



# Chemistry Honors

J.S. Morton HS District 201  
2014-2015

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## What will students learn in this course?

Key Concepts	Standards (Students will)
Matter and Measurement	Use physical properties to observe and describe matter. *HS-PS1-1 Physical Sciences
	Determine whether to filter, distill, or use chromatography *HS-PS1-3 Physical Sciences
Modern Atomic Theory & Periodicity	Describe different trends that occur on the periodic table *HS-PS1-1 Physical Sciences
	Discuss the differences among different elements *HS-PS1-8 Physical Sciences
Bonding & Polarity	Discuss the differences between ionic and covalent bonding *HS-PS2-6 Physical Sciences
	Build the VSEPR model for molecular compounds by using Dot Structures *HS-PS2-6 Physical Sciences
Naming Chemical Formulas	Name ionic and molecular compounds *HS-PS1-1 Physical Sciences
Chemical Reactions	Balance a chemical equation and predict the type of a chemical reaction *HS-PS1-2 Physical Sciences
The Mole	Discuss the importance of the mole in chemistry, as well as use the mole in chemical calculations *HS-PS1-7 Physical Sciences
Stoichiometry	Use a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction *HS-PS1-7 Physical Sciences
States of Matter	Discuss the difference in characteristics between solids, liquids, and gases. *HS-PS1-3 Physical Sciences
The Behavior of Gases	Use gas laws to show how gases respond to changes in pressure, volume and temperature. *HS-PS1-5 Physical Sciences
Thermochemistry	Discuss the law of conservation of energy and calculate the amount of energy absorbed or released in a chemical or physical process. *HS-PS3-4 Physical Sciences
Water and Solutions	Discuss the properties of water and how those properties aid in the process of solution formation. *HS-PS2-6 Physical Sciences
	Calculate molarities and dilutions *HS-PS2-6 Physical Sciences
Acids and Bases	Compare and contrast the properties of acids and bases. * HS-PS1-3 Physical Sciences
Reaction Rates and Equilibrium	Describe the role of energy in a chemical reaction * HS-PS3-1 Physical Sciences

*\*Full explanation of Next Generation Science Standards can be found at <http://www.nextgenscience.org/>*

## How will we know students have learned it?

Grade Scale	A- Advanced/ Exemplary	B- Proficient	C- Basic	D- Needs Improvement	E- Not Passing	I- Incomplete
	4.0-5.0	3.0-3.9	2.0-2.9	1.0-1.9	0.0-0.9	

Key Concept Weights	Semester 1			
	Unit 1: Matter and Measurement	10%	Unit 5: Chemical Reactions	15%
	Unit 2: Atomic Theory & Periodicity	10%	Unit 6: The Mole	15%
	Unit 3: Bonding & Polarity	15%	Semester 1 Exam	20%
	Unit 4: Naming Chemical Formulas	15%		

Key Concept Weights	Semester 2			
	Unit 7: Stoichiometry	15%	Unit 10: Water and Solutions	10%
	Unit 8: States of Matter	13%	Unit 11: Acids and Bases	10%
	Unit 9: Behavior of Gases	15%	Unit 12: Reaction Rates and Equilibrium	5%
	Unit 9B: Thermochemistry	12%	Semester 2 Exam	20%

Within each unit, assignments will be graded according to the following weights:

Assignment Categories	Common Assessments	60%
	Performance-Based Assessments	30%
	Practice	10%

Practice assignments are 10% in each unit because students should not be unduly penalized for mistakes during the learning process. The grade is primarily based on mastery of standards, and mastery is demonstrated on assessments.

Course Requirements	Matter and Measurements	<ul style="list-style-type: none"> <li>Vernier Lab (Temp vs Pressure identifying Variables) and lab quiz</li> <li>Density lab</li> <li>Performance-based quiz</li> <li><b>Common Assessment**</b></li> </ul>
	Modern Atom Theory & Periodicity	<ul style="list-style-type: none"> <li>Isotope lab</li> <li>Periodic table activity</li> <li>Performance-based quiz</li> <li><b>Common Assessment**</b></li> </ul>
	Bonding & Polarity	<ul style="list-style-type: none"> <li>Vernier Lab (Properties of Solutions: Electrolytes vs Nonelectrolytes) and lab quiz</li> <li>VSEPR activity</li> <li>Performance-based quiz</li> <li><b>Common Assessment**</b></li> </ul>
	Naming Chemical Formulas	<ul style="list-style-type: none"> <li>Vernier Lab (Conductivity of Solutions; The effect of Concentration) and lab quiz</li> <li>Chemical Formulas lab</li> <li>Performance-based quiz</li> <li><b>Common Assessment**</b></li> </ul>
	Chemical Reactions	<ul style="list-style-type: none"> <li>Types of reactions lab</li> <li>Performance-based quiz</li> <li><b>Common Assessment**</b></li> </ul>

	<b>The Mole</b>	<ul style="list-style-type: none"> <li>• Empirical Formula lab</li> <li>• Mole determination activity</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Stoichiometry</b>	<ul style="list-style-type: none"> <li>• Vernier Lab (Reaction Stoichiometry) and lab quiz</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>States of Matter</b>	<ul style="list-style-type: none"> <li>• Vernier Lab (Freezing and Melting of Water) and lab quiz</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Behavior of Gases</b>	<ul style="list-style-type: none"> <li>• Separation techniques lab</li> <li>• Compounds/Mixtures activity</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Thermochemistry</b>	<ul style="list-style-type: none"> <li>• Specific heat lab</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Water and Solutions</b>	<ul style="list-style-type: none"> <li>• Vernier Lab (Effect of Temperature on Solubility) and lab quiz</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Acids and Bases</b>	<ul style="list-style-type: none"> <li>• Vernier (acids/bases) lab H and lab quiz</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>
	<b>Equilibrium/Kinetics</b>	<ul style="list-style-type: none"> <li>• Lechatelier's Principle activity</li> <li>• Performance-based quiz</li> <li>• <b>Common Assessment**</b></li> </ul>

**\*\* These assessments must be completed and students must receive a 1.0 or above to receive credit for the course. If students do not meet these requirements, the student will receive an "I" (incomplete) for the semester. If requirements are not met within six weeks after the semester, the student will earn a grade of E.**

## What will we do when students aren't learning?

### Extra Help

Students who are not passing the course are expected to seek extra help. Further, any student who wants to improve his or her performance and grade is encouraged to ask for support, as well.

\* Classroom: Scheduled appointment with the teacher

### Re-do/Re-Take

Students are eligible and **expected** to re-do essays, projects, quizzes, labs and tests that do not meet or exceed standards. Daily assignments may be eligible for re-do only at the teacher's discretion. Students will be provided one opportunity for re-do on a given item, with any additional attempts at the teacher's discretion.



If not already required by the teacher, **students must request a re-do within one week after receiving the graded assignment.** The teacher will communicate any requirements that must be met prior to the re-do (i.e. after-school tutoring, extra practice assignments, etc.), as well as the deadline.

The maximum grade earned shall be full credit, given the original item is submitted on time with full effort. The teacher has the discretion to return any item, ungraded, that is incomplete or does not demonstrate full effort. That item will be subject to my late work policy, with the final grade reflecting any loss of credit due to late or incomplete submission.

Other than common assessments, teachers may provide an alternative assignment to demonstrate mastery.

## **What will we do when students have already learned it?**

Students who master the standards before the end of the unit will be offered enrichment assignments or projects to extend their learning. Students who decline are expected to complete required unit assignments and assessments.

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## **Procedures**

- Students are expected to inquire about missed learning/assignments immediately upon return from an absence.
- Students may make up or re-take tests in the classroom on [days, times] or at the testing center, available from 8:00-8:45 on Late Start Days.
- Students must bring their Inspiron 11 to class every day.
- All course materials, including the link to the online text book, are available on the class web page.
- Students must be in their seats before the bell rings to begin class.
- Parents are strongly encouraged to use Skyward Family Access to be informed on students' progress. For assistance setting up a password, contact the parent liaison at xxx.xxx.xxxx or xxxxxx@jasmorton.org.

Chemistry Proficiencies

Standard	5	4	3	2	1	0
Use physical properties to observe and describe matter. *HS-PS1-1 Physical Sciences	<ul style="list-style-type: none"> <li>• Define matter and categorize items as “matter” or “not matter”</li> <li>• Consistently uses a variety of physical properties to observe and describe matter and</li> <li>• Correctly performs mathematical conversions</li> </ul>	<ul style="list-style-type: none"> <li>• Define matter and categorize items as “matter” or “not matter”</li> <li>• Sometimes uses a variety of physical properties to observe and describe matter and</li> <li>• Correctly performs mathematical conversions</li> </ul>	<ul style="list-style-type: none"> <li>• Define matter and categorize items as “matter” or “not matter”</li> <li>• Minimal use of physical properties to observe and describe matter</li> <li>• Correctly performs mathematical conversions</li> </ul>	<ul style="list-style-type: none"> <li>• Define matter and categorize items as “matter” or “not matter”</li> <li>• Correctly performs mathematical conversions</li> </ul>	<ul style="list-style-type: none"> <li>• Define matter and categorize items as “matter” or “not matter”</li> </ul>	Does not meet minimal proficiency
Determine whether to filter, distill, or use chromatography *HS-PS1-3 Physical Sciences	<ul style="list-style-type: none"> <li>• Determine whether to filter, distill, or use chromatography to separate mixtures and explain the reasoning behind using such technique.</li> <li>• Can categorize mixtures as homogeneous vs heterogeneous</li> </ul>	<ul style="list-style-type: none"> <li>• Determine whether to filter, distill, or use chromatography to separate mixtures and explain the reasoning behind using such technique.</li> <li>• Needs guidance to categorize mixtures as homogeneous vs heterogeneous</li> </ul>	<ul style="list-style-type: none"> <li>• Determine whether to filter, distill, or use chromatography to separate mixtures and provide <u>some</u> reasoning behind using such technique.</li> <li>• Needs guidance to categorize mixtures as homogeneous vs heterogeneous</li> </ul>	<ul style="list-style-type: none"> <li>• Determine whether to filter, distill, or use chromatography to separate mixtures and provide <u>some</u> reasoning behind using such technique.</li> </ul>	<ul style="list-style-type: none"> <li>• List and define separation techniques</li> </ul>	Does not meet minimal proficiency
Describe different trends that occur on the periodic table *HS-PS1-1 Physical Sciences	<ul style="list-style-type: none"> <li>• Describe different trends that occur on the periodic table, correctly organize elements using the periodic trends and provide reasons for why such trends occur</li> </ul>	<ul style="list-style-type: none"> <li>• Describe different trends that occur on the periodic table, correctly organize elements using the periodic trends and attempts to provide reasons for why such trends occur</li> </ul>	<ul style="list-style-type: none"> <li>• Describe different trends that occur on the periodic table, correctly organize elements using the periodic trends</li> </ul>	<ul style="list-style-type: none"> <li>• Describe different trends that occur on the periodic table, sometimes correctly organizes elements using the periodic trends</li> </ul>	<ul style="list-style-type: none"> <li>• Describe different trends that occur on the periodic table.</li> </ul>	Does not meet minimal proficiency

Discuss the differences among different elements *HS-PS1-8 Physical Sciences	<ul style="list-style-type: none"> <li>Construct a model of an atom with correct numbers of subatomic particles and clearly discusses the differences among different elements, element isotopes, and ions.</li> </ul>	<ul style="list-style-type: none"> <li>Construct a model of an atom with correct numbers of subatomic particles and provides some differences among different elements, element isotopes, and ions.</li> </ul>	<ul style="list-style-type: none"> <li>Construct a model of an atom with correct numbers of subatomic particles and is aware of the existence of ions and isotopes</li> </ul>	<ul style="list-style-type: none"> <li>Construct a model of an atom with correct numbers of subatomic particles</li> </ul>	<ul style="list-style-type: none"> <li>Lists subatomic particles and their location within an atom</li> </ul>	Does not meet minimal proficiency
Discuss the differences between ionic and covalent bonding *HS-PS2-6 Physical Sciences	<ul style="list-style-type: none"> <li>Discuss the differences between ionic and covalent bonding and consistently predicts correctly whether elements will form molecular or ionic compounds based on their position on the periodic table.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the differences between ionic and covalent bonding and sometimes correctly predicts whether elements will form molecular or ionic compounds based on their position on the periodic table.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the differences between ionic and covalent bonding and rarely predicts whether elements will form molecular or ionic compounds based on their position on the periodic table.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the differences between ionic and covalent bonding</li> </ul>	<ul style="list-style-type: none"> <li>Student knows the definition of ionic and covalent bonding but cannot apply those definitions or classify compounds.</li> </ul>	Does not meet minimal proficiency
Build the VSEPR model for molecular compounds by using Dot Structures *HS-PS2-6 Physical Sciences	<ul style="list-style-type: none"> <li>Independently build the VSEPR model for molecular compounds by using dot structures draw by the student</li> <li>Properly name the shape of all VSEPR models</li> </ul>	<ul style="list-style-type: none"> <li>Independently build the VSEPR model for molecular compounds by using dot structures draw by the student</li> <li>Properly name the shape of some VSEPR models</li> </ul>	<ul style="list-style-type: none"> <li>Independently build the VSEPR model for molecular compounds by using dot structures draw by the student</li> </ul>	<ul style="list-style-type: none"> <li>With some teacher guidance, build the VSEPR model for molecular compounds by using dot structures drawn by the student</li> </ul>	<ul style="list-style-type: none"> <li>Define VSEPR and draw dot structures with some teacher guidance</li> </ul>	Does not meet minimal proficiency
Name Ionic and Molecular compounds *HS-PS1-1 Physical Sciences	<ul style="list-style-type: none"> <li>Determine if a compound is ionic or molecular based on its formula and properly name it.</li> <li>Correctly write chemical formulas from the compound's name.</li> </ul>	<ul style="list-style-type: none"> <li>Properly name ionic and covalent compounds</li> <li>Correctly write chemical formulas from the compound's name.</li> </ul>	<ul style="list-style-type: none"> <li>Name ionic and covalent compounds with minimal error.</li> <li>Write chemical formulas from the compound's name with minimal error.</li> </ul>	<ul style="list-style-type: none"> <li>Name ionic and covalent compounds with minimal error.</li> <li>Struggles to write chemical formulas from a compound's name</li> </ul>	<ul style="list-style-type: none"> <li>Student can list differences between ionic and molecular compound nomenclature but does not name compounds appropriately.</li> </ul>	Does not meet minimal proficiency

<p>Balance a chemical equation and predict the type of a chemical reaction *HS-PS1-2 Physical Sciences</p>	<ul style="list-style-type: none"> <li>Balance a chemical equation and predict the type of chemical reaction</li> <li>Discuss the importance of balancing chemical equations as it relates to the law of conservation of matter.</li> </ul>	<ul style="list-style-type: none"> <li>Balance a chemical equation and predict the type of chemical reaction</li> <li>Student can define the Law of Conservation of Matter.</li> </ul>	<ul style="list-style-type: none"> <li>Balance a chemical equation and predict the type of chemical reaction</li> </ul>	<ul style="list-style-type: none"> <li>Balance a chemical equation and predict the type of chemical reaction with some teacher guidance</li> </ul>	<ul style="list-style-type: none"> <li>Balance a chemical equation</li> </ul>	<p>Does not meet minimal proficiency</p>
<p>Discuss the importance of the mole in chemistry, as well as use the mole in chemical calculations *HS-PS1-7 Physical Sciences</p>	<ul style="list-style-type: none"> <li>Discuss the importance of the mole in chemistry, as well as use the mole in chemical calculations</li> <li>Always provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the importance of the mole in chemistry, as well as use the mole in chemical calculations</li> <li>Sometimes provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the importance of the mole in chemistry, as well as use the mole in chemical calculations</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the importance of the mole in chemistry, and attempts to use the mole in chemical calculations</li> </ul>	<ul style="list-style-type: none"> <li>Knows Avogadro's number and can calculate molar masses with the use a periodic table.</li> </ul>	<p>Does not meet minimal proficiency</p>
<p>Use a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction *HS-PS1-7 Physical Sciences</p>	<ul style="list-style-type: none"> <li>Define stoichiometry and its significance in chemistry.</li> <li>Use a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction</li> <li>Always provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Define stoichiometry and its significance in chemistry.</li> <li>Use a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction</li> <li>Sometimes provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Define stoichiometry and its significance in chemistry.</li> <li>Use a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction</li> </ul>	<ul style="list-style-type: none"> <li>Define stoichiometry and its significance in chemistry.</li> <li>Uses a balanced chemical equation to calculate amounts of reactants and products in a chemical reaction but makes error in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Define stoichiometry and its significance in chemistry.</li> </ul>	<p>Does not meet minimal proficiency</p>

Discuss the difference in characteristics between solids, liquids, and gases. *HS-PS1-3 Physical Sciences	<ul style="list-style-type: none"> <li>Discuss all the differences in characteristics between solids, liquids, and gases.</li> <li>Interpret phase diagrams and heating curves</li> </ul>	<ul style="list-style-type: none"> <li>Discuss some differences in characteristics between solids, liquids, and gases.</li> <li>Interpret phase diagrams and heating curves</li> </ul>	<ul style="list-style-type: none"> <li>Discuss some differences in characteristics between solids, liquids, and gases.</li> <li>Interprets phase diagrams and heating curves with some guidance</li> </ul>	<ul style="list-style-type: none"> <li>Discuss some differences in characteristics between solids, liquids, and gases.</li> </ul>	<ul style="list-style-type: none"> <li>Know that matter can be classified as solid, liquid, or gas</li> </ul>	Does not meet minimal proficiency
Use gas laws to show how gases respond to changes in pressure, volume and temperature. *HS-PS1-5 Physical Sciences	<ul style="list-style-type: none"> <li>Correctly uses gas laws to show how gases respond to changes in pressure, volume and temperature.</li> <li>Always provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Correctly uses gas laws to show how gases respond to changes in pressure, volume and temperature.</li> <li>Sometimes provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Correctly uses gas laws to show how gases respond to changes in pressure, volume and temperature.</li> </ul>	<ul style="list-style-type: none"> <li>Correctly uses gas laws to show how gases respond to changes in pressure, volume and temperature but needs help identifying the type of gas law problem.</li> </ul>	<ul style="list-style-type: none"> <li>Use gas laws to show how gases respond to changes in pressure, volume and temperature but makes frequent mistakes.</li> </ul>	Does not meet minimal proficiency
Discuss the law of conservation of energy and calculate the amount of energy absorbed or released in a chemical or physical process. *HS-PS3-4 Physical Sciences	<ul style="list-style-type: none"> <li>Discuss the law of conservation of energy and calculate the amount of energy absorbed or released in a chemical or physical process.</li> <li>Always provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the law of conservation of energy and calculate the amount of energy absorbed or released in a chemical or physical process.</li> <li>Sometimes provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the law of conservation of energy and calculate the amount of energy absorbed or released in a chemical or physical process.</li> </ul>	<ul style="list-style-type: none"> <li>Discusses the law of conservation of energy but needs guidance to calculate the amount of energy absorbed or released in a chemical or physical process.</li> </ul>	<ul style="list-style-type: none"> <li>Discusses the law of conservation of energy</li> </ul>	Does not meet minimal proficiency
Discuss the properties of water and how those properties aid in the process of solution formation. *HS-PS2-6 Physical Sciences	<ul style="list-style-type: none"> <li>Discuss the properties of water and how those properties aid in the process of solution formation.</li> <li>Define the different properties of solutions.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the properties of water and how those properties aid in the process of solution formation.</li> <li>Define the different properties of solutions.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the properties of water and how those properties aid in the process of solution formation.</li> <li>Defines only a few different properties of solutions.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the properties of water and how those properties aid in the process of solution formation.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the properties of water</li> </ul>	Does not meet minimal proficiency



<p>Calculate molarities and dilutions *HS-PS2-6 Physical Sciences</p>	<ul style="list-style-type: none"> <li>• Perform calculations involving molarity and dilutions</li> <li>• Always provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform calculations involving molarity and dilutions</li> <li>• Sometimes provides proper units with all numbers used in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform calculations involving molarity and dilutions</li> </ul>	<ul style="list-style-type: none"> <li>• Perform calculations involving molarity and dilutions but needs guidance to determine which formula needs to be used in a given problem.</li> </ul>	<ul style="list-style-type: none"> <li>• Student knows the formulas for molarity and dilutions but struggles to apply them mathematically.</li> </ul>	<p>Does not meet minimal proficiency</p>
<p>Compare and contrast the properties of acids and bases. * HS-PS1-3 Physical Sciences</p>	<ul style="list-style-type: none"> <li>• Compare and contrast the properties of acids and bases and distinguish between Arrhenius acids and bases with Bronsted-Lowry acids and bases.</li> <li>• Calculate the pH of a solution and discuss its meaning</li> <li>• Describe the importance of acid-base reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and contrast the properties of acids and bases</li> <li>• Calculate the pH of a solution and discuss its meaning</li> <li>• Describe the importance of acid-base reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and contrast the properties of acids and bases</li> <li>• Calculate the pH of a solution</li> <li>• Describe the importance of acid-base reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and contrast the properties of acids and bases</li> <li>• Calculate the pH of a solution</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and contrast the properties of acids and bases</li> </ul>	<p>Does not meet minimal proficiency</p>
<p>Describe the role of energy in a chemical reaction * HS-PS3-1 Physical Sciences</p>	<ul style="list-style-type: none"> <li>• Describe the role of energy in a chemical reaction</li> <li>• Discuss ways to control the rate of a chemical reaction.</li> <li>• Explain the reasons for which some reactions occur naturally and others do not.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the role of energy in a chemical reaction</li> <li>• Discuss ways to control the rate of a chemical reaction.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the role of energy in a chemical reaction</li> <li>• Can discuss one way to control the rate of a chemical reaction.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the role of energy in a chemical reaction</li> </ul>	<ul style="list-style-type: none"> <li>• Minimally describes the role of energy in a chemical reaction</li> </ul>	<p>Does not meet minimal proficiency</p>