Science Standard : Matter : I understand the organization, properties, and arrangement of matter					
Learning Target 3 : Arrangement : Students will understand physical and chemical changes of matter. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor	2.5 Rigor	2 Rigor	1
Student is able to explain how a change in	Student is partially able to explain how a change in	Student understands physical and chemical	Student is able to identify states of matter, and knows the terms	With support student is able to identify states of matter,	With support student is not able to identify

temperature will have an effect on matter, and understands a substance has physical (density, boiling point and solubility, etc.) and chemical (reactivity, pH) properties.	temperature will have an effect on matter, and understands a substance has physical (density, boiling point and solubility, etc.) and chemical (reactivity, pH) properties.	changes of matter.	physical change, chemical change, homogenous, and heterogenous.	and knows the terms physical change, chemical change, homogenous, and heterogenous.	states of matter, and knows the terms physical change, chemical change, homogenous, and heterogenous.

SCI. 6-8.PS.02.01					
Physical Science Standard: Force and Motion: I understand the essential ideas of motion; Newton's laws, momentum and energy. I can describe these ideas in multiple ways to predict the motion and behavior of objects.					
Learning Target 1 : Motion : I can clearly describe and predict the direction and speed and acceleration of objects in multiple ways. **(Grade 8)**					
4 Rigor: Using knowledge	3.5 Rigor: Analyzing	3 Rigor: Analyzing	2.5 Rigor: Comprehending	2 Rigor: Retrieving	1
Student is able to collect, record, and analyze data about frame of reference, speed, average	Student is partially able to collect, record, and analyze data about frame of reference, speed, average speed,	I can clearly describe and predict the direction and speed and acceleration of	Student understands the terms frame of reference, speed, average speed, velocity, and	With support understands the terms frame of reference, speed, average speed, velocity,	With support student is unable to understand the terms frame of reference,

speed, velocity, and acceleration.	velocity, and acceleration.	objects in multiple ways.	acceleration.	and acceleration.	speed, average speed, velocity, and acceleration.

SCI. 6-8.PS.02.02					
Physical Science Standard: Force and Motion : I understand the essential ideas of motion; Newton's laws, momentum and energy. I can describe these ideas in multiple ways to predict the motion and behavior of objects.					
Learning Target 2 : Newton's Laws : I can clearly describe and predict how forces affect the motion and behavior of objects in systems. **(Grade 8)**					
4 Rigor: Using	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Comprehending	2 Rigor: Retrieving	1
Student understands Newton's three laws and can use them explain real world situations (car accidents, etc).	Student partially understands Newton's three laws and can use them explain real world situations (car accidents, etc).	I can clearly describe and predict how forces affect the motion and behavior of objects in systems.	I am able to define the terms inertia, force, net force, balanced and unbalanced forces.	With support I am able to define the terms inertia, force, net force, balanced and unbalanced forces.	With support student is not able to define the terms inertia, force, net force, balanced and unbalanced forces.

SCI. 6-8.PS.02.03					
Physical Science Standard: Force and Motion : I understand the essential ideas of motion; Newton's laws, momentum and energy. I can describe these ideas in multiple ways to predict the motion and behavior of objects.					
Learning Target 3 : momentum and energy: I can clearly describe and predict how momentum and energy can affect the motion and behavior of objects and systems. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor:	2.5 Rigor:	2 Rigor:	1

Using		Analyzing	Comprehending	retrieving	
Students can apply the terms using an everyday situation. (ie. rollercoaster) to predict or calculate what would happen if the object were to be built differently.	Student is partially able to apply the terms using an everyday situation. (ie. rollercoaster) to predict or calculate what would happen if the object were to be built differently.	Student can clearly describe and predict how momentum and energy can affect the motion and behavior of objects and systems.	Student is able to define the terms momentum, Potential and kinetic energy, mass, and weight.	With support student is able to define the terms momentum, Potential and kinetic energy, mass, and weight.	With support, student is unable to define the terms momentum, Potential and kinetic energy, mass, and weight.

SCI. 6-8.PS.03.01					
Physical Science Standard : Mechanical Systems: I understand the essential ideas of simple machines, work, energy and power by investigating the transfer and transformation of energy between objects and in systems					
Learning Target 1 : Simple Machines : I can clearly describe simple machines and how they're used. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor	2.5 Rigor	2 Rigor: Retrieval	1
Student can explain how more than one simple machine makes a compound machine, and can identify where simple machines are used in the everyday.	Student can partially explain how more than one simple machine makes a compound machine, and can identify where simple machines are used in the everyday.	Student can clearly describe simple machines and how they are used.	The student understands simple machines, lever, gear, inclined plane, pulley, screw, wheel, and axle.	With support the student understands simple machines, lever, gear, inclined plane, pulley, screw, wheel, and axle.	With support, student is does not understand simple machines, lever, gear, inclined plane, pulley, screw, wheel, and axle.

SCI. 6-8.PS.03.02					
Physical Science Standard : Mechanical Systems : I understand the essential ideas of simple machines, work, energy and power by investigating the transfer and transformation of energy between objects and in systems.					
Learning Target 2 : Energy Application : I can identify the transfer and transformation of energy in everyday systems. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Understanding	2 Rigor: Comprehending	1
Student understand the relationship between the concepts of work and power in a system. Is skilled at predicting or calculating mechanical advantage in simple machines using their inputs and outputs. Is skilled at calculating potential energy and work done.	Student is partially able to understand the relationship between the concepts of work and power in a system. Is skilled at predicting or calculating mechanical advantage in simple machines using their inputs and outputs. Is skilled at calculating potential energy and work done.	Student can identify the transfer and transformation of energy in everyday systems.	Student understands the units of power and work; watt and joule, and understands the energy inputs and outputs of a system.	With support student understands the units of power and work; watt and joule, and understands the energy inputs and outputs of a system.	With support student does not understand the units of power and work; watt and joule, and understand s the energy inputs and outputs of a system.

SCI. 6-8.PS.04.01
Physical Science Standard : Heat : I can investigate the properties of heat and temperature
Learning Target 1 : I can describe how heat is transferred using conduction, convection and radiation. **(Grade 8)**

4 Rigor: Using	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Analyzing	2 Rigor: Retrieving	1
Student understands transfer of heat energy in a variety of systems (house, atmosphere), understand some materials transfer heat well and some transfer heat poorly, and can construct a model to explain how heat is transferred.	Student partially understands transfer of heat energy in a variety of systems (house, atmosphere), understand some materials transfer heat well and some transfer heat poorly, and can construct a model to explain how heat is transferred.	Student can describe how heat is transferred using conduction, convection and radiation.	Student understands how heat is transferred (conduction, convection and radiation), and understands the terms: thermal insulator and thermal conductor.	With support student understands how heat is transferred (conduction, convection and radiation), and understands the terms: thermal insulator and thermal conductor.	With support student does not understand how heat is transferred (conduction, convection and radiation), and understands the terms: thermal insulator and thermal conductor.

SCI. 6-8.PS.05.01					
Physical Science Standard : Electricity and Magnetism : I can describe the differences between series and parallel circuits					
Learning Target 1 : I can build both a series and parallel circuit describing the parts of each. **(Grade 8)**					
4 Rigor: Using	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Comprehending	2 Rigor: Retrieving	1
Student can construct both series and parallel circuits and explain when each would be used in the real world.	Student is partially able to construct both series and parallel circuits and explain when each would be used in the real world.	Student can build both a series and parallel circuit describing the parts of each.	Student understands electrical conductor, insulator, electrical current, load, complete and incomplete circuit, positive and negative	With support student understands electrical conductor, insulator, electrical current, load, complete and incomplete	With support student does not understand electrical conductor, insulator, electrical current, load,

			charge, series and parallel circuits	circuit, positive and negative charge, series and parallel circuits	complete and incomplete circuit, positive and negative charge, series and parallel circuits

SCI. 6-8.PS.05.02					
Physical Science Standard : Electricity and Magnetism : I can describe the differences between series and parallel circuits					
Learning Target: Power Generation: I understand the nature and trade off of electrical power generation. **(Grade 8)**					
4 Rigor: Using	3.5 Rigor:	3 Rigor: Analyzing	2.5 Rigor: Comprehending	2 Rigor: Retrieving	1
Student can create an argument on how our society generates electricity and the tradeoffs involved.	Student is partially able to create an argument on how our society generates electricity and the tradeoffs involved.	I understand the nature and trade off of electrical power generation.	Student understands the steps involved when electricity is generated from renewable and nonrenewable resources. Understand the different electricity sources used for power generation including coal, natural gas, hydroelectric, wind turbines, geothermal, nuclear and solar. Understand the terms renewable, non-renewable and fossil fuels.	With help student understands the steps involved when electricity is generated from renewable and nonrenewable resources. Understand the different electricity sources used for power generation	Does not have: The 2.5 content even with support

				including coal, natural gas, hydroelectric, wind turbines, geothermal, nuclear and solar. Understand the terms renewable, non-renewable and fossil fuels.	

SCI. 6-8.LS.04.01					
Life Science : Heredity and Reproduction : Examine the role of DNA in transferring traits, differentiating cells and determining physical characteristics of organisms.					
Learning Target 1 : I understand the role of nature vs. nurture in the development of an organism. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor: Comprehension	2.5 Rigor: Comprehension	2 Rigor: Retrieval	1
Student is able to explain how heredity and environment shape physical traits and behaviors (nature vs. nurture) with specific examples.	Student is partially able to explain how heredity and environment shape physical traits and behaviors (nature vs. nurture) with specific examples.	I understand the role of nature vs. nurture in the development of an organism.	Student understands the the terms: learned trait, inherited traits, nurture, nature, generation, and heredity.	With support, student understands the terms: learned trait, inherited traits, nurture, nature, generation, and heredity.	With support student does not understand the terms: learned trait, inherited traits, nurture, nature, generation, and heredity.

SCI. 6-8.LS.04.02

Life Science : Heredity and Reproduction : Examine the role of DNA in transferring traits, differentiating cells and determining physical characteristics of organisms.					
Learning Target 2 : I understand patterns of inheritance in determining genotype and phenotype. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor: Analysis	2.5 Rigor: comprehension	2 Rigor: Retrieval	1
Student understand the effects of sexual and asexual reproduction on the traits of the offspring, and is able to use a punnett square to determine what the likelihood is that a trait will show up in offspring.	Student partially understand the effects of sexual and asexual reproduction on the traits of the offspring, and is partially able to use a punnett square to determine what the likelihood is that a trait will show up in offspring.	Student understands patterns of inheritance in determining genotype and phenotype.	Student understands the terms: sexual and asexual reproduction, trait, gamete, fertilization, recessive and dominant traits.	With support student understands the terms: sexual and asexual reproduction, trait, gamete, fertilization, recessive and dominant traits.	With support student does not understand the terms: sexual and asexual reproduction, trait, gamete, fertilization, recessive and dominant traits.

SCI. 6-8.LS.04.03					
Life Science : Heredity and Reproduction : Examine the role of DNA in transferring traits, differentiating cells and determining physical characteristics of organisms.					
Learning Target 3 : I understand the causes and effects of genetic and chromosomal mutations. **(Grade 8)**					
4 Rigor:	3.5 Rigor:	3 Rigor : Analysis	2.5 Rigor: Comprehension	2 Rigor : Comprehension	1
Student is able to analyze a chromosomal mutation, and	Student is partially able to analyze a chromosomal	I understand the causes and effects of genetic and	Student understands the terms: gene mutation and	With support student understands the terms: gene	With support student does not understand

describe the cause and effect of these mutation.	mutation, and describe the cause and effect of these mutation.	chromosomal mutations.	chromosomal mutations.	mutation and chromosomal mutations.	the terms: gene mutation and chromosoma l mutations.

****All content standards must be met with a minimum of Meets-Partially Meets to pass the course.****