

**SOUTH BRUNSWICK SCHOOL  
DISTRICT**



**DISTRICT APPENDIX  
K-12**

**Included in this document are the various sections related to the instructional strands that cross content.**

**They have relevance to every curricular area and all grade levels.  
The strands are interwoven into content and integrated into instruction.  
They do not stand alone.**

Teaching for the 21<sup>st</sup> Century

Educational Technology Standards

21<sup>st</sup> Century Life and Career Education Skills

Character Education

Differentiation

Understanding by Design (UbD): “Reader’s Digest” Version

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| <p><b>Teaching for the 21<sup>st</sup> Century:</b><br/> <b>What does this mean and how do you do it?</b><br/>           Students need to gain skills that will enable them to learn on their own, think critically and creatively, and apply knowledge to new situations. An emphasis needs to be placed on problem solving, teamwork skills, global awareness, and proficiency in using technology. Students need to learn to collaborate and work on authentic problems that they will likely encounter in their future careers. This section will outline what this means and how you “teach” for the 21<sup>st</sup> century: Elementary, Middle and High.</p>  | <p><b>4</b></p> |
| <p><b>Tools for the 21<sup>st</sup> Century:</b><br/> <b>Life, Careers, and Digital Environments</b><br/>           21<sup>st</sup> Century Life and Career Education Skills and Educational Technology Skills outline the NJ Core Curriculum Content Standards for these areas that align with PK-12 learning.</p> <p>These standards are written into the curriculum documents for all areas of content— English Language Arts, Mathematics, Science, Social Studies, PE/Health Education, Visual Art, Music, World Language and Library-Media. They are integrated into curriculum and instruction in places where it is relevant and meaningful to do so, and in ways that enhance learning. You will see these integrations explicitly noted in the curriculum guides: Elementary, Middle and High.</p>   | <p><b>5</b></p> |
| <p><b>Character Education:</b><br/> <b>Safe and Caring Learning Communities</b></p> <p>South Brunswick takes an “approach” to character education that fosters the social, emotional and academic growth of each child. The intent is to create a safe and caring community while building life skills based on the five core values (CARES):</p> <ul style="list-style-type: none"> <li>C Cooperation</li> <li>A Assertion</li> <li>R Responsibility (and Respect)</li> <li>E Empathy</li> <li>S Self-Control</li> </ul> <p>For over ten years, the K-5 teachers have been trained in and have followed the <i>Responsive Classroom (RC)</i> approach.</p> <p>The middle school teachers have studied and/or been trained in the <i>Developmental Designs (DD)</i> approach to character education.</p> <p>The high school approach has been named “Strive for Five” and includes an annual theme with related activities to bring Character Education to the forefront. There is always a service-learning project connected to the theme. In addition, the high school also follows the <i>Institute of Excellence and Ethics (IEE)</i> approach. The IEE approach allows for explicit teaching of Character Education through a series of multimedia lessons that are embedded into the students’ schedules.</p> | <p><b>8</b></p> |

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| <p><b>Differentiation</b></p> <p>Differentiation of instruction is a deliberate and conscious method of planning and teaching that provides multiple avenues of learning. It means different challenges to different students. It is characterized by strategies that use an assessment of each individual student for readiness, interest and learning style to modify instruction in three ways: by content, process and product.</p> <p>In this document, there is a brief description of several approaches and methods that have long been utilized in South Brunswick to meet the differentiated needs of students within the classroom.</p> <ul style="list-style-type: none"> <li>• Bloom’s Taxonomy</li> <li>• Gardner’s Multiple Intelligences</li> <li>• Learning Styles</li> <li>• Inclusion Classrooms</li> <li>• Kagan Cooperative Learning</li> <li>• Principles of Differentiation</li> </ul> <p>It is expected that classroom instruction will be differentiated. This expectation is predicated upon the belief or disposition that “all students can learn.”</p> | <p><b>14</b></p> |
| <p><b>Understanding by Design</b></p> <p>For nearly two decades, the South Brunswick School District has held much value in the Understanding by Design (UbD) or Backward Design model of curriculum writing by Grant Wiggins. This model and the process of curriculum development, has been used in the district for many years. The curriculum template—which was recommended by the State of NJ and adopted/adapted by the District, includes elements of the UbD approach.)</p> <p>You will note that in every curricular area, we begin with the end in mind (that is, the big idea). Enduring understandings, essential questions and performance assessments—all based on standards-- are used in the process of curriculum development.</p> <p>With this being said, it is not only important to understand the process of UbD, but also how to implement curriculum designed in such a way.</p> <p>A brief overview of how to use Understanding by Design in delivering curriculum is included in the Appendix.</p>   | <p><b>17</b></p> |



## What does it mean to teach for the 21<sup>st</sup> Century?

**We can begin with this understanding: Our students are inheriting a dynamic world.<sup>1</sup>**

- It's a global society facing complex political, economic, technological, and environmental challenges.
- It's a service economy driven by information, knowledge, and innovation.
- It's a world of diverse communities and workplaces that rely on cross-cultural collaborative relationships and virtual social networks.
- It's an intensely competitive and constantly changing worldwide marketplace.

So, we have an obligation (and a vested interest) to

- Prepare students for life, careers & learning in the post-secondary world;
- Provide pathways to careers or career clusters; and
- Open the mind to vocations, avocations, and interests.

To do this, as we develop curriculum, write units of study, and plan our daily lessons, we need to heighten our awareness about those things that we do that prepare students for the life that lies ahead. This begins to take place from the moment students enter our system to the day they leave. They call this the “staircase to graduation” and require that we ask ourselves, “As they exit our system, are our students prepared and ready for college and careers?”

The District's SCOPA (standards-connections-objectives-procedures-assessment) lesson plan prompts you to consider the 21<sup>st</sup> century skills and themes that you are touching upon. If none apply, ask yourself if the lesson you are about to teach needs to be refreshed and taken to a more future-focused place.

Here are the skills and themes that a variety of sources<sup>2</sup> believe are those necessary for success in life and careers in the 21<sup>st</sup> century. They are categorized under the acronym of SALT: Skills, Awareness, Literacy, and Traits (The Soft Skills of Employability).

| <b>Connections to the 21<sup>st</sup> Century</b>   |  |   |   |
|---|--|---|---|
| As you teach this lesson, which connections to SALT are you making?   |  |   |   |
| <b>S</b>  | <b>A</b>   | <b>L</b>  | <b>T</b>  |
| <b>Skills</b>   | <b>Awareness</b>   | <b>Literacy</b>   | <b>Traits (The Soft Skills of Employability)</b>  |
| <ul style="list-style-type: none"> <li>• Critical thinking &amp; problem solving</li> <li>• Creative thinking &amp; innovation</li> <li>• Communication</li> <li>• Collaboration</li> <li>• Core Values (ethics)</li> </ul> | <ul style="list-style-type: none"> <li>• Global</li> <li>• Cross cultural</li> <li>• Career</li> </ul> | <ul style="list-style-type: none"> <li>• Content</li> <li>• Financial</li> <li>• Civic</li> <li>• Health</li> <li>• Information</li> <li>• Technology</li> <li>• Media</li> </ul> | <ul style="list-style-type: none"> <li>• Initiative</li> <li>• Productivity</li> <li>• Accountability</li> <li>• Responsibility</li> <li>• Self direction</li> <li>• Leadership</li> <li>• Humor</li> <li>• Resilience</li> <li>• Perseverance</li> </ul> |

Nothing on this list is new. All are “salt of the earth”—humble, unpretentious—and part of good teaching. The charge then, to each of us, is to be more explicit in their inclusion, incorporate more “real world” situations, problems and scenarios, and encourage use of digital tools and resources.

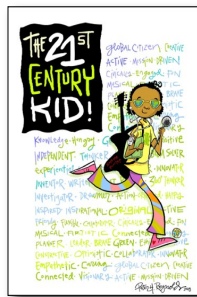
<sup>1</sup>NJCCCS Life & Career Education

<sup>2</sup>Partnership for 21<sup>st</sup> Century Skills

# EDUCATIONAL TECHNOLOGY STANDARDS

## STANDARD EIGHT

### Standard 8 Technology



New Jersey's Technology Standards consist of 8.1 Educational Technology and 8.2 Technology, Engineering, Design and Computational Thinking, which work symbiotically to provide students with the necessary skills for college and career readiness.

*"Advances in technology have drastically changed the way we interact with the world and each other. The digital age requires that we understand and are able to harness the power of technology to live and learn".*  
- International Society for Technology in Education

In this ever-changing digital world where citizenship is being re-imagined, our students must be able to harness the power of technology to live, solve problems and learn in college, on the job and throughout their lives. Enabled with digital and civic citizenship skills, students are empowered to be responsible members of today's diverse global society.

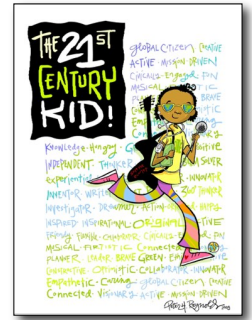
Readiness in this century demands that students actively engage in critical thinking, communication, collaboration, and creativity. Technology empowers students with real-world data, tools, experts and global outreach to actively engage in solving meaningful problems in all areas of their lives. The power of technology discretely supports all curricular areas and multiple levels of mastery for all students.

*"A major consequence of accelerating technological change is a difference in levels of technological ability and understanding. The workforce of the future must have the ability to use, manage, and understand technology."*  
- International Technology and Engineering Educators Association

The design process builds in our students the recognition that success is not merely identifying a problem but working through a process and that failure is not an end but rather a point for reevaluation. Whether applied as a skill in product development, in the learning environment, in daily life, in a local or more global arena, the design process supports students in their paths to becoming responsible, effective citizens in college, careers and life.

Computational thinking provides an organizational means of approaching life and its tasks. It develops an understanding of technologies and their operations and provides students with the abilities to build and create knowledge and new technologies. Not all students will be programmers, but they should have an understanding of how computational thinking can build knowledge and control technology.

Further information on Standard 8 can be found at <http://www.state.nj.us/education/aps/cccs/tech/>



## 21<sup>st</sup> CENTURY LIFE AND CAREER SKILLS

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### STANDARD 9

#### Standard 9

#### 21st Century Life and Careers

In today's global economy, students need to be lifelong learners who have the knowledge and skills to adapt to an evolving workplace and world. To address these demands, Standard 9, 21st Century Life and Careers, which includes the 12 Career Ready Practices, establishes clear guidelines for what students need to know and be able to do in order to be successful in their future careers and to achieve financial independence.

#### Mission:

*21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace.*

#### Vision:

To integrate 21st Century life and career skills across the K-12 curriculum and in Career and Technical Education (CTE) programs to foster a population that:

- Continually self-reflects and seeks to improve the essential life and career practices that lead to success.
- Uses effective communication and collaboration skills and resources to interact with a global society.
- Is financially literate and financially responsible at home and in the broader community.
- Is knowledgeable about careers and can plan, execute, and alter career goals in response to changing societal and economic conditions.
- Seeks to attain skill and content mastery to achieve success in a chosen career path.

The Standards: Standard 9 is composed of the Career Ready Practices and Standard 9.1, 9.2, and 9.3 which are outlined below:

- **The 12 Career Ready Practices**  
These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness.
- **9.1 Personal Financial Literacy**  
This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.
- **9.2 Career Awareness, Exploration, and Preparation**  
This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.
- **9.3 Career and Technical Education**  
This standard outlines what students should know and be able to do upon completion of a CTE Program of Study.

For students to be college and career ready they must have opportunities to understand career concepts and financial literacy. This includes helping students make informed decisions about their future personal, educational, work, and financial goals. By integrating Standard 9 into instruction, New Jersey students will acquire the necessary academic and life skills to not only achieve individual success but also to contribute to the success of our society.

Further information on Standard 9 can be found at [www.state.nj.us/education/aps/cccs/careerr/](http://www.state.nj.us/education/aps/cccs/careerr/)



## Elementary Character Education: Core Ethical Values

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### **Character Education Supporting Academic Achievement:**

*Through a collaborative effort between home and school, character education guides students in developing positive ideals and good habits that will improve behavior, school climate, and ultimately academic achievement. Character education is a learning process that enables students and adults in a school community to understand, care about and act on core ethical values in a healthy, safe and informed manner. It is a comprehensive, integrated approach that enables students to become good citizens in their school, community, and society.*

### **Dispositions**

The educator believes that it is his/her responsibility to foster a safe and caring community.

The educator is a participating member of that community and a vital role model in language and actions.

### **CARES~ The District Core Values**

- Cooperation:** Do your best to work with others. Play by the rules. Take turns and share. Be open-minded; listen to others. Don't take advantage of others. Don't blame others carelessly.
- Assertion:** Speak up nicely for what you believe. Tell the truth. Deal peacefully with anger, insults and disagreements.
- Responsibility:** Do what you are supposed to do. Always do your best. Use self-control. Be self-disciplined. Think before you act-consider the consequences. Be accountable for your choices. (NOTE: Respect is also often ascribed to the "R" in CARES.)
- Empathy:** Try to understand feelings, emotions and actions of others. Treat others with respect; follow the Golden Rule. Be tolerant of differences. Use good manners, not bad language. Be considerate of the feelings of others. Don't threaten, hit or hurt anyone.
- Self-Control:** Control your emotions, desires and actions. Be self-disciplined. Persevere: keep on trying. Think before you act - consider the consequences.

*Responsive Classroom (RC)* is our approach to teaching character education. It emphasizes social, emotional, and academic growth in a strong and safe school community. It is used in all of our elementary schools, in all classrooms, and at all grade levels.

Based on evidence and research by the Northeast Foundation for Children (NEFC), RC brings social and academic learning together throughout the school day. The premise is that children learn best when they have both the academic and social-emotional skills.

The South Brunswick approach to RC includes the following components:

- Morning Meeting
- Rule Creation
- Interactive Positive Modeling
- Positive Teacher Language
- Logical Consequences
- Guided Discovery
- Academic Choice
- Classroom Organization



- Working with Families
- Collaborative Problem Solving

RC is deeply entrenched at the K-5 level. Each school has an RC Leadership Team comprised of a teacher trainer (RC expert), a counselor and an administrator. The team annually develops goals and action plans. The South Brunswick Parent Academy annually offers workshops to elementary parents on elements of RC.

Morning Meeting, a key component of *Responsive Classroom*, helps create a classroom community where children can practice and explore social skills and merge social, emotional and academic learning. Morning Meeting addresses LA standards that deal with speaking, listening and viewing.

During Morning Meeting, the teacher and children gather in a circle at the beginning of the school day and proceed through the following components in order:

- **Greeting:** Children greet each other by name. The greeting can include a variety of handshakes and other activities.
- **Sharing:** Children share some news of interest and also respond to each other through asking questions and giving positive comments.
- **Group Activity:** The whole group does a fun, short activity together, usually with an academic focus.
- **Morning Message:** Through reading this daily message written by the teacher, children practice academic skills and build their sense of community.

Each grade level has its own version of this “approach,” but all levels are connected one to the other.

# Middle School Character Education: Core Ethical Values

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## **Character Education Supporting Academic Achievement:**

*Through a collaborative effort between home and school, character education guides students in developing positive ideals and good habits that will improve behavior, school climate, and ultimately academic achievement. Character education is a learning process that enables students and adults in a school community to understand, care about and act on core ethical values in a healthy, safe and informed manner. It is a comprehensive, integrated approach that enables students to become good citizens in their school, community, and society.*



## **Dispositions**

The educator believes that it is his/her responsibility to foster a safe and caring community.

The educator is a participating member of that community and a vital role model in language and actions.

## **CARES~ The District Core Values**

- Cooperation:** Do your best to work with others. Play by the rules. Take turns and share. Be open-minded; listen to others. Don't take advantage of others. Don't blame others carelessly.
- Assertion:** Speak up nicely for what you believe. Tell the truth. Deal peacefully with anger, insults and disagreements.
- Responsibility:** Do what you are supposed to do. Always do your best. Use self-control. Be self-disciplined. Think before you act-consider the consequences. Be accountable for your choices. (NOTE: Respect is also often ascribed to the "R" in CARES.)
- Empathy:** Try to understand feelings, emotions and actions of others. Treat others with respect; follow the Golden Rule. Be tolerant of differences. Use good manners, not bad language. Be considerate of the feelings of others. Don't threaten, hit or hurt anyone.
- Self-Control:** Control your emotions, desires and actions. Be self-disciplined. Persevere: keep on trying. Think before you act - consider the consequences.

For years the middle schools followed "Crossroads Cares about Character," a homegrown approach steeped in middle school philosophy. To better bridge to Responsive Classroom (RC) and to make character education more implicit (that is, a way of life), in 2009 Crossroads adopted *Developmental Designs for Middle School (DDMS)*, an approach developed by Origins in conjunction with the RC parent organization, Northeast Foundation for Children or NEFC.

This approach is grounded in research and is based on the belief that healthy, enjoyable relationships are the foundation for success in school. Teachers must know their students and students must come to know and appreciate one another. Components of the DDMS approach include the following:

- Community building
- Modeling and practicing
- Goals setting
- Empowering teacher language
- Pathways to self-control

A core team of teachers was deeply trained in DDMS and has since turnkey-trained other middle school staff members.

The core values are taught and modeled through the Development Design approach that is employed in classrooms throughout the day. This embedded approach to teaching character education emphasizes social, emotional, and academic growth in a strong and safe school community.

Circle of Power and Respect (CPR), a key component of *Developmental Designs*, helps create a classroom where children can practice and explore social skills and merge social, emotional and academic learning.

The core values are also emphasized and reinforced through the Unit organizational structure in which students work and learn together each day with a core group of teachers who support them in all aspects of their development. As such, every child is known well by both the adults and children in their small learning community. Unit teachers bring the students together on a periodic basis for the purpose of team-building and character development. The core values are at the heart of their work.

# High School Character Education: Core Ethical Values

“Everyone tries to define this thing called Character. It's not hard. Character is doing what's right when nobody's looking.” ~ J. C. Watts



## Character Education Supporting Academic Achievement:

*Through a collaborative effort between home and school, character education guides students in developing positive ideals and good habits that will improve behavior, school climate, and ultimately academic achievement. Character education is a learning process that enables students and adults in a school community to understand, care about and act on core ethical values in a healthy, safe and informed manner. It is a comprehensive, integrated approach that*

*enables students to become good citizens in their school, community, and society.*

## Dispositions

The educator believes that it is his/her responsibility to foster a safe and caring community.

The educator is a participating member of that community and a vital role model in language and actions.

## District Core Values

All schools in South Brunswick Schools share the common mission to foster positive school citizenship.

To that end, we embrace the following core values or CARES:

- C** Cooperation
- A** Assertion
- R** Responsibility
- E** Empathy
- S** Self-control

As students progress through the system and into SBHS, they continue to build upon this basic core while emphasizing the values that follow:

- **Honesty**
- **Respect**
- **Kindness**
- **Service**
- **Responsibility**

## The History of Character Education at the High School

For years, SBHS has followed a school-developed, explicit approach to character education called Strive for Five. Annually the school decides upon a theme and then develops related activities to bring Character Education to the forefront. There is a service-learning project connected to the theme.

In its quest to find a more implicit approach, the High School Character Education Committee reviewed several model programs. The committee then met with the Institute for Excellence and Ethics (IEE) and based on this, undertook a study of the Smart and Good High School Report. The committee made the decision in Spring 2010 to adopt aspects of IEE and to embed character education lessons into all of its 21st Century courses (required coursework for all freshmen) and into the James Kimple Center Program. Additional lessons are embedded into other areas as dictated by curriculum and program

### **IEE and SBHS: How does this work?**

The IEE approach allows for explicit teaching of Character Education through a series of multimedia lessons that are embedded into the students' schedules (e.g. 21<sup>st</sup> Century courses and HAP). IEE also builds teachers' capacity to integrate Character Education into other areas of content as relevant.

The Smart and Good High Schools Report produced by IEE aligned well with the SBHS Strive for Five in the following ways:

- Belief that both performance character and moral character—excellence and ethics—are essential for leading a productive, ethical, and fulfilling life.
- Utilization of all things in the life of the school— curriculum, discipline, co-curricular activities, rituals, and traditions—as opportunities to develop performance character and moral character.
- Creation of an ethical learning community where faculty and staff, students, parents, and the wider community support and challenge each other in their quest for excellence and ethics.
- Creation of a professional ethical learning community where faculty, staff, and administrators are committed to continuous self-development and ongoing improvement of the practices used to develop performance character and moral character.

### **SBHS as an Ethical Learning Community**

SBHS is a nationally recognized school of character and an ethical learning community. In an ethical learning community, faculty and staff, students, parents and the wider community support and challenge each other to do their best work (performance character) and be their best ethical self (moral character). This means that students and staff develop shared purpose and identity, have a voice; take a stand, take personal responsibility for continuous self-development, practice collective responsibility and learn to grapple with the tough issues.

### **Moral and Performance Character: What does each mean?**

**Moral Character:** Moral character is defined a relational orientation. It consists of those qualities needed for successful interpersonal relationships and ethical behavior.

**Performance Character:** Performance character is defined as a mastery orientation. It consists of those qualities needed to realize one's potential for excellence in school, the workplace, or any area of endeavor.

### **Character Education and Academics: Do they go together?**

At times there is a tension between teaching content and teaching character...and why educators must be teaching character education at all. The premise at SBHS is that character education and academics go hand-in-hand with each enhancing the other.

Here is why character education in critical to academic performance.

1. Students need performance character in order to do their best academic work (work ethic, self-discipline, perseverance, initiative, responsibility, teamwork).
2. Students need to develop their performance character from their schoolwork (that is, the ability to work hard, overcome obstacles, find success in a job well done, etc.)
3. Students need moral character in order to create the classroom relationships that make for a positive learning environment.

Students develop moral character from their schoolwork (e.g., by helping their peers to do their best work through a "culture of critique" that offers constructive feedback, by studying ethical issues in the curriculum, and by using their curricular learning in service projects that help solve real-world problems.)

## Differentiation of Instruction

*Differentiation of instruction is a deliberate and conscious method of planning and teaching that provides multiple avenues of learning. It means different challenges to different students. It is characterized by strategies that use an assessment of each individual student for readiness, interest and learning style to modify instruction in three ways: by content, process and product. (B. King-Shaver)*

### Dispositions

The teacher believes that all students can learn.

The teacher believes that it is his/her responsibility to make learning happen.

| Method/Approach                  | Knowledge & Skills   |
|----------------------------------|--|
| Bloom's Taxonomy                 | <p>In his 1956 "Taxonomy of Educational Objectives," Benjamin Bloom, a professor at the University of Chicago, identified six levels of cognitive complexity that have been used to make sure that instruction stimulates and develops students' higher-order thinking.</p> <ol style="list-style-type: none"> <li>1) Knowledge- Rote memorization</li> <li>2) Comprehension- Translate, paraphrase, interpret or extrapolate.</li> <li>3) Application- Transfer knowledge from one setting to another.</li> <li>4) Analysis- Work whole to part. Discover and differentiate the parts of a larger whole.</li> <li>5) Synthesis- Work part to whole. Weave component parts into a whole.</li> <li>6) Evaluation- Make judgment based on a set of standards.</li> </ol> <p>Bloom's Taxonomy was rethought in the 1990's when Lorin Anderson and David Krathwohl revisited the cognitive domain and made two major revisions: the change of names from noun to verb forms, and the rearrangement of the categories (levels 1 and 2). The chart shown below compares the taxonomies:</p> <ol style="list-style-type: none"> <li>1. Creating (Synthesis)- Building a structure or pattern from diverse elements. Putting parts together to form a whole; creating a new meaning or structure.</li> <li>2. Evaluating (Evaluation)- Making judgments about value of ideas/materials.</li> <li>3. Analyzing (Analysis)- Separating material into parts so that its structure is understood. Distinguishing between facts &amp; inferences.</li> <li>4. Applying (Application)- Using a concept in a new situation or unprompted use. Applies classroom learning into novel situations.</li> <li>5. Understanding (Comprehension)- Comprehending meaning &amp; interpreting instructions &amp; problems. Stating a problem in own words.</li> <li>6. Remembering (Knowledge)- Recalling or retrieving learned info</li> </ol> <p>This new taxonomy reflects a more active and perhaps more accurate way of thinking, however both are used universally.</p> |
| Gardner's Multiple Intelligences | <p>Howard Gardner is a professor, author, and 20-year director of Harvard University's Project Zero. He is best known for his theory of multiple intelligences-- the notion that there is no one single human intelligence that can be assessed by a standard instrument, but rather eight different intelligences that can be assessed via performance. Attending to a person's multiple intelligences results in a more personalized learning experience.</p>  |

| Method/Approach            | Knowledge & Skills  |
|----------------------------|---|
|                            | <ul style="list-style-type: none"> <li>✓ Visual / Spatial Intelligence</li> <li>✓ Musical Intelligence</li> <li>✓ Verbal Intelligence</li> <li>✓ Logical/Mathematical Intelligence</li> <li>✓ Interpersonal Intelligence</li> <li>✓ Intrapersonal Intelligence</li> <li>✓ Bodily / Kinesthetic Intelligence</li> <li>✓ Naturalistic Intelligence</li> </ul>   |
| Learning Styles            | <p>There are several frameworks for organizing learning based on how different individuals perceive and process experiences—that is, how they PREFER to learn. Based on brain dominance theory, there generally are four learning style preferences.</p> <ul style="list-style-type: none"> <li>• <b>Quadrant A (Blue):</b> These learners like realistic, rigorous, active problem solving. They are analytical and technical and concerned with data.</li> <li>• <b>Quadrant B (Green):</b> These learners are knowledge-oriented, conceptual, disciplined, and organized. They are practical, sequential and planners.</li> <li>• <b>Quadrant C (Red):</b> These learners prefer talking about their experiences and feelings, asking questions, working in groups and harmonizing.</li> <li>• <b>Quadrant D (Yellow):</b> These learners prefer to learn by self-discovery. They are spontaneous, open, curious, and enjoy open-ended tasks that involve risk.</li> </ul> |
| Inclusion Classrooms       | <p>Students in school, regardless of their strengths or weaknesses in any area, are part of the whole school community. The federal Individuals with Disabilities Education Act (IDEA) and its 1997 amendments make it clear that schools have a duty to educate children with disabilities in general education classrooms. This is called inclusive education. Teaching in the inclusive classroom requires an additional set of skills as there is often co-teaching involved in the delivery of this program.</p>   |
| Kagan Cooperative Learning | <p>To exist in the “real world, students need to be able to work as individuals, in competitive situations, and in cooperative situations—with the balance of time being spent in cooperative settings.</p> <p>Beginning in 1968, Dr. Spencer Kagan discovered that children of all ages in many parts of the world became more cooperative when they were placed in certain types of situations. He began a research program to apply those findings to classrooms and created simple, brain-based “structures” that allow teachers to guide the interaction of students. Kagan's structures not only lead to greater cooperativeness; they have proven positive results in many areas such as greater academic achievement, improved ethnic relations, enhanced self-esteem, harmonious classroom climate, and the development of social skills and character virtues.</p>  |

| Method/Approach               | Knowledge & Skills  |
|-------------------------------|---|
| Principles of Differentiation | <p>Carol Ann Tomlinson, a 21-year educator, author and Professor of Educational Leadership at the University of Virginia, is the Principal Investigator for the National Research Center on the Gifted and Talented. The focus of her research has been the development of strategies for differentiating instruction in mixed ability classrooms and responding to the needs of all learners. Simply put, differentiation is the teacher’s response to the learner’s needs. Teachers can differentiate process, product, content and environment.</p> <p>Tomlinson's work is based on the following 8 principles:</p> <ol style="list-style-type: none"> <li>1) The teacher is clear about what is important in the subject matter.</li> <li>2) The teacher understands, appreciates, and builds upon student differences.</li> <li>3) Assessment and instruction are inseparable.</li> <li>4) The teacher adjusts content, process, and product in response to student readiness, interests, and learning profile.</li> <li>5) All students participate in respectful work.</li> <li>6) Students and teachers are collaborators in learning.</li> <li>7) Goals of a differentiated classroom are maximum growth and individual success.</li> <li>8) Flexibility is the hallmark of a differentiated classroom.</li> </ol> |



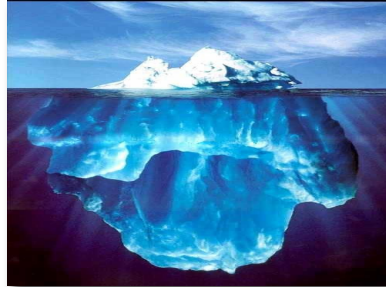
## Teaching using Understanding by Design: The “Reader’s Digest” Version

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*Understanding.*

*It grows from questioning oneself and being questioned by others.*

*~Sizer 1984*



**Go below the surface to discover the “big idea.”**

### **Overview of Understanding by Design (UbD)**

South Brunswick School District holds much value in the UbD or Backward Design model of curriculum writing by Grant Wiggins. Although we do not use the process to the exact detail, starting with the end in mind (the big idea), enduring understandings, essential questions and performance assessments are used in the process of curriculum development. With this being said, it is not only important to understand the process of UbD, but also how to implement curriculum designed in such a way. The following information is provided as a brief overview of how to use Understanding by Design in delivering curriculum.

### **Key UbD Terminology**

- **Big Idea:**  
The theme. *Example: History and Culture*
- **Enduring Understanding(s):**  
What it is that students will carry away with them at the end of their study (insightful perspective, theory, assumption, life lesson, paradox, core concept). *Example: Art is information.*
- **Essential Question(s):**  
Connected to the big idea and enduring understanding. EQs are open-ended, arguable, and can be asked over and over again. *Example: What can you learn about a culture by looking at its art?*
- **Formative Assessment:**  
Things you do to assess student understanding and skills along the way.
- **Summative Assessment:**  
Things you do at the end-point of a unit to assess broad understanding of knowledge and skills.
- **Performance Assessment:**  
Students **show** what they know about the big idea and demonstrate understanding of the big idea.

### **Helpful Hints**

- Students should always be aware of what they are expected to know. Post essential questions as you work through a unit. Tie the work, thinking and discussions back to the essential questions and enduring understanding. Share expectations and rubrics before the work begins.
- Teach by raising more questions and answering fewer questions. Ask and re-ask big questions and answer little ones.
- Engage students in inquiry and inventive work as soon as possible.
- Make clear that there is no such thing as a stupid question.
- Reverse roles: Ask naïve questions and make students come up with the answers that are explanations and interpretations.
- Raise questions with many plausible answers as a way to push students to consider multiple perspectives.
- Follow-up with assignments that make students investigate and support diverse points of view.
- Coach students to conduct effective final performances.
- Strive to develop greater autonomy in students so that they can find knowledge on their own and accurately self-assess and self-regulate.
- Assess for understanding periodically, not just at the end of a lesson, unit or course. Never assume that covering a topic once will result in student understanding.

~Understanding by Design by Grant Wiggins and Jay McTighe

### **How to Teach for Understanding**

To teach for understanding requires that teachers routinely use a combination of these types of teaching:

- Didactic- direct instruction
- Coaching- teacher provides guidance and feedback as students work
- Constructivist- numerous opportunities for guided inquiry and discussions around the essential questions and understandings.

### **Key Questions to Consider**

To help you decide when to use which teaching type listed above or in what combination, ask yourself the following:

- When should we teach what we know?
- When should we structure experiences that cause inquiry and constructive understanding?
- When should we cover and when should we uncover?

**Teaching Types Explained:**

| <b>What the Teacher Uses</b> | <b>What the Teachers Do</b>   | <b>What Students Do</b>  |
|------------------------------|---|--|
| Didactic                     | Instruct: <ul style="list-style-type: none"> <li>▪ Demonstrate</li> <li>▪ Model</li> <li>▪ Lecture</li> <li>▪ Question</li> </ul>   | Receive, take in, respond: <p><i>Observe, attempt, practice, refine, listen, watch, take notes, question, answer, give responses</i></p>   |
| Coaching                     | Provide: <ul style="list-style-type: none"> <li>▪ Feedback</li> <li>▪ Conference</li> <li>▪ Guide practice</li> </ul>   | Refine skills, deepen understanding: <p><i>Listen, consider, practice, retry, refine, revise, reflect, recycle</i></p>   |
| Constructivist               | Engage students in <ul style="list-style-type: none"> <li>▪ Reflection</li> <li>▪ Cooperative learning</li> <li>▪ Discussion</li> <li>▪ Experimental inquiry</li> <li>▪ Graphic representation</li> <li>▪ Guided inquiry</li> <li>▪ Problem-based learning</li> <li>▪ Open-ended questions</li> <li>▪ Reciprocal teaching</li> <li>▪ Simulations</li> <li>▪ Socratic seminar</li> </ul> | Construct, examine, extend meaning: <p><i>Compare, induce, define, generalize, collaborate, support others, teach, listen, question, consider, explain, hypothesize, gather data, analyze, visualize, connect, map relationships, question, research, conclude, support, solve, evaluate, reflect, rethink, predict, teach, examine, consider, challenge, debate</i></p> |

*The learner must make meaning of ideas/concepts, not just receive explanations from teachers, if complex ideas/concepts are to be understood.*

*~Brooks & Brooks 1993*