

Curriculum Development Timeline

School: Township of Ocean Elementary Schools

Course: Gifted and Talented, Grade 1

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	DIY Science Experiments	31	ELA Writing
12	DIY Science Experiments	32	ELA Writing
13	DIY Science Experiments	33	ELA Writing
14	DIY Science Experiments	34	ELA Writing
15	DIY Science Experiments	35	ELA Writing
16	DIY Science Experiments	36	ELA Writing
17	DIY Science Experiments	37	ELA Writing
18	DIY Science Experiments	38	ELA Writing
19	DIY Science Experiments	39	ELA Writing
20	DIY Science Experiments	40	ELA Writing



Core Instructional & Supplemental Materials including various levels of Texts

Logic Puzzles, Consumable STEAM supplies, Mentor texts

Time Frame

1st Marking Period

Topic

Logic Puzzles

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.**MA.1.OA.A.2** -Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.**MA.1.MD.C.4** -Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Learning Objectives and Activities

Students will understand that...

- Hands-on experiences promote cooperative learning through finding relationships and organizing information.
- Developing critical and divergent thinking, and deductive and spatial reasoning happens through working with various puzzles.
- Perseverance is a skill honed through time.

Activities...

- Brick by Brick
- Shape by Shape
- Keva Planks
- Quirkle
- Blokus
- Soduku
- Ken-Ken

Assessments

Formative:

- Observational
- Self-assessment-individual critique



- Progressive task improvement.

Summative:

- Rubric based (O, G, S, N)
- "I now know" journal

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.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	
DIY Science Experiments	
Alignment to Standards	
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	



Students will understand that...

- Hands-on experiences promote cooperative learning through finding relationships and organizing information.
- The scientific process must be completed through sequential steps to prove or disprove a hypothesis.
- The collection of data during an experiment is paramount in determining the legitimacy of a hypothesis.
- Developing critical and divergent thinking happens through various educational experiences.
- Perseverance is a skill honed through time.

Activities...

- [How to build a satellite](#)
- [Easy science experiments](#)
- [STEM Shark activities](#)

Assessments**Formative:**

- Self assessment
- Peer critique
- Teacher observation (anecdotal notes)

Summative:

- Rubrics (including-- criteria for content, processing skills, and collaborative effort)
- "I now know" journal

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.Cl.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a)

Career Education

- CRP2. Apply appropriate academic and technical skills



Time Frame	3rd Marking Period
Topic	
Discovering Art through Science Experiments	
Alignment to Standards	
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. MA.K-2.1.2.2.Cr1a - Discover, share and express ideas for media artworks through experimentation, sketching and modeling. MA.K-2.1.2.2.Cr1b - Brainstorm and improvise multiple ideas using a variety of tools, methods and materials. MA.K-2.1.2.2.Pr5 - Developing and refining techniques and models or steps needed to create products MA.K-2.1.2.2.Pr5b - Identify, describe and demonstrate basic creative skills such as trial-and-error and playful practice, within media arts production. MA.K-2.1.2.2.Pr5c -Discover, experiment with and demonstrate creative skills for media artworks.	
Learning Objectives and Activities	
<i>Students will understand that...</i> • Science and art often integrate and overlap. • Many things in nature are considered art and/or have beauty. • The scientific method is completed through a series of sequential steps in which data is collected and a hypothesis is proven or disproven. <i>Activities...</i> • Integrated science and art • Water galaxy painting • Crystal Bubbles • Dancing Rabbits • Building Beans • Ocean Science • Magnetic Rubbing • Stencil Leaves • Science from Art • Magic Cabbage • Marble Sculpture • Inmiscibles • Paint Pendulum	



- Ice Structures
- Bottle Optics
- Erupting Colors
- Chromatography
- [Salad spinner art](#)

Assessments

Formative:

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

Summative:

- Rubric based (O, G, S, N)
- "I now know" journal

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

Career Education

- CRP6. Demonstrate creativity and innovation.

Time Frame	4th Marking Period
Topic	
ELA Writing	
Alignment to Standards	
LA.W.1.3 - Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure. LA.W.1.5 - With guidance and support from adults, focus on a topic, respond to questions	



and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed.

LA.SL.1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

LA.SL.1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

LA.SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings

LA.L.1.2 - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Learning Objectives and Activities

Students will understand that...

- The Writing process is a series of 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 the writing piece.
- Rubric outlines requirements for the project and final writing piece.
- An original illustration is needed for a successful project.

Activities...

- Alternate story ending
- Students will listen to various versions of the “Gingerbread Man” story
- Students will then listen to a version of another fairy tale selected by the instructor
- Students will brainstorm alternate endings to the fairy tale
- Students will use a four square approach(introduction, middle, ending) to create and write an alternate ending
- Students will edit writing, complete a rough draft and illustrate new ending
- Students will share new ending with peers

OR

- [3 Act Math](#)
 - Students will create three steps to solve a math problem
 - More [Samples](#)

Assessments

Formative:

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

Summative:

- Rubric
- “I now know” journal



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

- 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a)
- 9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
- 9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).

Career Education

- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.

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

