Pacing & Curriculum Guide

Chemistry and Chemistry I Honors- 2003340 and 2003350

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Revised February, 2018

Chemistry Course Description

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teacher Association (NSTA) recommends that at the high school level, all students should be in the science laboratory, field, or collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a regular basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC Framework for K-12 Science Education, 2010)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should also specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link http://www.cpalms.org/uploads/docs/standards/eld/SC.pdf

For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at

Reading Standards for Literacy in Science and Technical Subjects (Grades 9–10)

Grades 9–10 Students:	Grades 11–12 Students:
Key Ideas and Details	
Craft and Structure	

Production and Distribution of Writing

Common Core State Standards for Mathematics: Mathematical Practices Grades K712

MP 1: Make sense of problems
and persevere in solving them

MP 5: Use appropriate tools strategically	x	o These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. o Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations.

CCPS Chemistry and Chemistry Honors Curriculum Map (Course Numbers 2003340 and 2003350)

Current Textbook Alignment: Pearson Chemistry for Florida	Standards Additional Standards for Chemistry Honors	

Quarter 3		SC.912.P.10.2 SC.912.P.10.8	x x
Quarter 4		SC.912.P 10.10 SC.912.P.10.11	

Chemistry and Honors Chemistry (Course numbers 2003340 and 2003350)

Scientific Measurement	Recommended Pacing: 2 weeks
Standards:	
_____ _____	

Learning Goals	Academic Vocabulary	Resources
x x x x		

Electrons in Atoms	Recommended Pacing: 21 weeks

Standards:

Learning Goals	Academic Vocabulary	Resources
x x x x x x x		

Chemistry and Honors Chemistry (Course numbers 2003340 and 2003350)

Covalent Bonding	Recommended Pacing: 2-3 weeks
Standards:	

Chemical Reactions	Recommended Pacing: - 1

Chemistry and Honors Chemistry (Course numbers 2003340 and 2003350)

States of Matter	Recommended Pacing: 21 weeks
Standards:	

Learning Goals	Academic Vocabulary	Resources
x x x x x		

Behavior of Gases		Recommended Pacing: 1 week
Standards:		
Learning Goals	Academic Vocabulary	Resources

x

x

Thermochemistry	Recommended Pacing: 1 week
Standards:	

Water and Aqueous Systems	Recommended Pacing: 21 weeks
Standards:	

Solutions

Reaction Rates and Equilibrium	Recommended Pacing: 1 week
Standards:	

_____

_____

Chemistry