

Physical Science, 4th Quarter
2017-2018

Tennessee Department of Education Pacing Guide & Resources:

http://tncurriculumcenter.org/index.php?option=com_curriculum&controller=pacing&task=view&course_id=3202&subject_id=1

Course Level Expectations	Checks for Understanding
<i>Physical Science: Embedded Inquiry</i>	
CLE 3202.Inq.1 Recognize that science is a progressive endeavor that reevaluates and extends what is already accepted.	3202.Inq 1. Recognize that science is a progressive endeavor that reevaluates and extends what is already accepted.
CLE 3202.Inq.2 Design and conduct scientific investigations to explore new phenomena, verify previous results, test how well a theory predicts, and compare opposing theories.	3202.Inq 2. Design and conduct scientific investigations to explore new phenomena, verify previous results, test how well a theory predicts, and compare opposing theories.
CLE 3202.Inq.3 Use appropriate tools and technology to collect precise and accurate data.	3202.Inq 3. Use appropriate tools and technology to collect precise and accurate data.
CLE 3202.Inq.4 Apply qualitative and quantitative measures to analyze data and draw conclusions that are free of bias.	3202.Inq 1. Recognize that science is a progressive endeavor that reevaluates and extends what is already accepted.
CLE 3202.Inq.5 Compare experimental evidence and conclusions with those drawn by others about the same testable question.	3202.Inq 2. Design and conduct scientific investigations to explore new phenomena, verify previous results, test how well a theory predicts, and compare opposing theories.
CLE 3202.Inq.6 Communicate and defend scientific findings.	3202.Inq 3. Use appropriate tools and technology to collect precise and accurate data.
	3202.Inq 4. Apply qualitative and quantitative measures to analyze data and draw conclusions that are free of bias.
	3202.Inq 5. Compare experimental evidence and conclusions with those drawn by others about the same testable question.
	3202.Inq 6. Communicate and defend scientific findings.

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Course Level Expectations	Checks for Understanding
<i>Physical Science: Embedded Technology & Engineering</i>	
CLE 3202.T/E.1 Explore the impact of technology on social, political, and economic systems.	3202.T/E.1 Select appropriate tools to conduct a scientific inquiry.
CLE 3202.T/E.2 Differentiate among elements of the engineering design cycle: design constraints, model building, testing, evaluating, modifying, and retesting.	3202.T/E.2 Apply the engineering design process to construct a prototype that meets developmentally appropriate specifications.
CLE 3202.T/E.3 Explain the relationship between the properties of a material and the use of the material in the application of a technology.	3202.T/E.3 Explore how the unintended consequences of new technologies can impact human and non-human communities.
CLE 3202.T/E.4 Describe the dynamic interplay among science, technology, and engineering within living, earth-space, and physical systems.	3202.T/E.4 Present research on current engineering technologies that contribute to improvements in our daily lives.
	3202.T/E.5 Design a series of multi-view drawings that can be used by other students to construct an adaptive design and test its effectiveness.
	3202.T/E.6 Evaluate the overall benefit to cost ratio of a new technology.

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Course Level Expectations	Checks for Understanding
<i>Physical Science: Embedded Mathematics</i>	
CLE 3202.Math.1 Understand the mathematical principles behind the science of physics.	3202.MATH.1 Understand the mathematical principles behind the science of physics.
CLE 3202.Math.2 Utilize appropriate mathematical equations and processes to solve basic physics problems.	3202.MATH.2 Utilize appropriate mathematical equations and processes to solve basic physics problems.
	3202.Math.3 Apply and interpret rates of change from graphical and numerical data
	3202.Math.4 Analyze graphs to describe the behavior of functions.
	3202.Math.5 Interpret results of algebraic procedures.
	3202.Math.6 Model real-world phenomena using functions and graphs.
	3202.Math.7 Articulate and apply algebraic properties in symbolic manipulation
	3202.Math.8 Apply geometric properties, formulas, and relationships to solve real-world problems.
	3202.Math.9 Make decisions about units, scales, and measurement tools that are appropriate for problem situations involving measurement.
	3202.Math.10 Collect, represent, and describe linear and nonlinear data sets developed from the real world.
	3202.Math.11 Make predictions from a linear data set using a line of best fit.
	3202.Math.12 Interpret a data set using appropriate measures of central tendency.
	3202.Math.13 Choose, construct, and analyze appropriate graphical representations for a data set.
	3202.Math.14 Use concepts of length, area, and volume to estimate and solve real-world problems.

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TN Course Level Expectations	TN Checks for Understanding	Student Friendly "I Can" Statements	Prerequisite Knowledge	ACT Readiness	Instructional Time	TN Ready Questions/ Resources	ACT Questions/ Resources
3202.3 5. Explore and explain the nature of sound and light energy.	See 3202.2 Standards and Checks for Understanding			All CLR, REL,WMS 402 and *03, ARG, SYN	1 Day		
3202.3 6. Investigate the properties and behaviors of mechanical and electromagnetic waves.	See 3202.2 Standards and Checks for Understanding			All CLR, REL,WMS 402 and *03, ARG, SYN	1 Day		
3202.4 1. Explore the difference between mass and weight.	3202.4.2 Explore the difference between mass and weight.			All CLR, REL,WMS 402 and *03, ARG, SYN	1 Day		
3202.4 2. Relate gravitational force to mass.	3202.4.1 Demonstrate the effect of gravity on objects.			All CLR, REL,WMS 402 and *03, ARG, SYN	1 Day		
3202.4 3. Demonstrate the relationship among work, power, and machines.	3202.4.3 Identify, design, demonstrate, and explain simple and compound machines. 3202.4.4 Gather and analyze data and solve problems related to mechanical			All CLR, REL,WMS 402 and *03, ARG, SYN, IOD *01, *02 EMI *01-*04	3 Days Allow time for Labs		

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advantage and efficiency of simple machines. 3202.4.5 Recognize the combinations of various simple machines found in a compound machine.						
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