

ANCHORAGE SCHOOL DISTRICT
ANCHORAGE, ALASKA

ASD MEMORANDUM #299 (2002-2003)

May 19, 2003

TO : SCHOOL BOARD
FROM: OFFICE OF THE SUPERINTENDENT
SUBJECT: SCIENCE KIT CHANGES FOR GRADES K-3

RECOMMENDATION:

It is the Administration's recommendation that the School Board approve changes to the kit titles in the science framework at grades K-3 and the Grade Level Focus at third grade. These changes will align the unit's connection to state and national standards and increase the strong articulation of K-12 curriculum in the life, physical, and earth sciences. These changes include:

Kindergarten

Consider replacing Balls and Ramps (Insights) with one of two units currently being field-tested. These are Wood and Paper (FOSS) and Fabric (FOSS).

First Grade

Revise existing ASD units: Alaskan Animals and Power of Water.

Second Grade

Replace Time and Measure (ASD) with Sound (Insights).

Third Grade

Change grade level focus from "Changes of Form" to "Change". Revise existing ASD units: Alaskan Plants and Weather. Replace Changes of State (Insights) with Changes (NSRC).

PERTINENT FACTS:

All materials used in the Anchorage School District are reviewed and revised on a cyclical basis. The current ASD K-6 Framework and kits were adopted in February 1995. The aim of the curriculum review process is to assure that the

framework continues to meet the needs of students and teachers and aligns with both state and national standards. Over the past two school years, teams of teachers, parents, and community scientists working with the elementary science teacher experts have been reviewing the current science units, surveying teachers, field testing kits, and developing recommendations.

Criteria used during the curriculum review process included:

- unit's connection to state and national standards;
- maintaining a strong articulation of K-12 curriculum in the life, physical, and earth sciences;
- unit's connection to grade level focus;
- unit's use of best practices;
- connections made to reading, writing, and math within the unit;
- grade level appropriateness of units;
- assessments within the unit to guide instruction.

Rationale for changes in ASD K-12 Science Framework:

The current kindergarten physical science kit, Balls and Ramps, is a strong unit and develops important concepts but there have been concerns about grade level appropriateness and materials management for the kit that is designed for the K/1 level. Both units being field-tested, Fabric and Wood and Paper, were specifically designed to address physical science concepts at the kindergarten level. All three kits have a strong emphasis on characteristics.

After reviewing the first grade kits and looking at survey data collected, it was determined that the current topics were appropriate. The review team recommended revising the two ASD units, Alaskan Animals and The Power of Water, and standardizing their format and presentation.

Recommendations at second grade call for replacing the existing second grade kit Time and Measure with Sound. The uniquely Alaskan challenges of short winter day length and frequent cloudy or poor weather conditions make it difficult to meet the Time and Measure unit's requirements for multiple outdoor experiences with sunlight and shadows. This hampers the students' ability to develop an understanding of the passage of time by observing their shadows. The addition of Sound to the framework creates an opportunity to introduce the concept of waves and will create a foundation for middle and high school concepts.

The review team recommends altering the third grade focus from "Changes of Form" to "Change". This allows students to observe phenomena from a broader perspective as they collect data and record evidence of change. The concepts at

third grade were determined to be appropriate and to have strong connections to the grade level focus. It was recommended that the two ASD kits at third grade, Alaskan Plants and Weather, be revised and their format and presentation be standardized. The existing unit Changes of State was designed for grades four/five. Classroom assessments and anecdotal records have shown that this kit is not developmentally appropriate for third graders. Replacing Changes of State with the recently revised Change unit will give students more accessible materials and experiences to make a connection to similar concepts.

These changes strengthen the K-6 framework, but leave a question at kindergarten in the physical science strand. We are field testing Wood and Paper, and Fabric to find an appropriate unit that fits the grade level focus, "Characteristics".

The changes listed here have been thoroughly discussed and approved by the Science Curriculum Committee. The information has also been reviewed by the elementary principals and Patricia McRae, Executive Director of Elementary Education.

Attachment

CC/JC/EL/TGR

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