

ADOLESCENCE & YOUNG ADULTHOOD

SCIENCE STANDARDS



Standard I: Understanding Students

Accomplished science teachers continuously seek to understand their students, and they use this knowledge to enhance student learning.

Standard III: Curriculum and Instruction

Accomplished science teachers thoughtfully and deliberately implement a standards-based curriculum using a variety of high-quality instructional strategies and resources to enhance student learning.

Standard V: Learning Environment

Accomplished science teachers create and maintain a safe and engaging learning environment to promote and support science learning for all students.

Standard VII: Advancing Professionalism

Accomplished science teachers advance their professionalism by pursuing leadership roles, collaborating with colleagues, and undertaking high-quality professional learning opportunities.

Standard IX: Reflection

Accomplished science teachers continually reflect on their teaching practice in order to maximize their own professional growth and improve the quality of their students' learning experiences.

Standard II: Knowledge of Science

Accomplished science teachers have comprehensive understandings of the nature of science, inquiry, and natural phenomena.

Standard IV: Assessment

Accomplished science teachers purposefully assess their students in order to set learning goals, differentiate instruction, and encourage student learning.

Standard VI: Family and Community Partnerships

Accomplished science teachers establish productive interactions and successful partnerships with families and communities to enhance student learning.

Standard VIII: Diversity, Fairness, Equity and Ethics

Accomplished science teachers understand and value diversity, and they engage all students in high quality science learning through fair, equitable, and ethical teaching practices.

WHAT ARE THE STEPS TO ▶ CERTIFICATION? ◀



Component 1: Content Knowledge

-Computer-based assessment of 45 selected response questions.

-3 short essays / constructed response exercises on:

- I. Data Analysis
- II. Contexts of Science
- III. Development of Scientific Concepts

Component 2: Differentiation in Instruction

-Demonstrate your strategies for linking instructional activities together to engage students in building conceptual understanding of a major idea in science along with developing one or more goals related to scientific practices.

-Choose three instructional activities, related instructional materials, and two student responses to each activity.

-Submit a Written Commentary that provides an analysis and a context for your instructional choices.

Component 3: Teaching Practice and Learning Environment

-Provide a brief overview of the content of your overall submission.

-Submit two 10–15 minute videos of your teaching practice, showcasing different instructional units, content, and strategies in each.

-Submit information about the instructional context for each video.

-Describe your instructional planning for the lesson featured in each video and submit supporting materials.

-Submit a commentary for each video that includes analysis and reflection on your teaching practice; that communicates your pedagogical decision making before, during, and after the lesson shown in the video; and that focuses on your impact on student learning.



Component 4: Effective and Reflective Practitioner

-Provide a profile or description of one entire class of current students developed from and supported by information you collect about the students.

-Provide evidence that you collect relevant information about your group of students to prove you base assessment practices on your knowledge of the students and understanding of sound assessment principles. Show you use assessments and other data sources to positively impact students' learning. You must link the assessment data to your practice.

-Submit evidence you use accumulated knowledge about students from the current year and/or previous school year to analyze the effectiveness of your own practice and to initiate or contribute to collaborative efforts designed to support students' learning and growth.

-Reflect on your practice of gathering and using information about students and how you can best contribute to positive changes for students and your practice in the future.

To find out more about National Board:

<https://www.nbpts.org/>

Ready to start your journey? Apply for the Illinois subsidy here:

<https://nbrc.illinoisstate.edu/>