

Observation Number: _____

Observer's Initials: _____

PURDUE UNIVERSITY FORT WAYNE
Science Education Student Teaching Observation Form

Student: _____ Visitation Date/Time: _____

University Supervisor/Cooperating Teacher: _____

School: _____ No. of Students: _____ Subject: _____

Specific Observations: What did you see and hear?

Questions/comments/
connections to standards:

Observation Number: _____

Observer's Initials: _____

Observations continued:

Questions/comments/
connections continued:

Observer's additional feedback (highlight the areas of strength):

Future goals – **determined jointly** (based on IN REPA standards, see next pages)

University Supervisor/Cooperating Teacher:

(Signature) (Date)

Student Teacher:

(Signature) (Date)

Standard 1: The Nature and Processes of Science

Chemistry teachers have a broad and comprehensive understanding of the nature of science and the processes of scientific inquiry.

Standard 2: Central Concepts and Connections in Science

Chemistry teachers have a comprehensive understanding of the core ideas in other science disciplines and of the relationships between science, engineering, technology, and society.

Standard 3: Atomic Structure

Chemistry teachers have a broad and comprehensive understanding of the structure of atoms.

Standard 4: The Properties of Matter

Chemistry teachers have a broad and comprehensive understanding of the states of matter and their characteristic properties.

Standard 5: Chemical Bonding

Chemistry teachers have a broad and comprehensive understanding of the principles of chemical bonding and the characteristics of intermolecular forces.

Standard 6: Chemical Reactions

Chemistry teachers have a broad and comprehensive understanding of common inorganic chemical reaction types and the principles of chemical reactivity.

Standard 7: Thermochemistry

Chemistry teachers have a broad and comprehensive understanding of the laws of thermodynamics and how they apply to chemical systems.

Standard 8: Organic Chemistry and Biochemistry

Chemistry teachers have a broad and comprehensive understanding of organic chemistry and biochemistry.

Standard 9: Science Instruction and Assessment

Chemistry teachers have a broad and comprehensive understanding of content-specific instruction and assessment in science.

The Indiana Educator Standards for Science–Chemistry describe the knowledge and skills that teachers need to help students achieve the learning outcomes defined by the Indiana Revised Academic Standards for Science Grade 5–Grade 8, Chemistry I, and Integrated Chemistry and Physics. Links to relevant portions of the Indiana Academic Standards can be found below.

[Grade 5 Process Standards](#)

[Grade 6 Physical Science](#)

[Grade 8 Process Standards](#)

[Integrated Chemistry and Physics](#)

[Grade 5 Physical Science](#)

[Grade 7 Process Standards](#)

[Grade 8 Physical Science](#)

[Grade 6 Process Standards](#)

[Grade 7 Physical Science](#)

[Chemistry I](#)

CONTENT

Science—Earth and Space Science Educator Standards

Standard 1: The Nature and Processes of Science

Earth and space science teachers have a broad and comprehensive understanding of the nature of science and the processes of scientific inquiry.

Standard 2: Central Concepts and Connections in Science

Earth and space science teachers have a comprehensive understanding of the core ideas in other science disciplines and of the relationships between science, engineering, technology, and society.

Standard 3: Stars, Galaxies, and the Universe

Earth and space science teachers have a broad and comprehensive understanding of the origin, structure, and components of the universe.

Standard 4: Earth and the Solar System

Earth and space science teachers have a broad and comprehensive understanding of the solar system and the sun-moon-Earth system.

Standard 5: Earth's Origin, Evolution, and Structure

Earth and space science teachers have a broad and comprehensive understanding of the origin, evolution, and structure of Earth.

Standard 6: Earth Processes and Materials

Earth and space science teachers have a broad and comprehensive understanding of the physical and chemical processes that shape Earth's surface and the materials that Earth is composed of.

Standard 7: Freshwater Systems and the Oceans

Earth and space science teachers have a broad and comprehensive understanding of the hydrosphere.

Standard 8: The Atmosphere, Weather, and Climate

Earth and space science teachers have a broad and comprehensive understanding of the atmosphere, weather, and climate.

Standard 9: Biogeochemical Cycles, Geologic Resources, and the Environment

Earth and space science teachers have a broad and comprehensive understanding of the cycling of matter through biogeochemical cycles, the use and management of geologic resources, and the effects of human activities on the environment.

Standard 10: Science Instruction and Assessment

Earth and space science teachers have a broad and comprehensive understanding of content-specific instruction and assessment in science.

The Indiana Educator Standards for Science—Earth and Space Science describe the knowledge and skills that teachers need to help students achieve the learning outcomes defined by the Indiana Revised Academic Standards for Science. Links to relevant portions of the Indiana Academic Standards can be found below.

[Grade 5](#)

[Grade 6](#)

[Grade 7](#)

[Grade 8](#)

[Earth and Space Science I](#)

Standard 1: The Nature and Processes of Science

Physical science teachers have a broad and comprehensive understanding of the nature of science and the processes of scientific inquiry.

Standard 2: Central Concepts and Connections in Science

Physical science teachers have a comprehensive understanding of the core ideas in other science disciplines and of the relationships between science, engineering, technology, and society.

Standard 3: Atomic Structure, the Properties of Matter, and Nuclear Processes

Physical science teachers have a broad and comprehensive understanding of models of atomic structure, the periodic table, the properties of matter, and nuclear processes.

Standard 4: Chemical Bonding, Chemical Reactions, and Stoichiometry

Physical science teachers have a broad and comprehensive understanding of chemical bonding, chemical reactions, and stoichiometry.

Standard 5: Energy Transformations, Energy Transfers, and Thermochemistry

Physical science teachers have a broad and comprehensive understanding of energy transformations, energy transfers, and thermochemistry.

Standard 6: Motion and Forces

Physical science teachers have a broad and comprehensive understanding of motion and forces.

Standard 7: Mechanical Waves

Physical science teachers have a broad and comprehensive understanding of the properties and propagation of mechanical waves.

Standard 8: Electromagnetic Energy, Electricity, and Magnetism

Physical science teachers have a broad and comprehensive understanding of electromagnetism, electricity, and magnetism.

Standard 9: Energy and Society

Physical science teachers have a broad and comprehensive understanding of the production and use of energy and the effects of energy use on society and the environment.

Standard 10: Science Instruction and Assessment

Physical science teachers have a broad and comprehensive understanding of content-specific instruction and assessment in science.

The Indiana Educator Standards for Science–Physical Science describe the knowledge and skills that teachers need to help students achieve the learning outcomes defined by the Indiana Revised Academic Standards for Science. Links to relevant portions of the Indiana Academic Standards can be found below.

[Grade 5](#)

[Grade 6](#)

[Grade 7](#)

[Grade 8](#)

[Integrated Chemistry and Physics](#)

CONTENT

Science – Physics Educator Standards

Standard 1: The Nature and Processes of Science

Physics teachers have a broad and comprehensive understanding of the nature of science and the processes of scientific inquiry.

Standard 2: Central Concepts and Connections in Science

Physics teachers have a comprehensive understanding of the core ideas in other science disciplines and of the relationships between science, engineering, technology, and society.

Standard 3: Motion and Forces

Physics teachers have a broad and comprehensive understanding of motion, forces, and Newton's laws in one and two dimensions.

Standard 4: Energy and Momentum

Physics teachers have a broad and comprehensive understanding of the conservation of energy and momentum.

Standard 5: Thermodynamics and Kinetic Theory

Physics teachers have a broad and comprehensive understanding of the laws of thermodynamics and the kinetic theory of matter.

Standard 6: Electricity and Magnetism

Physics teachers have a broad and comprehensive understanding of electricity and magnetism.

Standard 7: Vibrations and Waves

Physics teachers have a broad and comprehensive understanding of vibrations and waves and the application of wave properties to sound and light.

Standard 8: Modern Physics

Physics teachers have a broad and comprehensive understanding of the fundamental ideas of modern physics.

Standard 9: Science Instruction and Assessment

Physics teachers have a broad and comprehensive understanding of content-specific instruction and assessment in science.

The Indiana Educator Standards for Science–Physics describe the knowledge and skills that teachers need to help students achieve the learning outcomes defined by the Indiana Revised Academic Standards for Science. Links to relevant portions of the Indiana Academic Standards can be found below.

[Indiana Science Standards](#)

[Grade 5](#)

[Grade 6](#)

[Grade 7](#)

[Grade 8](#)

[Physics I](#)

Standard 1: Student Development and Diversity

Teachers at the secondary level have a broad and comprehensive understanding of student development and diversity and demonstrate the ability to provide instruction that is responsive to student differences and that promotes development and learning for all students.

Standard 2: Learning Processes

Teachers at the secondary level have a broad and comprehensive understanding of learning processes and demonstrate the ability to facilitate student achievement.

Standard 3: Instructional Planning and Delivery

Teachers at the secondary level have a broad and comprehensive understanding of instructional planning and delivery and demonstrate the ability to plan and deliver standards-based, data-driven differentiated instruction that engages students, makes effective use of contemporary tools and technologies, and helps all students achieve learning goals.

Standard 4: Assessment

Teachers at the secondary level have a broad and comprehensive understanding of assessment principles and practices and demonstrate the ability to use assessment to monitor student progress and to use data to guide instructional decision making.

Standard 5: Learning Environment

Teachers at the secondary level have a broad and comprehensive understanding of student learning environments and demonstrate the ability to establish positive, productive, well-managed, and safe learning environments for all students.

Standard 6: The Professional Environment

Teachers at the secondary level have a broad and comprehensive understanding of professional environments and expectations and demonstrate the ability to collaborate with others to improve student learning, to engage in continuous professional growth and self-reflection, and to adhere to legal and ethical requirements of the profession.

Standard 7: Reading Instruction

Teachers at the secondary level have a broad and comprehensive understanding of content-area and disciplinary literacy skills, and demonstrate the ability to plan and deliver integrated content-area reading instruction that is based on student learning standards, student literacy needs and strengths as reflected in ongoing student data, and scientifically based reading research.