# Standards Vs Curriculum

Standards are expectations. For instance, we expect students to know that 2+2=4, and why. Curriculum is the program created by school to teach students to learn that 2+2 =4, and why.

Standards are statements. Curriculum includes many resources: activities, lessons, units, assessments, and can include publisher textbooks.

Standards define what is to be learned by the end of a school year. Curriculum is the detailed plan for day to day teaching.

Standards are the end. Curriculum is the means.

# AERO Vision

American-sponsored overseas schools will know how standards-based education can and should strengthen a school's curriculum, teaching, assessment, and, most importantly, student learning. These schools will develop and sustain a program of standards-based learning in their schools.

# Mission

- Provide challenging, professionally-validated, voluntary academic standards for use as a foundation for curriculum in American-sponsored schools overseas
- Assist overseas schools to develop their own K-12 curricula that are grounded in standards
- Train teachers to use the AERO standards as the basis for assessing their students' progress and their own instruction
- Assist schools in developing standards-based curricula and sustaining curricula by becoming professional communities of learners.

# About AERO

**AERO** is a project supported by the U.S. State Department's Office of Overseas Schools (A/OPR/OS) and the Overseas Schools Advisory Council to assist schools in developing and implementing standards-based curricula. Project faculty use the AERO standards as the basis of the professional development they provide.

**AERO** provides a framework for curriculum consistency across grades K-12 and for stability of curriculum in overseas schools, which typically have a high rate of teacher turnover. AERO's resources, workshops, and professional consultation services help overseas schools implement and sustain standards-based curricula. This effort is in alignment with research-based trends in the development of curriculum worldwide, and particularly with the Common Core initiative in the U.S.

# What is Project AERO?

American Education Reaches Out (AERO), began as a project to adapt the U. S. national standards in Mathematics, Science, Language Arts and Social Studies to serve the needs of multi-national student bodies. Over the years, standards have also been developed in Music, Visual Arts and World Languages. In addition, three other components have been added: AERO:SAW, which provides a focus on standards-based assessment, AERO:SBC, which is a collection of week-long summer institutes on curriculum design, and OSAC-funded AERO mini-workshops, which are one to two-day introductions to the principles taught more deeply in the summer institutes.

# AERO and IB Schools

Schools with IB programs use the AERO Standards in various ways. Some expect students to meet the standards by the end of grade 10 and then use the IB as the basis for the curriculum for the last two years of high school. Another choice is to maintain the AERO Standards through grade 12 for students not enrolled in the full IB program.

In schools that follow the Primary Years Program and/or Middle Years Program, AERO provides a clear, measurable set of expectations for content knowledge and skills that integrate with the curriculum design criteria for PYP and MYP.

# Aero Standards

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Benchmark** | | **PS.2.4A:** By the end of Grade 4, students will differentiate between physical and chemical changes. | | | | | **PS.2.8A:** By the end of Grade 8, students will demonstrate how substances can chemically react with each other to form new substances having properties different from those of the original substances. | | | |
| **Progression Levels** | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **Changes in Matter** | **Physical and Chemical Changes** | | Describe how the properties of certain materials can change when specific actions are applied to them, such as freezing, mixing, heating, cutting, dissolving and bending. | Demonstrate that when some substances combine, they may retain their individual properties (e.g. salt and pepper) and that some may lose their individual properties (e.g. powdered drink in water). | Investigate and explain that not all materials react the same way when an action is applied to them. | Differentiate between a physical change, such as melting, and a chemical change, such as rusting. | Describe how energy has the ability to create change. | Explain that oxidation involves combining oxygen with another substance, as in burning or rusting. | Identify characteristics of chemical changes: (e.g. burning, production of a new substance, production of light, color change, endothermic and exothermic reactions, reactivity). | Demonstrate how substances can react chemically with other substances to form new substances, known as compounds, and that in such re-combinations the properties of the new substances may be very different from those of the old. |