

SCIENCE

Adopted April 2001

Student accountability on statewide assessments for these standards began in 2002-03.

The study of Science promotes scientific literacy where students can explore natural events using rational and systematic observation, identification, description, experimental investigation, and theoretical explanation. These scientific concepts and processes provide students with decision-making skills needed for informed participation in civic and economic affairs.
PHYSICAL SCIENCE: Understand structures and properties of matter and changes that occur in the physical world.

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
MATTER Understand structure and properties of matter.	Understand structure and properties of matter.	Describe objects according to their physical properties.	Identify substances as they exist in different states of matter. <i>Distinguish among solids, liquids, and gases.</i> <i>Identify unique properties of each state of matter.</i>	Compare properties of specific substances. <i>Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</i> <i>Recognize that substances may be grouped by their physical properties.</i> <i>Use the concept of density to evaluate which objects will float or sink in water.</i>	Describe properties of elements and their relationship to the periodic table. <i>Explain atoms and their base components (protons, neutrons, and electrons) as a basis for all matter.</i> <i>Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</i> <i>Recognize that the historical development of atomic theory demonstrates how scientific knowledge changes over time, and how those changes have had an impact on society.</i>	Know and apply fundamental concepts of the physical sciences. Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science. Use information, skills, and investigative processes employed in a field of science. Investigate, through research and inquiry, important principles, theories, and/or relationships from a field of science.
Understand chemical and physical changes.	Describe and analyze chemical and physical changes.	Describe changes that occur in matter.	Describe the ability of matter to change state by heating and cooling. <i>Recognize that heating and cooling cause changes in states of matter.</i> <i>Identify changes in states of matter seen in the environment.</i>	Compare physical and chemical changes. <i>Distinguish between examples of chemical changes and physical changes.</i> <i>Describe processes that will separate the components of physical mixtures.</i> <i>Describe events that accompany chemical changes, but not physical changes.</i> <i>Explain how our understanding of the nature of matter and chemical reactions has changed over time.</i>	Analyze the effects of various factors on physical changes and chemical reactions. <i>Describe how transformations among solids, liquids, and gases occur (change of state).</i> <i>Identify factors that can influence change of state, including temperature, pressure, and concentration.</i> <i>Describe chemical reactions in terms of reactants and products.</i> <i>Describe the factors that affect the rate of chemical reactions.</i> <i>Recognize examples that show when substances combine or break apart in a chemical reaction, the total mass remains the same (conservation of mass).</i>	
FORCE Understand fundamental forces, their forms, and their effects on motion.	Describe fundamental forces and the motions resulting from them.	Describe an object's position and how to affect its movement.	Describe and compare the motion of objects. <i>Recognize and describe the motion of an object in terms of one or more forces acting on it.</i>	Explain interactions between force and matter and relationships among force, mass, and motion. <i>Recognize and describe the motion of an object based on its mass and the force exerted on it.</i> <i>Predict the change in direction or speed of an object by changing the forces acting on it.</i> <i>Explain inertia.</i>	Describe and explain the effects of multiple forces acting on an object. <i>Understand and apply the relationship $F=ma$ in situations in which one force acts on an object.</i> <i>Recognize that equal and opposite forces occur when one object exerts a force on another.</i> <i>Describe the forces acting on an object, based on the motion of that object.</i>	
			Identify examples of magnetism and gravity exerting force on an object. <i>Recognize that magnets attract and repel each other and other materials.</i> <i>Recognize that things on or near Earth are pulled toward it by Earth's gravity.</i>	Recognize that every object exerts gravitational force on every other object. <i>Describe the effect of gravitational force on objects at the Earth's surface.</i>	Recognize that gravity is a universal force. <i>Describe the relationship of mass and distance to gravitational force.</i>	

PHYSICAL SCIENCE: (Continued)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
<p>ENERGY</p> <p>Understand energy, its transformations, and interactions with matter.</p>	<p>Explain and analyze the interaction of energy and matter.</p>	<p>Identify common types and uses of energy.</p>	<p>Identify forms of various types of energy and their effects on matter.</p> <p><i>Identify various forms of energy including heat, light, sound, and electricity.</i></p> <p>Describe examples of energy transfer.</p> <p><i>Identify the direction of heat transfer on a diagram showing objects at different temperatures.</i></p> <p><i>Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</i></p> <p><i>Identify examples of energy transfer in the environment.</i></p>	<p>Compare forms and behaviors of various types of energy.</p> <p><i>Distinguish between the forms of energy including heat, chemical, mechanical, and gravitational potential energy.</i></p> <p>Describe and explain various energy transfers and resulting transformations.</p> <p><i>Trace the flow of energy transformations in a system.</i></p> <p><i>Explain the principle that energy is conserved, neither created nor destroyed.</i></p> <p><i>Identify how technological advances have changed humankind's use of energy.</i></p>	<p>Describe differences and similarities between kinds of waves, including sound, seismic, and electromagnetic, as a means of transmitting energy.</p> <p><i>Recognize that waves of all kinds have energy that can be transferred when the waves interact with matter.</i></p> <p><i>Apply the concepts of frequency, wavelength, amplitude, and energy to electromagnetic and mechanical waves.</i></p> <p>Describe and analyze examples of conservation of energy.</p> <p><i>Recognize that heat energy is a by-product of most energy transformations.</i></p> <p><i>Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves.</i></p> <p><i>Explain the difference between potential and kinetic energy.</i></p> <p><i>Analyze the flow of energy through a system by applying the law of conservation of energy.</i></p>	<p>(See previous page)</p>

LIFE SCIENCE: Understand structure, functions, and interactions of living organisms and the environment.

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
<p>ORGANISMS</p> <p>Understand the characteristics, structure, and functions of organisms.</p>	<p>Describe the characteristics, structure, and functions of organisms.</p>	<p>Recognize characteristics that are similar and different between organisms.</p>	<p>Group or classify organisms based on a variety of characteristics.</p> <p><i>Classify a variety of living things into groups using various characteristics.</i></p> <p>Describe the function of organ systems.</p> <p><i>Classify organs by the system to which they belong.</i></p>	<p>Describe and explain the relationship and interaction of organ systems.</p> <p><i>Identify organ systems at work during a particular activity and describe their effect on each other.</i></p>		<p>Know and apply fundamental concepts of the life sciences.</p> <p>Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science.</p> <p>Use information, skills, and investigative processes employed in a field of science.</p> <p>Investigate, through research and inquiry, important principles, theories, and relationships from a field of science.</p>

LIFE SCIENCE: (Continued)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
		Describe the basic needs of living things.	Describe basic plant and animal structures and their functions. <i>Associate specific structures with their functions in the survival of the organism.</i>	Describe and explain the structure and functions of an organism in terms of cells, tissues, and organs. <i>Identify differences and similarities between plant and animal cells.</i> <i>Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</i> <i>Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</i> <i>Explain how our understanding of cells and microbes has changed over time.</i>	Describe, explain, and compare the structure and functions of cells in organisms. <i>Describe how biological systems can maintain equilibrium (homeostasis).</i> <i>Identify unique structures in cells from plants, animals, and prokaryotes.</i> <i>Identify cell organelles and state how their activities contribute to a particular type of cell carrying out its functions.</i> <i>Explain the role of the cell membrane in cell transport.</i> <i>Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each.</i> <i>Describe photosynthesis as a chemical process and part of the carbon cycle.</i> <i>Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes.</i>	(See previous page)
<p>HEREDITY Understand the transmission of traits in living things.</p>	Understand the transmission of traits in living things.	Describe how related plants and animals have similar characteristics.	Describe the life cycle of an organism. <i>Describe the life cycle of common organisms.</i> <i>Recognize that organisms are produced by living organisms of similar kind, and do not appear spontaneously from inanimate materials.</i>	Describe how the traits of an organism are passed from generation to generation. <i>Distinguish between asexual and sexual reproduction.</i> <i>Identify traits inherited through genes and those resulting from interactions with the environment.</i> <i>Use simple laws of probability to predict patterns of heredity with the use of Punnett squares.</i> <i>Explain how our understanding of heredity has changed over time.</i>	Explain laws of heredity and their relationship to the structure and function of DNA. <i>Describe the structure of DNA and the way that DNA functions to control protein synthesis.</i> <i>Recognize and understand the differences between meiosis and mitosis in cellular reproduction.</i> <i>Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.</i> <i>Apply concepts of inheritance of traits, including Mendel's laws, Punnett squares, and pedigrees, to determine the characteristics of offspring.</i> <i>Recognize the existence of technology that can alter and/or determine inherited traits.</i>	

LIFE SCIENCE: (Continued)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
<p>DIVERSITY/ INTERDEPENDENCE</p> <p>Understand the relationships among living things and between living things and their environments.</p>	<p>Explain and analyze the interdependence of organisms in their natural environment.</p>	<p>Describe a habitat and the organisms that live there.</p>	<p>Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><i>Use drawings or models to represent a series of food chains for specific habitats.</i></p> <p><i>Identify the producers, consumers, and decomposers in a given habitat.</i></p> <p><i>Recognize how all animals depend upon plants whether or not they eat the plants directly.</i></p> <p><i>Explain the relationship between animal behavior and species survival.</i></p> <p><i>Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</i></p>	<p>Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><i>Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</i></p> <p><i>Identify populations of organisms within an ecosystem by the function that they serve.</i></p> <p><i>Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</i></p> <p><i>Explain the importance of niche to an organism's ability to avoid direct competition for resources.</i></p>	<p>Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><i>Predict outcomes of changes in resources and energy flow in an ecosystem.</i></p> <p><i>Explain how humans and other species can impact an ecosystem.</i></p> <p><i>Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</i></p>	<p>(See previous page)</p>
	<p>Describe and analyze diversity of species, natural selection, and adaptations.</p>	<p>Identify how some animals gather and store food, defend themselves, and find shelter.</p>	<p>Describe how adaptations help a species survive.</p> <p><i>Describe changes to the environment that have caused the population of some species to change.</i></p> <p><i>Identify conditions that might cause a species to become endangered or extinct.</i></p>	<p>Describe and explain the theory of natural selection as a mechanism for evolution.</p> <p><i>Identify and explain how random variations in species can be preserved through natural selection.</i></p> <p><i>Describe how animal and plant structures adapt to environmental change.</i></p>	<p>Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><i>Recognize that, over time, natural selection may result in development of a new species or subspecies.</i></p> <p><i>Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species.</i></p> <p><i>Explain how biological evolution can account for the diversity of species developed over time.</i></p> <p><i>Explain the relationship between genetics, mutations, and biological evolution.</i></p> <p><i>Explain how our understanding of evolution has changed over time.</i></p>	

EARTH AND SPACE SCIENCE: Understand physical properties of the Earth, how those properties change, and the Earth's relationship to other celestial bodies.

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
<p>THE DYNAMIC EARTH</p> <p>Understand the properties and limited availability of the materials which make up the Earth.</p>	<p>Identify the structure of the Earth system and the availability and use of the materials that make up that system.</p>	<p>Recognize physical differences in Earth materials.</p>	<p>Identify properties and uses of Earth materials.</p> <p><i>Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</i></p> <p><i>Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</i></p> <p><i>Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</i></p> <p><i>Recognize that discarded products contribute to the problem of waste disposal.</i></p>	<p>Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><i>Identify ways in which various resources can be recycled and reused.</i></p>	<p>Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><i>Predict consequences of increased consumption of renewable and non-renewable resources.</i></p>	<p>Know and apply fundamental concepts of the earth and space sciences.</p> <p>Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science.</p> <p>Use information, skills, and investigative processes employed in a field of science.</p> <p>Investigate, through research and inquiry, important principles, theories, and relationships from a field of science.</p>
<p>Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p>	<p>Explain and analyze changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p>	<p>Identify daily and seasonal weather changes.</p>	<p>Describe patterns of seasonal weather.</p> <p><i>Describe weather in measurable quantities including temperature, wind direction, wind speed, and precipitation.</i></p> <p><i>Interpret data over a period of time and use information to describe changes in weather from day to day, week to week, and season to season.</i></p> <p>Identify causes of Earth surface changes.</p> <p><i>Identify effects of wind and water on Earth materials using appropriate models.</i></p> <p><i>Identify effects of rapid changes on Earth's surface features including earthquakes and volcanoes.</i></p>	<p>Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><i>Explain the water cycle.</i></p> <p><i>Identify factors that cause or affect weather patterns.</i></p> <p><i>Identify factors that affect the rate of evaporation, condensation, and cloud formation.</i></p> <p><i>Identify the difference between weather and climate.</i></p> <p><i>Explain how geography affects climate.</i></p> <p>Describe the Earth's structure and how it changes over time.</p> <p><i>Recognize the solid Earth is layered with a lithosphere, a hot convecting mantle, and a dense metallic core.</i></p> <p><i>Identify the processes that result in different kinds of landforms.</i></p> <p><i>Identify factors affecting water flow, soil erosion, and deposition.</i></p> <p><i>Give examples of landform changes that occur at different rates.</i></p> <p><i>Describe the evidence for and the development of the theory of plate tectonics.</i></p> <p><i>Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</i></p> <p><i>Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</i></p>	<p>Analyze the relationship between global energy transfer and climate.</p> <p><i>Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.</i></p> <p><i>Describe how solar radiation and the amount that reaches Earth is affected by stratospheric ozone.</i></p> <p><i>Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.</i></p> <p>Analyze evidence of ongoing evolution of the Earth system.</p> <p><i>Describe methods of determining ages of rocks and fossils.</i></p> <p><i>Use rock sequences and fossil evidence to determine geologic history.</i></p> <p><i>Describe and analyze theories of Earth's origin and early history using scientific evidence.</i></p> <p><i>Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions.</i></p> <p><i>Describe how the evolution of life caused dramatic changes in the composition of the Earth's atmosphere, which did not originally contain oxygen.</i></p> <p><i>Identify how volcanic eruptions and impacts of huge rocks from space can cause widespread effects on climate.</i></p>	

EARTH AND SPACE SCIENCE: (Continued)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
THE EARTH IN SPACE Understand the Earth's place in the solar system and the universe.	Explain relationships among the Earth, sun, moon, and the solar system.	Identify and trace the movement of objects in the sky.	Describe the Earth's place in the solar system and the patterns of movement of objects within the solar system using pictorial models. <i>Describe Earth's position and movement in the solar system.</i> <i>Recognize that the rotation of the Earth on its axis every 24 hours produces the night-and-day cycle.</i>	Explain the relationship of the Earth's motion to the day, season, year, phases of the moon, and eclipses. <i>Explain the relationship between the cycle of seasons and the tilt of the Earth on its axis.</i>	Explain how mass and distance affect the interaction between Earth and other objects in space. <i>Recognize that the sun's gravitational pull holds the Earth and other planets in their orbits, just as the planets' gravitational pull keeps their moons in orbit around them.</i> <i>Explain that the force of gravity between Earth and other objects in space depends only upon their masses and the distances between them.</i>	(See previous page)
THE UNIVERSE Describe natural objects, events, and processes outside the Earth, both past and present.						

SCIENTIFIC INQUIRY: Use interrelated processes to pose questions and investigate the physical and living world.

(These standards are assessed through Oregon's Official Scientific Inquiry Scoring Guides for the purpose of classroom work sample assessment.)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
FORMING THE QUESTION/HYPOTHESIS Formulate and express scientific questions or hypotheses to be investigated.	Make observations. Formulate and express scientific questions or hypotheses to be investigated based on the observations.	Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.	Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.	Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.	Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.	Determine areas of inquiry, frame scientific problems, and pose research questions and hypotheses involving scientific relationships.
DESIGNING THE INVESTIGATION Design safe and ethical scientific investigations to address questions or hypotheses.	Design scientific investigations to address and explain questions or hypotheses.	Plan a simple investigation.	Design a simple scientific investigation to answer questions or test hypotheses.	Design a scientific investigation to answer questions or test hypotheses.	Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.	Design scientific investigations that use precise and appropriate methodology to address questions, examine scientific relationships, and test hypotheses.
COLLECTING AND PRESENTING DATA Conduct procedures to collect, organize, and display scientific data.	Collect, organize, and display scientific data.	Collect data from an investigation.	Collect, organize, and summarize data from investigations.	Collect, organize, and display sufficient data to support analysis.	Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.	Conduct scientifically accepted procedures to collect, organize, and display data.

SCIENTIFIC INQUIRY: (Continued)

COMMON CURRICULUM GOALS	CONTENT STANDARDS	BENCHMARK 1 (GRADE 3)	BENCHMARK 2 (GRADE 5)	BENCHMARK 3 (GRADE 8)	CIM/CAM	PASS CRITERIA
<p>ANALYZING AND INTERPRETING RESULTS</p> <p>Analyze scientific information to develop and present conclusions.</p>	<p>Analyze scientific information to develop and present conclusions.</p>	<p>Use the data collected from an investigation to explain the results.</p>	<p>Summarize, analyze, and interpret data from investigations.</p>	<p>Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>	<p>Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>	<p>Analyze and interpret data and relationships, evaluate investigations, and develop supported explanations.</p>

ADDITIONAL COMMON CURRICULUM GOALS

Instruction in the Common Curriculum Goals of Unifying Concepts and Processes, History and Nature of Science, Science in Personal and Social Perspectives, and Science and Technology is required in all Oregon school districts; however, they are not included on the statewide assessment except as specifically indicated in the eligible content (italicized in print of preceding seven pages) in Earth/Space Science, Life Science, or Physical Science.

UNIFYING CONCEPTS AND PROCESSES

Understand and apply major concepts and processes common to all sciences.

Common Curriculum Goals:

- Understand that any collection of things that have an influence on one another can be thought of as a system.
- Understand that a model is a tentative scheme or structure with explanatory power.
- Understand that both patterns of change and stability are important in the natural world.
- Understand that changes in scale influence the characteristics, properties, and relationships within a system.

PASS Criteria:

Know and apply fundamental concepts that unify the sciences.

HISTORY AND NATURE OF SCIENCE

Understand science as a human endeavor, the nature of scientific knowledge, and the history of science as it relates to and clarifies scientific inquiries.

Common Curriculum Goals:

- Understand that science is a human endeavor practiced by individuals from many different cultures.
- Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.
- Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments, and skepticism.

PASS Criteria:

Examine the work of scientists and the development of scientific theories or bodies of research.

Informally analyze scientific writings, theories, research, and arguments.

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

Understand that science provides a basis for understanding and acting on personal and social issues.

Common Curriculum Goals:

- Describe the role of science and technology in local, national, and global issues.
- Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems, and natural resource supplies.
- Explain risks and benefits in personal and community health from a science perspective.

PASS Criteria:

Evaluate scientific, social, or ethical implications of scientific research and writings.

SCIENCE AND TECHNOLOGY

Understand the interconnections among science, technology, and society.

Common Curriculum Goals:

- Understand the relationship that exists between science and technology.
- Understand the process of technological design to solve problems and meet needs.

Oregon Scientific Inquiry Work Sample Implementation Schedule

Adopted April 26, 2001

Scientific Inquiry Scoring Guides are composed of four dimensions:

- Forming a Question or Hypothesis
- Designing an Investigation
- Collecting and Presenting Data
- Analyzing and Interpreting Results

Teachers are expected to provide instruction and classroom assessment in all four dimensions of the scoring guide. However, only the dimensions indicated below must be reported for school district work sample management.

STUDENTS IN	2003-04 (2005-06 GRADUATES)	2004-05 (2006-07 GRADUATES)	2005-06 (2007-08 GRADUATES)
BENCHMARK 2 (Grades 4 and 5) Scored with the Benchmark 2 Scoring Guide	Report scores on one dimension: ■ Collecting Performance standard: The Collecting dimension must have a rating of 4 or higher.	Report scores on two dimensions: ■ Designing ■ Collecting Performance standard: Both dimensions must have a rating of 4 or higher and must be on the same work sample.	Report scores on three dimensions: ■ Designing ■ Collecting ■ Analyzing Performance standard*: Each dimension must have a rating of 4 or higher. Designing and Collecting must be on the same work sample. Analyzing may be on a separate work sample.
BENCHMARK 3 (Grades 6, 7, and 8) Scored with the Benchmark 3 Scoring Guide	Report scores on two dimensions: ■ Designing ■ Collecting Performance standard: Both dimensions must have a rating of 4 or higher on the same work sample.	Report scores on three dimensions: ■ Designing ■ Collecting ■ Analyzing Performance standard: Each dimension must have a rating of 4 or higher. Designing and Collecting must be on the same work sample. Analyzing may be on a separate work sample.	Report scores on four dimensions: ■ Forming ■ Designing ■ Collecting ■ Analyzing Performance standard*: Each dimension must have a rating of 4 or higher. Designing and Collecting must be on the same work sample. Forming and Analyzing may be on the same or separate work samples.
CIM (Students working toward a CIM) Scored with the CIM Scoring Guide	Report scores on two dimensions: ■ Designing ■ Collecting Performance standard: Both dimensions must have a rating of 4 or higher on the same work sample.	Report scores on three dimensions: ■ Designing ■ Collecting ■ Analyzing Performance standard: Each dimension must have a rating of 4 or higher. Designing and Collecting must be on the same work sample. Analyzing may be on a separate work sample.	Report scores on four dimensions: ■ Forming ■ Designing ■ Collecting ■ Analyzing Performance standard*: Each dimension must have a rating of 4 or higher. Designing and Collecting must be on the same work sample. Forming and Analyzing may be on the same or separate work samples.

*For more information regarding the science work sample requirements for 2005-06, please see the Scientific Inquiry Work Sample requirements FAQ document available online. Go to www.ode.state.or.us/, select "Start ODE A-Z Topics" and search for "Science assessment."