COMPETENCY-BASED EDUCATION

BARNARD SCHOOL
AGENDA

➔ WHAT IS COMPETENCY-BASED EDUCATION?
➔ WHY COMPETENCY-BASED EDUCATION?
➔ WHAT IS COMPETENCY-BASED GRADING?
WHAT IS COMPETENCY-BASED EDUCATION?

An approach that meets students where they are at, and allows them to progress at their own speed along a developmental continuum.

Definition of Competency Education

**Design Principle 1**
Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning.

**Design Principle 2**
Assessment is a meaningful, positive, and empowering learning experience for students that yields timely, relevant, and actionable evidence.

**Design Principle 3**
Students receive timely, differentiated support based on their individual learning needs.

**Design Principle 4**
Students progress based on evidence of mastery, not seat time.

**Design Principle 5**
Students learn actively using different pathways and varied pacing.

**Design Principle 6**
Strategies to ensure equity for all students are embedded in the culture, structure, and pedagogy of schools and education systems.

**Design Principle 7**
Rigorous, common expectations for learning (knowledge, skills, and dispositions) are explicit, transparent, measurable, and transferable.

Written by E. Levine and S. Patrick, 2019
WHAT ARE COMPETENCIES?
Sets of explicit, measurable, and transferable skills

EXAMPLE: MATH
Expressions and Equations: Students will reason abstractly and manipulate symbolic expressions to represent relationships and interpret expressions and equations in terms of a given context for determining an unknown value.

Scientific Notation: Uses products of integer powers of ten to represent numbers.
WHAT ARE COMPETENCIES?
Sets of explicit, measurable, and transferable skills

“How has climate change affected tree swallow populations in New England?”

I have traveled to an unnamed pond that connects to the Pawtuck River in South Hampton, New Hampshire three times. The trail is surrounded by a marsh area with a wide variety of animal species, the pond is used for irrigation at the nearby Herrick Pond Farm. While I was there I observed the tree swallows living in this area. There were two of these great birds living in a dead tree near the end of the trail. Tree swallows are small birds with white underbellies, grey wings, and blue backs. The birds nest in dead trees or holes carved by woodpeckers. While I was at the pond, I noticed that there were only a few swallows in the area, even though they arrive in March and normally nest in groups. I suspect climate change has played a role in the decrease of tree swallow populations in the northeast.

Climate change has played a large role in the changing of weather in the northeast. It gets warm earlier, and there is more severe weather playing the area. Because of the increase in heat, the swallows travel north earlier to lay their eggs. When they arrive they mate, and consequently need to feed the offspring. When the birds migrate earlier the insects haven’t appeared yet, and the babies often die from starvation. This reduces their population and if the offspring die it will already be too late to have more.

An increase in severe storms also decreases the amount of surviving hatchlings, when there are long rainstorms the birds can’t find insects because of the rain, so the offspring continue to starve. This causes a low turnout of juvenile birds after mating season. If these storms keep forming it is likely that the tree swallow population will continue to decrease. Having offspring is the most important aspect of keeping a species alive, but with only a few offspring, tree swallows will not be able to survive and find mates. This is important because these are beautiful birds that add a lot to our environment. They control the populations of the insects that they feed on, and regulate the balance of nature.

In conclusion, climate change is a large factor in the decrease of tree swallow populations in the northeast. Change in temperature has given a rise to earlier migration and an increase in storms that has caused the swallows to not receive the amount of sustenance their juveniles need. I propose that there should be a study that tracks the amount of two swallows that are living in nest boxes in New Hampshire and also monitor weather patterns. We could use this information to determine if there is a correlation between an increase in storms and a decrease in swallows. This would also be relevant for other birds, because swallows cannot be the only birds impacted by climate change.

A flying tree swallow

Tree swallow nest

EXAMPLE:
Science & Engineering Practices: SCI.68.SEP.1 Ask questions and Define Problems

Students will ask and refine questions that lead to descriptions and explanations of how the natural and designed world works and which can be tested.
WHAT ARE COMPETENCIES?
Sets of explicit, measurable, and transferable skills

EXAMPLE: ELA
Argument Writing: W.6.1
Students will introduce claim(s) and organize the reasons and evidence clearly. Students will support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.

Speaking & Listening SL.6.3
Students will delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.
WHY COMPETENCY-BASED EDUCATION?

- Use of competencies allows teachers to quickly identify gaps and strengths.
- Behavior is separate from academics; a student is not penalized in their academic scores if they cannot attend a class or miss a homework assignment.
- Encouraging growth and celebrates student learning and progress.
- Allows teachers to determine the most critical areas of need in their classroom.
- Provides student choice
- Allows students to demonstrate their understanding in multiple ways
HABITS OF LEARNING

Skills that all students need to be successful learners

- Critical Thinking/Problem Solving
- Creativity
- Communication
- Collaboration
- Self-Direction
SKILLS EMPLOYERS ARE LOOKING FOR

LOOKING TOWARD 2022...

SKILLS ON THE RISE

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Creativity, originality, and initiative
4. Technology design and programming
5. Critical thinking and analysis
6. Complex problem-solving
7. Leadership and social influence
8. Emotional intelligence
9. Reasoning, problem-solving, and brainstorming
10. Systems analysis and evaluation

SKILLS IN DECLINE

1. Manual dexterity, endurance, and precision
2. Memory, verbal, and spatial abilities
3. Management of financial, material resources
4. Technology installation and maintenance
5. Reading, writing, math, and active listening
6. Management of personnel
7. Quality control and safety awareness
8. Coordination and time management
9. Visual, auditory, and speech abilities
10. Technology use, monitoring, and control

GROWTH MINDSET
The belief that ability is developed through dedication and hard work.

“Failure is an opportunity to grow”
GROWTH MINDSET
“I can learn to do anything I want”
“Challenges help me to grow”
“My effort and attitude determine my abilities”
“Feedback is constructive”
“I am inspired by the success of others”
“I like to try new things”

“Failure is the limit of my abilities”
FIXED MINDSET
“I’m either good at it or I’m not”
“My abilities are unchanging”
“I don’t like to be challenged”
“My potential is predetermined”
“When I’m frustrated, I give up”
“Feedback and criticism are personal”
“I stick to what I know”
Competency-Based Education Fosters The Development of a Growth Mindset
Assessments

- Competencies are assessed individually on a 1-4 scale.
- Rubrics inform students of the skills required to meet expectations.
- Formative and summative assessments.
- **Final mastery** is assessed at *end of instruction*.
- Students have the opportunity to reassess after further study and preparation.
Focus on the **Learning Process and Student Effort**

**Formative Assessments**

Students Take Ownership of Their Learning

- Student self-assessment
- Track their own progress
- Monitor their mastery of the objectives
- Determine where to focus their effort for further learning
Quality Performance Assessments
Assessments that give students the opportunity to demonstrate mastery of skills through a task
# Traditional vs. Performance-Based Learning

<table>
<thead>
<tr>
<th>Traditional (Time-based Learning)</th>
<th>Performance-based Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement based on time</td>
<td>Movement based on performance</td>
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<tr>
<td>Learning happens only in the classroom</td>
<td>Learning takes place anytime, anywhere</td>
</tr>
<tr>
<td>Driven by textbooks</td>
<td>Driven by needs of learners</td>
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<tr>
<td>Teacher-centered decision making</td>
<td>Learner-centered decision making</td>
</tr>
<tr>
<td>Focus on learning basic skills in different subject areas</td>
<td>Focus on critical thinking and problem-solving skills across content areas</td>
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<tr>
<td>Teacher is the only judge of quality student work</td>
<td>Self, peers, teachers, administrators, other stakeholders judge student work</td>
</tr>
<tr>
<td>Prepares learners for industrial-age jobs</td>
<td>Prepares learners for 21st century jobs</td>
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</tbody>
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Strengths and weaknesses are more clearly defined:

<table>
<thead>
<tr>
<th>Tri 1 subjects</th>
<th>Student 1</th>
<th>Student 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argumentative Writing</td>
<td>92%</td>
<td>84%</td>
</tr>
<tr>
<td>Language Usage</td>
<td>88%</td>
<td>82%</td>
</tr>
<tr>
<td>Informational Reading</td>
<td>63%</td>
<td>82%</td>
</tr>
<tr>
<td>Final grade</td>
<td>81% = B-</td>
<td>82% = B-</td>
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Focus on Final Achievement

Student 1 Grade = 68%
Student 2 Grade = 82%

Students no longer penalized for taking longer to learn
1-**Beginning**: Student performance is progressing with support, but student is unable to meet the marking period expectation with consistency or quality.

2-**Developing**: Student performance is progressing toward the marking period expectation, demonstrating some understanding and application of skills and knowledge with support. Student is not yet independent in demonstrating his/her skill.

3-**Proficient**: Student performance meets the expected grade level skills and knowledge for marking period expectation with consistency, quality, and independence.

4-**Advanced**: Student performance exceeds the marking period expectation.
Competency-Based Grading

**Habits of Learning**

**Communication:** Students will utilize space and materials to both understand and/or convey meaning to an intended audience.

**Innovation:** Students will interpret experiences and imagine and play with new possibilities in order to create approaches that are unique and meaningful.

**Collaboration:** Students will demonstrate the ability to work with other people in a process that requires interdependence to solve a problem, achieve a goal, or complete a task.

**Self Direction:** Students will initiate and manage personal learning, and demonstrate a “growth” mindset, through self-awareness, goal-setting, ownership, perseverance, managing learning, and self-reflection in order to develop personal goals.
SUCCESS
what people think it looks like

SUCCESS
what it really looks like
What do our students think about CBE?
End of Year Report Card

2020-2021-Dual Report Card (both Traditional and Competencies)

2022-2023-Competency-Based Grading only
QUESTIONS
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