

**Pleasant Valley Community School District
SEVENTH GRADE SCIENCE - GRADE LEVEL INDICATORS**

Standard 1: Understands and applies the principles of scientific inquiry.				
Interval Benchmark 1: Uses scientific reasoning to answer questions or solve problems.				
Grade Level Benchmark	Vocabulary	Information	Skills	Classroom Resources
a: Recognizes a problem or asks a question.	hypothesis, purpose	Understands the elements and steps of the scientific method	Reads a lab to determine what question is being asked.	Volumania, Marble lab, Drops on Penny, CSI Lab, Atomic Mass of Vegium
b: Considers many different explanations.	objective, subjective	Understands the components of a lab. Understands and follows a lab discussion.	Explains lab results. Offers rationale for poor results.	Classroom labs
c: Evaluates a solution.	accuracy, reliability, validity	Understands a "reasonable" solution.	Determines solution. Analyzes lab results. Explains given error.	CSI lab
d: Communicates findings.	conclusion, publish	Understands a lab write-up.	Completes a lab "write-up" including all steps of the scientific method.	Atomic mass of Vegium
e: Understands that science is subject to change.	development, theory, technology, status quo	Understands atomic theory. Understands genesis of Atomic Theory.	Describes scientific change process. Given a scenario, define why change must occur.	History of Atomic Theory, Chapter 11 in text
Interval Benchmark 2: Analyzes scientific procedures and investigations.				
Grade Level Benchmark	Vocabulary	Information	Skills	Classroom Resources
a: Identifies purpose or hypothesis of an investigation.	purpose, hypothesis	Understands the steps of the scientific method.	States the purpose. Given a specific lab is able to identify the purpose.	CSI lab, Sponge Creature lab
b: Recognizes control in an experiment.	control, variable	Understands the purpose of a control in an experiment. Understands the purpose of a variable in an experiment.	Given a lab, identifies the control. Given a lab, identifies the variable.	CSI lab
c: Identifies flaws in experimental design.	experimental design, variability	Understands important elements of experimental design. Understands potential for error in experimental design.	Describes basic experimental design. Given a lab study, can identify flaws in experimental design.	Classroom labs, Discuss in Sponge Creature lab
d: Understands the effect of manipulating a variable.	manipulate, increase, decrease	Knows the relationship between a variable and the outcome. Understands how altering the variable affects the outcome.	Given a lab study, predicts effect of changing the variable. Identifies variable to be manipulated; identifies outcome.	Classroom labs