

Curriculum Development Timeline

School: Township of Ocean Elementary Schools

Course: Gifted and Talented, Grade 2

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



Township of Ocean Pacing Guide			
Week	Marking Period 1	Week	Marking Period 3
1	Logic Puzzles	21	Discovering Art through Science Experiments
2	Logic Puzzles	22	Discovering Art through Science Experiments
3	Logic Puzzles	23	Discovering Art through Science Experiments
4	Logic Puzzles	24	Discovering Art through Science Experiments
5	Logic Puzzles	25	Discovering Art through Science Experiments
6	Logic Puzzles	26	Discovering Art through Science Experiments
7	Logic Puzzles	27	Discovering Art through Science Experiments
8	Logic Puzzles	28	Discovering Art through Science Experiments
9	Logic Puzzles	29	Discovering Art through Science Experiments
10	Logic Puzzles	30	Discovering Art through Science Experiments
Week	Marking Period 2	Week	Marking Period 4
11	Lego Kit Unit	31	Dinosaur Investigation Unit
12	Lego Kit Unit	32	Dinosaur Investigation Unit
13	Lego Kit Unit	33	Dinosaur Investigation Unit
14	Lego Kit Unit	34	Dinosaur Investigation Unit
15	Lego Kit Unit	35	Dinosaur Investigation Unit
16	Lego Kit Unit	36	Dinosaur Investigation Unit
17	Lego Kit Unit	37	Dinosaur Investigation Unit
18	Lego Kit Unit	38	Dinosaur Investigation Unit
19	Lego Kit Unit	39	Dinosaur Investigation Unit
20	Lego Kit Unit	40	Dinosaur Investigation Unit



Core Instructional & Supplemental Materials including various levels of Texts

Logic Puzzles, Lego Kits, Consumable STEAM supplies

Time Frame	1st Marking Period
Topic	
Logic Puzzles	
Alignment to Standards	
TECH.8.1.2.B.CS1 - Apply existing knowledge to generate new ideas, products, or processes. TECH.8.1.2.E.CS1 - Plan strategies to guide inquiry TECH.8.1.2.F.CS2 - Plan and manage activities to develop a solution or complete a project. TECH.8.1.2.F.CS3 - Collect and analyze data to identify solutions and/or make informed decisions. TECH.8.1.2.F.CS4 - Use multiple processes and diverse perspectives to explore alternative solutions. MA.2.OA.A - Represent and solve problems involving addition and subtraction.	
Learning Objectives and Activities	
<i>Students will understand that...</i> - Through teacher created hands-on experiences that promote cooperative learning through finding relationships, organizing information, critical and divergent thinking, and deductive and spatial reasoning. <i>Activities....</i> Card games Online challenges - Brick by Brick - Shape by Shape - Keva Planks - Q-Bitz Mensa for Kids Chess- online	
Assessments	
<u>Formative:</u> - Observational - Self-assessment-individual critique	



- Progressive task improvement.

Summative:

- Rubric based (O, G, S, N)

Interdisciplinary Connections**Career Readiness, Life Literacies, and Key Skills****Technology Integration**

- 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive)

Career Education

- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

Time Frame	2nd Marking Period
Topic	
Lego Kit Unit	
Alignment to Standards	
TECH.8.1.5.A - Students demonstrate a sound understanding of technology concepts, systems and operations TECH.8.1.5.B - Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology. TECH.8.2.5.A - Technology systems impact every aspect of the world in which we live. TECH.8.2.5.B - Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society. TECH.8.2.5.C - The design process is a systematic approach to solving problem TECH.8.2.5.D - The designed world is the product of a design process that provides the means to convert resources into products and systems. TECH.8.2.5.E - Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to create	
Learning Objectives and Activities	



Students will understand that...

- There are specific steps in the engineering design process, e.g., identify the need or problem, research the problem, develop possible solutions, select the best possible design, select the best possible solution(s), construct a prototype, test and evaluate, communicate the solution(s), and redesign.
- To understand the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
- And develop an understanding of technology concepts, systems and operations.
- To demonstrate creative thinking, construct knowledge and develop innovative products and process using Lego Robots and cooperative groups.

Activities...

- [Lego cats](#)
- [Lego animals](#)
- [Lego sea creatures](#)
- [Lego sharks](#)
- Lego Robots

Assessments**Formative:**

- Self assessment
- Peer critique
- Teacher observation (anecdotal notes)
- Successful robot design using Lego app.

Summative:

- Rubrics (including criteria for content, processing skills, and collaborative effort.)

Interdisciplinary Connections**NJSLS: Computer Science and Design Thinking**

- 8.1.2.AP.4: Break down a task into a sequence of steps.

Career Readiness, Life Literacies, and Key Skills**Technology Integration**

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1)

Career Education

- CRP6. Demonstrate creativity and innovation.

Time Frame	3rd Marking Period
Topic	
Discovering Art through Science Experiments	
Alignment to Standards	
CS.K-2.8.1.2.DA.3 - Identify and describe patterns in data visualizations. CS.K-2.8.1.2.DA.4 - Make predictions based on data using charts or graphs. CS.K-2.8.1.2.AP.4 - Break down a task into a sequence of steps. SCI.1-PS4-4 - Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. SCI.1-PS4-2 - Make observations to construct an evidence-based account that objects can be seen only when illuminated. SCI.1-LS1-1 - Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. SCI.K-2-ETS1-3 - Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. SCI.K-2-ETS1-2 - Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	
Learning Objectives and Activities	
<i>Students will understand that...</i> • Science and art often integrate and overlap. • Many things in nature are considered art or have beauty. • The scientific method is completed through a series of steps in which data is collected and a hypothesis is proven or disproven. <i>Activities:</i> • Salad spinner art • Coffee filter flowers • Stencil Leaves • Magic Cabbage • Marble Sculpture • Immiscibles • Paint Pendulum • Ice Structures • Bottle Optics • City Skyline collage	



- [Integrating Science and Art](#)

Assessments

Formative:

- Observational
- Self-assessment-individual critique
- Progressive task improvement.

Summative:

- Rubric based (O, G, S, N)

Interdisciplinary Connections

Career Readiness, Life Literacies, and Key Skills

Technology Integration

- 9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2)
- 9.4.2.Cl.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a)

Career Education

- CRP6. Demonstrate creativity and innovation.

Time Frame

4th Marking Period

Topic

Dinosaur Investigation Unit

Alignment to Standards

LA.RL.2.7 - Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

LA.RI.2.2 - Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.

LA.RI.2.3 - Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

LA.W.2.2 - Write informative/explanatory texts in which they introduce a topic, use evidence-based facts and definitions to develop points, and provide a conclusion.



LA.W.2.5 - With guidance and support from adults and peers, focus on a topic and strengthen writing as needed through self-reflection, revising and editing.

LA.W.2.7 - Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

Learning Objectives and Activities

Students will understand that...

- The Writing Process has many steps: Prewriting, Drafting, Editing, Revising and Publishing.
- Completing the steps of the writing process are required for good writing.
- Using graphic organizers helps align information needed in writing piece.
- Rubric outlines requirements for project and final writing piece.

Activities...

- Students will use class time to listen to stories on dinosaurs and explore dinosaur books independently
- Students will select a dinosaur or prehistoric period to investigate
- Students will peer edit and revise writing three paragraphs about the dinosaur or prehistoric period.
- Students will create a 3D representation of the topic selected.
- Students will present writing piece and 3D representation to peers

Assessments

Formative:

- Self assessment
- Individual critique
- Peer conferences
- Teacher/student conferences

Summative:

- Writing rubric
- 3D project rubric

Interdisciplinary Connections

Career Readiness, Life Literacies, and Key Skills

Technology Integration

- 9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.



- 9.4.2.IML.3: Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults (e.g., 6.3.2.GeoGI.2, 6.1.2.HistorySE.3, W.2.6, 1-LSI-2).
- 9.4.2.TL.2: Create a document using a word processing application.
- 9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).

Career Education

- CRP4. Communicate clearly and effectively and with reason.

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

