

# CAESL Pre-Service Assessment Modules

To aid in the preparation of highly qualified teachers, CAESL is developing curriculum materials on student assessment for use with pre-service middle and high school teachers.

## Program Overview

The CAESL Pre-service Assessment Modules (PAM) are based on a cycle of assessment that links planning, teaching, and reflecting on student work. The modules also emphasize meeting the learning needs of the wide range of students in today's classrooms, including English Language Learners. PAM materials are intended for use in secondary teacher education courses.

The set of modules has been used in a semester-long course on assessment at San José State University, and selected modules have been used in quarter-length methods and practicum courses at Stanford University. The University of California at Santa Cruz also is collaborating on module development and use.

### The PAM curriculum is organized around two ESSENTIAL QUESTIONS:

- 1) Why assess student learning?
- 2) How do teachers decide on what and how to assess student learning?

### and four main LEARNING GOALS:

- Establishment and communication of learning goals for all students
- Use of assessments to support, guide, and reflect on feedback related to student learning
- Use of multiple sources of information to assess student learning
- Understanding of current trends in assessment and accountability and their influence on policy and practice

## Module Topics and Titles

- I. Foundations of Assessment
  - a. Today's Diverse Learners
  - b. Standards and Diverse Learners
  - c. Curriculum, Instruction, Assessment and Students (CIAS)
  - d. Reliability, Standardization, Validity and Practicality (RSVP)
- II. Informal Classroom Assessment
  - a. The Role of Informal Assessment
  - b. Effective Informal Assessment
- III. Designing Meaningful Assessment Tools
  - a. Paper and Pencil Assessments
  - b. Performance Assessments
- IV. Analyzing, Evaluating and Documenting Student Learning
  - a. Examining Student Work
  - b. Grading and Reporting Progress
- V. Standardized Testing
  - a. Design, Delivery and Interpretation of Standardized Tests
  - b. Consequences of Standardized Tests
  - c. Test-Wiseness
- VI. Scoring Procedures

## A CLOSER LOOK

### Specific Goals

- 1) Explain how current trends in assessment and accountability influence policy and practice in schools today
  - a) Compare and contrast assessments "for" and "of" learning and justify their use in classrooms and schools.
- 2) Collect and use multiple sources of information to assess pupils' learning.
  - a) Understand and use a variety of informal and formal (formative and summative) assessments to determine progress and plan instruction.
  - b) Explain and justify with examples from your own teaching how standards, assessment, curriculum, and instruction are integrated for the purpose of supporting pupils' learning.
  - c) Construct and provide a rationale for a variety of assessment tools (including rubrics or other scoring guides, portfolios, quizzes, and tests) in specific subject area teaching.
  - d) Apply concepts of reliability, validity, practicality, and standardization (RSVP) to the design of classroom assessment tools.
- 3) Establish and communicate learning goals for all pupils.
  - a) Explain and contrast the types and purposes of standards, goals, and objectives and their corresponding roles in planning curriculum, instruction, and assessment.
  - b) Use grade level subject matter content standards to plan short and long term curriculum, instruction, and ongoing assessment.
- 4) Use assessments to support, guide, and reflect on feedback related to pupils learning.
  - a) Use assessment tools that provide pupils with meaningful feedback about their progress.
  - b) Examine and use assessment results to inform planning of ongoing instruction.

## Student Work

Big Ideas	Skills and Standards	Student and Family Knowledge	Assesment (Formative and Summative)	Instructional Strategies or Practices	Resources and Materials
Can matter be created or destroyed? Why does anybody care if matter can or cannot be created or destroyed?	California Department of Education Chemistry Content Standard:  3. The conservation of atoms in chemical reactions leads to the principle of conservation of matter and the ability to calculate the mass of products and reactants. As a basis for understanding this concept:  a. Students know how to describe chemical reactions by writing balanced equations.  TSWBRAE:  1. Describe how conservation of mass relates to a balanced equation.  2. Determine the coefficients to balance the chemical equation for a reaction.  3. Write a complete chemical equation and be able to interpret all the symbols in a equation.  4. Classify a given reaction as a combustion, decomposition, double displacement.	Previous unit exam provides diagnostic assessment of student skills in calculations involving mass, moles, and molar mass needed for this unit.  Begin unit by showing NOVA video "Kaboom!" which is about the history and current development of explosives. Video delivers many dramatic visual examples of chemical reactions.  "Moles of Chalk" lab provides assessment of conversion of mass to moles and ability to determine a chemical formula from the compound name.  Reactions used in lab activities have some dramatic visual effect to appeal to students interest.  Significant use of hands on lab activities to reinforce learning through a variety of learning modes.	<b>Formative:</b>  1. Previous unit exam to assess background knowledge and skills needed for this unit.  2. "Moles of Chalk" lab provides assessment of background knowledge in conversion of mass to moles, ability to determine a chemical formula from the compound name, and ability to determine molar mass from formula.  3. Balanced equations written on board provide assessment of ability to balance equation.  4. Balancing Equations Race provides further assessment of balancing equation ability.  5. The Conservation of Mass Lab includes question which assess the students ability to describe how conservation of mass relates to a balanced equation.  6. Quiz on Writing complete equations.  7. Quiz on classifying reaction types.  <b>Summative:</b>	1. Video "Kaboom!" describes research and use of explosive chemical reactions.  2. Lab: Moles of Chalk – students determine how many moles of chalk used to write students name on board.  3. Lecture with overhead transparencies on balancing chemical equations  4. Students practice balancing equations in groups and write balanced equations on board.  5. Homework practice balancing equations.  6. Balancing Equations Race – students complete in teams of two to complete a worksheet fastest.  7. Mini Lecture on conservation of mass.  8. Homework worksheet practice applying the conservation of mass concept.  9. Lab: Conservation of Mass – students determine and compare mass of products to mass of reactants.  10. Lecture with overhead on interpreting and writing complete equations.  11. Homework practice writing complete equations with worksheet.  12. Lab: Writing Complete Equations – Students will use their knowledge of chemical symbols and terms to write complete, balanced equations for several demonstrated reactions.  13. Lecture on the six classifications of chemical reactions.  14. Homework worksheet practice identifying reaction types.  15. Lab: Types of Reactions Lab – students will perform six different types of reactions and then write a complete, balanced equation for each.  16. Review major concepts and skills.	Textbook  Supplemental worksheets and lab information from: <a href="http://www.chemfiesta.com">www.chemfiesta.com</a>  Overhead projection slides.  California State Department of Education 9-12 chemistry content standards <a href="http://www.cde.ca.gov">www.cde.ca.gov</a>  NOVA video "Kaboom!"

### Unit Planning Matrix Critique and Rubric -- It's all about CIAS and RSVP!

Big Ideas	Skills and Standards	Student and Family Knowledge	Assessment (formative and summative)	Instructional Strategies or Practices	Resources and Materials
What are the enduring understandings/essential questions to be addressed?  Critique: Compare the essential questions to the features suggested by Wiggins. To what extent do the EQs measure up to his definition?	What important skills/standards will students learn, practice or apply?  Critique: How explicit are the content standards? To what extent do the skills/objectives demonstrate the full range of Bloom's levels (non-inferential verb choices)? Are the skills and standards directly linked to the EQs?	How will you draw on their ideas, interests and experiences to connect students to the big ideas?  Critique: What is meant by "student and family knowledge"? To what extent has the teacher considered students' developmental, cultural, and social dimensions? In what ways are students' REAL interests reflected? To what extent are there links to EQs, standards and skills? What will be done at the start of the unit to diagnose what students already know (skills, concepts, strategies and experiences)?	What is meaningful evidence that students have understood the big ideas and reached proficiency on the skills/standards?  Critique: How are the assessments aligned with the skills, standards and EQs? To what extent do the assessment choices cover the full scope of the	What instructional practices and strategies will support students to meet the standards and grasp the big ideas?  Critique: How explicitly are the instructional practices aligned with the skills, standards and EQs? To what extent do these practices support students to adequately prepare for the	What resources will best convey the big ideas and concepts to support skill attainment?  Critique: To what extent do the resources and materials link what is to be learned with how it will be taught and assessed? Are the

Criteria	High quality 15 points	Satisfactory 12 points	Revision Suggested 9 points
<b>Explanations And Rationale</b> • distinctions among and use of essential questions, standards, and objectives in planning instruction and assessment • ways to diagnose student prior knowledge early in the unit and for continuing to draw on student's backgrounds and interests throughout. • distinction between formative and summative assessment tools as assessments "of" and "for" learning	Accurately uses relevant technical language of assessment to support description, explanation and reflection  5 points	Uses a few selected concepts or terms to support description and explanation  4 points	Technical language or concepts of assessment are inaccurately applied or absent from the response  3.5 points
<b>CIAS Links</b> • how standards, assessment, curriculum, and instruction are integrated for the purpose of supporting student learning. • how and why selected instructional strategies support student learning • how assessment results guide student learning and next steps for teaching	Demonstrates clear and deep understanding for how the assessment tool or process is grounded in standards or objectives for student learning, provides explicit feedback to students, and informs teaching decisions  7 points	Offers clear links among standards and objectives for student learning, the design of assessment, feedback to students and next steps for instruction.  5.5 points	Links between standards or objectives, assessments, feedback, and instruction are vague, unelaborated or missing  4 points
<b>Depth and Breadth of Response</b>	Addresses all aspects of the assignment with examples and many well-organized, elaborated and specific details supported by course readings, discussions and experience.  3 points	Addresses all aspects of the assignment with examples and some well-organized and specific details related to course readings, discussions and experience.  2.5 points	May be missing some aspect of the assignment and/or response is unorganized, general and/or unelaborated or otherwise unsupported.  1.5 points

The CAESL Pre-Service Assessment Modules are based upon courses currently taught at San Jose State University and Stanford University.

# CAESL

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