Curriculum Development Timeline

School: Township of Ocean Elementary Schools

Course: Gifted and Talented, Grade 6

Department: Gifted and Talented

Board Approval	Supervisor	Notes
August 2009	Jessica Shaw	Update Standards
August 2013	Christine Picerno	Update Standards
December 2017	Christine Picerno	Update Standards
August 2021	Rich Steckhahn	Revisions

DEPARTMENT Gifted & Talented COURSE Grade 6

Township of Ocean Pacing Guide			
Week	Marking Period 1	**Week**	Marking Period 3
1	**Project Based Learning:** Hands-On Projects	21	**Project Based Learning:** Hands-On Projects
2	**Project Based Learning:** Hands-On Projects	22	**Project Based Learning:** Hands-On Projects
3	**Project Based Learning:** Hands-On Projects	23	**Project Based Learning:** Hands-On Projects
4	**Project Based Learning:** Hands-On Projects	24	**Project Based Learning:** Hands-On Projects
5	**Project Based Learning:** Hands-On Projects	25	**Project Based Learning:** Hands-On Projects
6	**Project Based Learning:** Hands-On Projects	26	**Project Based Learning:** Hands-On Projects
7	**Project Based Learning:** Hands-On Projects	27	**Project Based Learning:** Hands-On Projects
8	**Project Based Learning:** Hands-On Projects	28	**Project Based Learning:** Hands-On Projects
9	**Project Based Learning:** Hands-On Projects	29	**Project Based Learning:** Hands-On Projects
10	**Project Based Learning:** Hands-On Projects	30	**Project Based Learning:** Hands-On Projects
Week	Marking Period 2	**Week**	Marking Period 4
11	**Project Based Learning:** Technology-based	31	**Project Based Learning:** Technology-based
12	**Project Based Learning:** Technology-based	32	**Project Based Learning:** Technology-based
13	**Project Based Learning:** Technology-based	33	**Project Based Learning:** Technology-based
14	**Project Based Learning:** Technology-based	34	**Project Based Learning:** Technology-based
15	**Project Based Learning:** Technology-based	35	**Project Based Learning:** Technology-based
16	**Project Based Learning:** Technology-based	36	**Project Based Learning:** Technology-based
17	**Project Based Learning:** Technology-based	37	**Project Based Learning:** Technology-based
18	**Project Based Learning:** Technology-based	38	**Project Based Learning:** Technology-based
19	**Project Based Learning:** Technology-based	39	**Project Based Learning:** Technology-based
20	**Project Based Learning:** Technology-based	40	**Project Based Learning:** Technology-based

Time Frame	Semester
Topic	
Project Based Learning Hands-On Projects	
Alignment to Standards	
CS.6-8.8.1.8.AP.2 - Create clearly named variables that represent different data types and perform operations on their values. **CS.6-8.8.2.8.ED.2** - Identify the steps in the design process that could be used to solve a problem. **CS.6-8.8.2.8.ED.7** - Design a product to address a real-world problem and document the iterative design process, including decisions made as a result of specific constraints and trade-offs (e.g., annotated sketches). **CS.6-8.8.2.8.ETW.2** - Analyze the impact of modifying resources in a product or system (e.g., materials, energy, information, time, tools, people, capital). **LA.RI.6.1** - Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text. **LA.W.6.7** - Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate. **LA.W.6.9** - Draw evidence from literary or informational texts to support analysis, reflection, and research. **LA.SL.6.5** - Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.. **6-8.MS-ETS1-1.1.1** - Define a design problem that can be solved through the development of an object, tool, process or system and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions. **6-8.MS-ETS1-4** - Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. **SCI.MS-PS2-2** - Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.. **TECH.8.1.8.C.CS4** - Contribute to project teams to produce original works or solve problems. **TECH.8.1.8.F.CS2** - Plan and manage activities to develop a solution or complete a project. **TECH.8.2.8.C.CS2** - The application of engineering design. **TECH.8.2.8.C.4** - Identify the steps in the design process that would be used to solve a designated problem. **TECH.8.2.8.C.5b** - Create a technical sketch of a product with materials and measurements labeled. **TECH.8.2.8.D.3** - Build a prototype that meets a STEM-based design challenge using science, engineering, and math principles that validate a solution.	
Learning Objectives and Activities	
Students will understand that… • Activities are be based on completion of student- interest questionnaire.	

- Mathematics appears in everyday life experiences.
- The steps of the engineering process must be completed in order to achieve maximum benefit.
- The scientific method must be completed in a specific order with recorded data to prove or disprove a hypothesis.
- Personal attributes, behavior, knowledge and skills promote self-awareness, personal responsibility and self-direction.
- Effective communication skills are necessary to convey meaning and understanding others.
- There are many solutions to a problem and an unsuccessful attempt is not a failure, but a way that does not work correctly.

Activities…

Students will participate in a minimum of two projects from this curricular area in a quarter.

- Weekly warm-up questions
- Project- based learning geared toward student interests;
    - Magnetic levitation
    - Current World issue projects
    - Biomimicry
    - Competitions (individual/group)
    - Package the pringle
    - Rocket aeronautics
    - Circuitry
    - Cardboard furniture

Assessments

Formative:
- Observational
- Self-guided goal setting
- Self-assessment

Summative:
- Rubric based (P/F)

Interdisciplinary Connections

Career Readiness, Life Literacies, and Key Skills

Technology Integration

Career Education
• CRP6. Demonstrate creativity and innovation • CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

Time Frame	Semester
Topic	
Project Based Learning Technology-based	
Alignment to Standards	
LA.RI.6.7 - Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue. **LA.W.6.7** - Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate. **LA.SL.6.2** - - Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study. **LA.SL.6.5** - Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information. **MA.6.EE.C.9** - Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. **TECH.8.1.8.A.CS2** - Select and use applications effectively and productively **TECH.8.1.8.A.1** - Demonstrate knowledge of a real world problem using digital tools. **TECH.8.1.8.C.CS4** - Contribute to project teams to produce original works or solve problems. **TECH.8.1.8.E.CS2** -Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media..	

TECH.8.2.8.C.5b - Create a technical sketch of a product with materials and measurements labeled.

Learning Objectives and Activities

Students will understand that…

- Activities are based on completion of the student- interest questionnaire.
- Mathematics appears in everyday life experiences.
- Using multiple sources in research is needed to confirm accuracy of sources.
- Personal attributes, behavior, knowledge and skills promote self-awareness, personal responsibility and self-direction.
- Effective communication skills are necessary to convey meaning and understanding to others.
- Proper application of technology assists in daily tasks.
- Technology is developing at a rapid pace and computing skills are needed to be successful in today's job market.
- There are many solutions to a problem and an unsuccessful attempt is not a failure, but a way that does not work correctly.

Activities…

Students will participate in a minimum of two projects from this curricular area in a quarter.

- Weekly warm-up questions
- Project- based learning geared toward student interests;
    - Coding- creation of animations
    - Movie making
    - Tinkercad
    - Competitions (individual/group)

Assessments

Formative:

- Observational
- Self-guided goal setting
- Self-assessment

Summative:

- Rubric based (P/F)

Interdisciplinary Connections

Career Readiness, Life Literacies, and Key Skills

Technology Integration

Career Education
• CRP6. Demonstrate creativity and innovation • CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

Modifications (ELL, Special Education, At-Risk Students, Gifted & Talented, & 504 Plans)

ELL:

- Work toward longer passages as skills in English increase
- Use visuals
- Introduce key vocabulary before lesson
- Teacher models reading aloud daily
- Provide peer tutoring
- Use of Bilingual Dictionary
- Guided notes and/or scaffold outline for written assignments
- Provide students with English Learner leveled readers.

Supports for Students With IEPs:

- Allow extra time to complete assignments or tests
- Guided notes and/or scaffold outline for written assignments
- Work in a small group
- Allow answers to be given orally or dictated
- Use large print books, Braille, or books on CD (digital text)
- Follow all IEP modifications

At-Risk Students:

- Guided notes and/or scaffold outline for written assignments
- Introduce key vocabulary before lesson
- Work in a small group
- Lesson taught again using a differentiated approach
- Allow answers to be given orally or dictated

- Use visuals / Anchor Charts
- Leveled texts according to ability

Supports for Students With 504 Plans:

- Follow all the 504 plan modifications
- Text to speech/audio recorded selections
- Amplification system as needed
- Leveled texts according to ability
- Fine motor skill stations embedded in rotation as needed
- Modified or constrained spelling word lists
- Provide anchor charts with high frequency words and phonemic patterns