

CCS COURSE MAP

SUBJECT: PHYSICAL SCIENCE

GRADE LEVEL 9th/10th
COURSE LENGTH Year

REVIEWED 2018-2019

Student Goals:					
		I	To gain appreciation for the inorganic materials in the world God created.		
		II	To learn laws of God and man that apply to earth and how it works.		
		III	To apply the laws of God and man that relate to matter and motion.		
Student Outcomes					
		I	The students will be able to critically compare the forces in the Word of God and those present in the world today.		
		II	The students will be able to explore man's collected knowledge of the materials God use to create the heavens and the Earth.		
		III	The students will be able to study basic science skills used in scientific investigation.		
		IV	The students will be able to examine earth's matter and motion.		
		V	The students will be able to explore electricity and magnetism.		
		VI	The students will be able to apply basic science skills used in scientific investigation.		
		VII	The students will be able to show their understanding of scientific knowledge through investigations, reports and projects.		
UNIT/ WEEKS	STANDARD	OBJECTIVES	ACTIVITIES/ASSESSMENT	RESOURCES	BIBLICAL INTEGRATION
Unit 1: Matter 5 weeks	9.2.1.1.1 9.2.1.1.2 9.2.1.1.3 9.2.1.1.4 9.2.1.2.1	Students will: ·understand the composition of matter ·be able to explain the differences in the phases of matter ·differentiate between chemical and physical changes ·be able to write chemical formulas for different types of bonding	·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests	· <i>Physical Science</i> – Purposeful Design text ·Lab equipment ·Lab worksheets ·Quizzes ·Tests	·Like many types of matter, for gold to be of value it must be crushed, smelted and refined. As Christians God must also put us through refining processes. ·Even the nonliving matter like water declare the works of the Lord. ·God is orderly in His design and through the study of elements we

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					<p>realize the true beauty of who our orderly Creator is.</p> <ul style="list-style-type: none"> ·Just as chemicals interact every day, God created people to also interact for His purpose
<p>Unit 2: Types of Substances</p> <p>4 weeks</p>	<p>9.2.1.1.3 9C.2.1.2.2</p>	<p>Students will:</p> <ul style="list-style-type: none"> · be able to give characteristics to the different groups of metals ·explain the process of refining ores ·be able to categorize elements according to their properties ·identify simple organic compounds ·know about useful materials 	<ul style="list-style-type: none"> ·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests 	<ul style="list-style-type: none"> ·<i>Physical Science</i> – Purposeful Design text ·Lab equipment ·Lab worksheets ·Quizzes ·Tests 	<ul style="list-style-type: none"> ·God has given us a wealth of knowledge by looking at the elemental materials that He has provided. By handling this information correctly we can find benefits to help better mankind ·Riches will pass away but wisdom is forever

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<p>Unit 3: Interactions of Matter</p> <p>4 weeks</p>	<p>9.2.1.2.2 9.2.1.2.3 9.2.1.2.4</p>	<p>Students will:</p> <ul style="list-style-type: none"> ·learn about solutions and mixtures ·identify what is soluble and insoluble ·write chemical reaction equations ·identify what can speed up or slow down reactions ·differentiate between acids and bases ·determine the usefulness of acidic and alkaline properties 	<ul style="list-style-type: none"> ·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests 	<p>·<i>Physical Science</i> – Purposeful Design text</p> <ul style="list-style-type: none"> ·Lab equipment ·Lab worksheets ·Quizzes ·Tests 	<ul style="list-style-type: none"> ·We can relate our minds to the things we learn about solutions. Just like certain things do not go with each other well, certain things do not belong in our mixture in our minds. We must evaluate what we allow in the space of our minds. ·Jesus is like a catalyst in that he causes change ·As there is a litmus test for acids and bases, there are litmus tests that can be applied to our faith
<p>Unit 4: Matter in Motion</p> <p>5 weeks</p>	<p>9.2.2.2.1 9.2.2.2.2 9.2.2.2.3 9.2.2.2.4 9.2.3.2.2</p>	<p>Students will:</p> <ul style="list-style-type: none"> ·learn the types of forces ·calculate linear and circular motion forces ·describe the forces found in fluids ·explain the forces involved with flight ·identify types of energy ·understand the relationship between power, force, and machines ·identify types of 	<ul style="list-style-type: none"> ·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests 	<p>·<i>Physical Science</i> – Purposeful Design text</p> <ul style="list-style-type: none"> ·Lab equipment ·Lab worksheets ·Quizzes ·Tests 	<ul style="list-style-type: none"> ·Forces are a powerful thing in daily life. So are the force and power of our words. What is coming out of our mouths? ·Work requires energy and work never truly ends, so we should be intentional to not be so busy, busy, busy doing work that we forget to spend time with God.

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		simple machines and describe how they can be applied to everyday life			
Unit 5: Energy at Work 3 weeks	9.2.3.2.6 9.2.4.1.1 9.2.4.1.2	Students will: ·describe what heat is and how it is transferred ·explain how atoms decay ·know the uses of nuclear power and radioactivity ·differentiate between renewable and nonrenewable resources	·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests	· <i>Physical Science</i> – Purposeful Design text ·Lab equipment ·Lab worksheets ·Quizzes ·Tests	·As we find more and new ways to produce energy or make more efficient machines, we must remember that these discoveries are merely a reflection of the full glory and revelation of God. ·God has provided for mankind in many ways and the knowledge and application of nuclear energy reminds us of this. ·As Christians we must find a balance in the field of conservation; being able to use the resources God gave us as well as

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					preserve the resources He gave us.
Unit 6: Sound and Light 5 weeks	9.2.3.2.3 9.2.3.2.7	Students will: ·identify wave parts ·explain wave behaviors ·understand the relationship between speed, frequency, and intensity in sound ·identify practical uses of sound ·identify and apply uses of the electromagnetic spectrum ·explain the way lenses and mirrors work ·identify practical uses for lenses and mirrors	·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests	· <i>Physical Science</i> – Purposeful Design text ·Lab equipment ·Lab worksheets ·Quizzes ·Tests	·As we study the power and force behind waves, may it remind us that God is mightier still than the raging seas ·Sound and music not only can be pleasing to people, but they are a way to communicate praise to God ·As we study light, we can remember that Jesus is the Light of the world ·Mirrors show us a reflection using light; God’s Word is a mirror for Christians to see their spiritual reflections

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<p>Unit 7: Electricity and Magnetism</p> <p>3 weeks</p>	<p>9.2.3.2.1 9.2.3.2.4 9.2.3.2.5</p>	<p>Students will:</p> <ul style="list-style-type: none"> ·understand static electricity ·explain the uses of conductors and insulators ·identify and draw electric cells, currents and circuits ·understand electrical safety ·explain the magnetic force ·relate magnetism to electricity ·describe the electric motor and its uses 	<ul style="list-style-type: none"> ·Discussions ·Lab activities ·Worksheets ·Homework ·Quizzes ·Tests 	<p>·<i>Physical Science</i> – Purposeful Design text</p> <ul style="list-style-type: none"> ·Lab equipment ·Lab worksheets ·Quizzes ·Tests 	<ul style="list-style-type: none"> ·Just as electric currents have the potential to transfer large amounts of power, so do Christians through prayer ·Magnets generate great attractive and repulsive forces. Christians should be careful what they allow to attract to them and repel the things that displease God
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