

OFFICE OF INSTRUCTIONAL PROGRAMS AND SERVICES
Summary of State Board of Education Agenda Items

December 18, 2008

OFFICE OF INSTRUCTIONAL PROGRAMS AND SERVICES

Office of Student Assessment

2. Approval of the Mississippi Alternate Assessment of Extended Curriculum Frameworks (MAAECF) Student Performance Level Descriptors for Science
(Has cleared the Administrative Procedures Act process with no public comments)

In compliance with the *No Child Left Behind Act of 2001 (NCLB)*, the Mississippi Department of Education, through the Office of Student Assessment (OSA), convened educators to work with E & R Assessments to develop a science alternate assessment, the Mississippi Alternate Assessment of Extended Curriculum Frameworks (MAAECF), specifically for students with significant cognitive disabilities (SCD). Under NCLB these students are required to be assessed in the acquisition of science knowledge and skills as are general education students. The assessment is administered to SCD students in grades 5, 8 and 12 or ungraded students who are the age of their peers in these grades. The MAAECF will be used to meet NCLB reporting requirements. The first live administration of the Science MAAECF was during the 2007-08 school year as required by the USDE. The participants in the MAAECF standard setting including special education supervisors, special education teachers, parents of significantly cognitively disabled students (SCD), and a speech-language pathologist participated in the development of these performance level descriptors. These Performance Level Descriptors were used to guide the standard setting committee in the cut scores for Basic, Proficient, and Advanced performance on the Science MAAECF. Those cut scores were approved by the State Board of Education at its October 2008 meeting.

Recommendation: Approval

Back-up material attached

GRADE 5 SCIENCE

Science involves a number of skills and the development of subskills in four interrelated strands: (1) inquiry, (2) earth and space systems, (3) life sciences, and (4) physical sciences. These skills and concepts in these strands vary in complexity and importance for students in this grade. In general, students in this grade are expected to progress with instruction from awareness to recognition and recall of basic science words and concepts, awareness of their personal health and physical environment, and use inquiry methods to collect information.

To develop and demonstrate skills in science, students require varying levels of support especially as the complexity of science tasks and materials increase. This support or accommodation is intended to facilitate students' access or responding to tasks or items so that they can demonstrate what they know and can do.

Minimal	Basic	Proficient	Advanced
<p>Student is able to perform simple skills or, but is has difficulty to communicating understanding and demonstrating most discrete science concepts or skills. Student currently exhibits 1 or 2 of the entry-level skills and knowledge in science at a barely <i>emerging</i> level.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Demonstrates very limited understanding of the most basic science concepts and skills. 	<p>Student attends to science instruction and participates in activities. Student responds or performs several skills in at least one Science strand, typically at the <i>emerging</i> level in at least one setting.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Classifies/sorts objects or pictures of according to similar physical properties (e.g. size, color, etc,) and observable features * Identifies the stars, moon, and sun. * Identifies weather commonly occurring in Mississippi 	<p>Student demonstrates the ability to understand and use multiple science skills and concepts. The student's understanding of basic concepts and performance of many skills in at least two Science strands are typically at the <i>progressing level</i> across two or more settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Identifies body part responsible for various bodily functions. * Recognizes major land and water masses of the earth. * Identifies and demonstrates the use of simple machines. 	<p>Student demonstrates a consistent understanding of the concepts and skills contained in the Science items. He or she performs many of the skills in three or more Science strands at the <i>progressing level</i> and some skills at the <i>accomplished</i> level in multiple settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Demonstrates understanding of cause and effect. * Connects science instruction to previous instruction or personal experiences. * Uses a variety of teacher provided resources to identify vocabulary and pictures from science units. * Communicates results of an investigation.

GRADE 8 SCIENCE

Science involves a number of skills and the development of subskills in four interrelated strands: (1) inquiry, (2) earth and space systems, (3) life sciences, and (4) physical sciences. These skills and concepts in these strands vary in complexity and importance for students in this grade. In general, students in this grade are expected to progress with instruction from recognition and recall of basic science words and concepts to some application in daily functioning, application in their daily personal health and functioning in the physical environment, and use inquiry methods to collect information.

To develop and demonstrate skills in science, students require varying levels of support especially as the complexity of science tasks and materials increase. This support or accommodation is intended to facilitate students' access or responding to tasks or items so that they can demonstrate what they know and can do.

Minimal	Basic	Proficient	Advanced
<p>Student is able to perform simple skills but is has difficulty communicating, understanding, and demonstrating most basic science concepts or skills. Student currently exhibits 1 or 2 of the entry-level skills and knowledge in science at a barely <i>emerging</i> level.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Demonstrates very limited understanding of the most basic science concepts and skills * Classifies activities according to physical or chemical changes 	<p>Student attends to science instruction and participates in activities. Student responds or performs several skills in at least one Science strand, typically at the <i>emerging</i> level in at least one setting.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Chooses appropriate tools for completing a task * Identifies features of the solar system * Describes climate and weather patterns commonly occurring in Mississippi * Demonstrates two habits to maintain good health (e.g. washing hands, washing face, and brushing teeth, etc.) 	<p>Student demonstrates the ability to understand and use multiple science skills and concepts. The student understands basic concepts and performance of many skills in at least two Science strands are typically at the <i>progressing level</i> across two or more settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Demonstrates understanding of cause and effect (e.g. severe weather, unhealthy habits, littering, etc.) * Describes the use of simple machines in his/her environment and the effect of force * Conducts a simple experiment to address a question or problem * Classifies matter as a gas, solid, or liquid. 	<p>Student demonstrates a consistent understanding of Science concepts and skills. The student performs many skills in three or more Science strands at the <i>progressing level</i> and some skills at the <i>accomplished</i> level in multiple settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Connects science concepts to previous instruction or personal experiences * Identifies scientific vocabulary, concepts, and activities in the environment * Communicate results of an experiment by summarizing and explaining data

GRADE 12 SCIENCE

Science involves a number of skills and the development of subskills in four interrelated strands: (1) inquiry, (2) earth and space systems, (3) life sciences, and (4) physical sciences. These skills and concepts in these strands vary in complexity and importance for students in this grade. In general, students in this grade are expected to progress with instruction from understanding to application of basic science skills and concepts in science experiments, earth and space systems, weather, plants and animals, bodily functions and energy motion and matter.

To apply skills in science, students at this level require minimal support and exhibit more independence than in earlier grades in science related activities.

Minimal	Basic	Proficient	Advanced
<p>Student is able to perform simple skills or, but is has difficulty to communicating understanding and demonstrating most discrete science concepts or skills. Student currently exhibits 1 or 2 of the entry-level skills and knowledge in science at a barely <i>emerging</i> level.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Chooses appropriate tools for conducting science experiments. * Identifies features of the solar system including the earth, sun, other planets, and asteroid belts. * Identifies and describes weather conditions typical for Mississippi *Identifies body part responsible for various bodily functions. 	<p>Student attends to science instruction and participates in activities. Student responds or performs several skills in at least one Science strand, typically at the <i>emerging</i> level in at least one setting.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Identifies and demonstrate the use of simple machines. *Identifies how plants and animals meet their basic needs for water, food, and shelter. *Describes features of animals and plants that allow them to adapt to their habitat. *Identifies activities that involve change in substances (e.g., baking, boiling) 	<p>Student demonstrates the ability to understand and use multiple science skills and concepts. The student's understanding of basic concepts and performance of many skills in at least two Science strands are typically at the <i>progressing level</i> across two or more settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> * Classifies matter as gas, solid, or liquid and describes in terms of buoyancy, solubility, etc. *Develops graphs, charts or other visual representations to illustrate the results on an investigation. *Explains how fossils are made. *Compares and contrasts living organisms. *Sequences the life stages of plants and/or animals. 	<p>Student demonstrates a consistent understanding of the concepts and skills contained in the Science items. He or she performs many of the skills in three or more Science strands at the <i>progressing level</i> and some skills at the <i>accomplished</i> level in multiple settings.</p> <p>Student typically:</p> <ul style="list-style-type: none"> *Interprets data collected as part of an experiment. *Predicts outcomes based on observations of previous experience. *Classifies rocks, gems, and minerals according to their characteristics.