Mastery-Based Learning and Grading Forum

SAU 39
Mastery Based Learning
Top 10 Skills

**in 2020**
1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

**in 2015**
1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity
Why have we started this work?

SAU 39 Strategic Plan:

• Develop SAU-wide standards for all students pre-K-12
  • Adopt a **common reporting system** based on academic standards and habits of mind that are age appropriate and include narrative comments on student progress

• Realize a fully aligned and unified SAU #39 Pre-K through 12 curricula and culture of rigorous academic excellence
  • Implement a system-wide, **competency-based assessment model**
Why have we started this work?

NHDOE Minimum Standards for School Approval

The 2014 School Approval Standards address the change that must take place from a traditional classroom-only educational system, to a transformed educational system that includes competency-based learning environments and multiple pathways to graduation, resulting in students that are truly college and career ready.

Minimum Standards Require:

- Ongoing assessment of district and graduation competencies through the use of local assessments that are aligned with state and district content and performance standards

- Performance assessment to evaluate students’ achievement of the local course level competencies, as part of a system of assessments, locally determined.

- An organized plan for recording student progress in meeting district and graduation competencies

- Competencies for work-study practices and the expectation that students must demonstrate achievement in these competencies in order to qualify for graduation
College and Career Ready Standards require students to apply learning

• High School Math:
  • Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

• High School Reading (Grade 9-10):
  • Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
Anolis Lizard Investigation

- **Scenario:** You are a field Biologist. You have just joined a team that is studying natural selection in the Anolis Lizards living in the Caribbean. The head of your team is Dr. Losos. First, you will get caught up on the current research by looking at an experiment that has been conducted. Then, you will design a new experiment from your findings to further explore the natural selection of the Anolis lizards.

- **Essential Question:** How is natural selection a mechanism for evolution of a species?

- **Introduction:** Natural selection may indeed be the most powerful biological force that this world has ever seen. The idea that factors such as predators and natural disasters can either cause a species to adapt and evolve or die and go extinct has puzzled biologists for the last two centuries. In this investigation you will discover the influence of natural selection on a population of Anolis lizards.
Performance Assessment
Life Science

- Part I: Background Information
  - Video analysis
  - Previous experiment
  - Discuss with team

- Part II: Hypothesis Review

- Part III: Experiment
  - Procedure
  - Data Collection

- Part IV: Analyzing Data & Graphing
  - Use the data you have collected to generate results.
  - Include examples of mathematical calculations.
  - Create a visual to display those results.

- Part V: Discussion
  - Make a claim on whether data supports hypothesis or not.
  - Use data to support your conclusions regarding your claim.
  - Explain how the data relates to the concept of natural selection.
  - Discuss possible limitations and/or sources of error.

- Part VI: Further Research Question
  - Generate a testable question to guide a new investigation of natural selection of Anolis lizards.

- Part VII: Further Research Experimental Design
  - Develop an experimental procedure to test your question. Make a prediction about your outcomes and identify any limitations/sources of error.
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What work are we doing?

How are we supported in our work?

• Summer curriculum institutes – social studies, math, literacy, and science
  • Unpacking new standards
  • Developing common curriculum
  • Developing common summative assessments and rubrics

• Kindergarten Program Development
• Assessment, Grading and Reporting committee work
• Responsive Classroom Training
• Mentor Program Development
• Supporting parent communication and student learning
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K-12 Competency Education / Mastery Learning State Policy Across the US
71 New England Institutions of Higher Education State that Proficiency-Based Diplomas Do Not Disadvantage Applicants

1. Admissions offices receive a huge variety of transcripts, including transcripts from international schools, home-schooled students, and a wide variety of alternative educational institutions and programs that do not have traditional academic programs, grading practices, or transcripts.

2. Students with non-traditional transcripts—including “proficiency-based” or “competency-based” transcripts—will not be disadvantaged in any way during the admissions process. Colleges and universities simply do not discriminate against students based on the academic program and policies of the sending school, as long as those program and policies are accurately presented and clearly described.

3. As long as the school profile is comprehensive and understandable, and it clearly explains the rigor of the academic program, the technicalities of the school’s assessment and grading system, and the characteristics of the graduating class, the admissions office will be able to understand the transcript and properly evaluate the strength of a student’s academic record and accomplishments. In short, schools use so many different systems for grading, ranking, and tracking students that a school’s system can only be properly understood when a transcript is accompanied by a comprehensive school profile. A class rank or GPA, for example, doesn’t mean much unless the admissions office also has the “key” (i.e., the school profile) that it needs to understand the applicant’s academic accomplishments and abilities in context.
71 public and private institutions of higher education from across New England provided statements and letters stating unequivocally that students with proficiency-based grades and transcripts will not be disadvantaged in any way.

**Massachusetts**
1. Babson College
2. Harvard University
3. Massachusetts Institute of Technology
4. Tufts University
5. Wellesley College

**Rhode Island**
1. Community College of Rhode Island
2. Rhode Island College
3. University of Rhode Island

**New Hampshire**
1. Antioch University New England
2. Community College System of New Hampshire
3. Dartmouth College
4. Granite State College
5. Great Bay Community College
6. Keene State College
7. Lakes Region Community College
8. Manchester Community College
9. Nashua Community College
10. NHTI-Concord’s Community College
11. Plymouth State University
12. River Valley Community College
13. University of New Hampshire
15. White Mountains Community College
What can you do to support our work?

• Spread the word
• Be willing to ask questions
• Speak to your child at home about their learning
• Direct others to us if they have questions
• Attend our forums in the spring
What questions can we answer?