Gifted and Talented Education-Grade 7

Unit Title: ***Unit 1: Innovation and Advertising***

Stage 1: Desired Results

Standards & Indicators:
NAGC:-Gifted Education Programing Standards:

Standard 1: Learning and Development
1.1 Self Understanding - Students with Gifts and Talents demonstrate self-knowledge with respect to their interests, strengths, identities, and needs in socio-emotional development and intellectual, academic, creative leadership, and artistic domains.
1.2 Self Understanding - Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow; they recognize the influences of their beliefs, traditions, and values on their learning and behavior.
1.3. Self-Understanding - Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their peer group and others in the general population.
1.4. Awareness of Needs - Students with gifts and talents access resources from the community to support cognitive and affective needs, including social interactions with others having similar interests and abilities or experiences, including same-age peers and mentors or experts.
1.5. Awareness of Needs - Students' families and communities understand similarities and differences with respect to the development and characteristics of advanced and typical learners and support students with gifts and talents' needs.

Standard 2: Assessment
2.5. Learning Progress - Students self assess their learning progress.

Standard 3: Curriculum Planning and Instruction
3.3. Responsiveness to Diversity - Students with gifts and talents develop knowledge and skills for living in and contributing to a diverse and global society.

Standard 4: Learning Environments
4.1. Personal Competence - Students with gifts and talents demonstrate growth in personal competence and dispositions for exceptional academic and creative productivity. These include self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking.
4.2. Social Competence - Students with gifts and talents develop social competence manifested in positive peer relationships and social interactions.
4.3. Responsibility and Leadership - Students with gifts and talents demonstrate personal and social responsibility
4.4. Cultural Competence - Students with gifts and talents value their own and others' language, heritage, and circumstance. They possess skills in communicating, teaming, and collaborating with diverse individuals and across diverse groups. They use positive strategies to address social issues, including discrimination and stereotyping.

Standard 5: Programming
5.3. Career Pathways - Students with gifts and talents create future career-oriented goals and identify talent development pathways to reach those goals.
5.4. Collaboration - Students with gifts and talents are able to continuously advance their talent development and achieve their learning goals through regular collaboration among families, community members, advocates, and the school.
5.8. Evaluation of Programming and Services - Students with gifts and talents have access to programming and services required for the development of their gifts and talents as a result of ongoing evaluation and program improvements.

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Career Readiness, Life Literacies and Key Skills		
Standard	**Performance Expectations**	**Core Ideas**
9.4.8.CI.3	Examine challenges that may exist in the adoption of new ideas.	Complex issues require complex thought and critical thinking. Real-world issues and problems are integral to the success of humanity.
9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.	Problems are most effectively solved through multiple diverse perspectives. Respectful discussions can provoke thought and inspire new tracks of thinking.
9.4.8.TL.6	Collaborate to develop and publish work that provides perspectives on a real-world problem	A project is strengthened through responsible peer review and feedback. Multiple perspectives are a critical part of a successful project.

Central Idea/Enduring Understanding:	**Essential/Guiding Question:**
• Making mistakes is an important part of the process of innovating • Problem solving is an essential part of everyday life	• What is the formula for innovation? • What is the definition of creativity? • How can we apply the SCAMPER strategy to create an original idea for a product? • What is the difference between a fixed and growth mindset? • How can we create a product to fit a client's desires and feedback given throughout the process? • How do we define the term maker and differentiate between a formal and informal maker?
Content:	**Skills(Objectives):**
• Identify and experience different Feats and Flops • The formula for innovation and an understanding of each element • Using SCAMPER as a strategy to create an idea for a project • Develop a new product as well as advertising to help create curiosity about it • Learn the difference between a fixed and growth mindset • Work as a business to help a client develop a solution to a problem involving advertising • Take clients desires and feedback and determine the best course of action for their company to solve their problem • Learn and define the word maker and the difference between the two types, informal and formal	• The students will reflect on their lives to identify significant achievements and failures they have experienced. • The students will be introduced to the formula for innovation. • The students will discuss and define blue-sky thinking. • Students will come to an understanding as to the definition of creativity. • The students will apply the SCAMPER strategy to create an idea for an original product. • The students will come to an understanding of the importance of curiosity in the formula for innovation. • The students will brainstorm a marketing plan or commercial to help create curiosity about their new product.

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	● The students will explore the importance of making mistakes in the process of innovating. ● The students will hypothesize how they might deal with a failed product or marketing approach for the fictional inventions. ● The students will explore the importance of persistence to the process of innovating. ● The students will determine the difference between a fixed mindset and a growth mindset. ● The students will use a Need to Know Board to examine a messy situation. ● The students will work collaboratively and productively in groups. ● The students will research the answers to questions they identify as important to solving a real-world problem. ● The students will propose a solution to a real-world problem. ● The students will rank order their ideas using a logic elimination grid. ● The students will prepare a presentation according to the desires of their clients. ● The students will make revisions based on client feedback. ● The students will analyze advertisements for effectiveness using the AIDA principle. ● The students will apply a model for critical thinking to advertising. ● The students will make a formal presentation of product ideas and an advertisement. ● THe students will critique classmates' presentations and serve as a focus group. ● The students will be introduced to the term maker and define what it means. ● THe students will explore the types of formal vs. informal makers.

Interdisciplinary Connections:

Science:

MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

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.

Computer Science and Design Thinking:

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8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.

8.2.8.ED.3: Develop a proposal for a solution to a real-world problem that includes a model (e.g., physical prototype, graphical/technical sketch).

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

Language Arts:
W.WR.7.5. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

SL.UM.7.5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points

Stage 2: Assessment Evidence

Performance Task(s):

- Develop a marketing plan or commercial for a new product
- Prepare a presentation to help clients solve an product and advertising problem according to their desires
- Make revisions to their presentation based on feedback given
- Make a formal presentation of product ideas and advertisements.

Other Evidence:

- Student workbook check ins
- Classroom and Group discussion
- Observation
- Exit Ticket
- Whip Around Activity

Stage 3: Learning Plan

Learning Opportunities/Strategies:

- Consensus Map
- SCAMPER REsponses
- Group Discussion
- Logic Elimination Grids
- AIDA Critique Sheets
- Focus Groups Feedback Forms
- Mistake to Masterpiece Activity
- Mindset Mix-up Activity
- Hall of Fame Nominations
- Need to Know Board
- Focus Group Feedback Form
- Engineering Design Process Card Order Sort

Resources:

Lesson 1-

- Famous Failures Video: https://www.youtube.com/watch?v=zLYECIjmnQs

Lesson 2-

- Blue-Sky Disney Video: https://www.youtube.com/watch?v=pWRVRAoSWo0

Lesson 3-

- SCAMPER App: http://scamper.site44.com/
- Creativity 101 App: http://creativity101.site44.com/

Lesson 4-

- Ronco Veg-o-matic Commercial: https://www.youtube.com/watch?v=FGo7W_mbWCE
- Ronco Mr. Microphone Commercial: https://www.youtube.com/watch?v=hqIrzkPDtrk
- Ronco Pocket Fisherman Commercial: https://www.youtube.com/watch?v=p3wv5X2GbUU

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	Lesson 11- ● Ethos, Pathos, Logos Video: https://www.youtube.com/watch?v=FeCz5fy02JE ● Additional Ronco Commercials:https://www.youtube.com/watch?v=XQZtlvDiJ4s Lesson 14: ● Engineering Design Process Video: https://www.youtube.com/watch?v=pSmz1r3l3tE LGBT and Disabilities Resources: ● LGBTQ-Inclusive Lesson & Resources by Garden State Equality and Make it Better for Youth ● LGBTQ+ Books DEI Resources: ● Learning for Justice ● GLSEN Educator Resources ● Supporting LGBTQIA Youth Resource List ● Respect Ability: Fighting Stigmas, Advancing Opportunities ● NJDOE Diversity, Equity & Inclusion Educational Resources ● Diversity Calendar

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Optional enrichment activities using higher grade level reading materials Student will create a higher-level activity or experiment of their choosing, on a smaller scale, to complete and report upon in their own time Student can act as a mentor to peers who are struggling and provide support/feedback as necessary Student may perform a critical analysis of any higher-level reading materials	Clear and explicit directions and materials that are on (or above) grade-level Students provided with high-quality, rigorous materials and supports that provoke scholarly thought and critical thinking skills Differentiation of learning strategies: visual, auditory, kinetic and cooperative	Provide daily classroom agenda in advance Partner student with a high-achieving peer for check-ins Frequently check for understanding Break large tasks down into smaller pieces If necessary, a review with student / guardians / administration as needed regarding	Any student requiring further accommodations and/or modifications will have them individually listed in their 504 Plan or IEP. These might include, but are not limited to: breaking assignments into smaller tasks, giving directions through several channels (auditory, visual, kinesthetic, model), and/or small group instruction for reading/writing ELL supports should include, but are not limited to, the following:: Extended time Provide visual aids

Differentiation of learning strategies: visual, auditory, kinetic and cooperative		expectations and program requirements Provide a highly structured, predictable learning environment One-on-one instruction	Repeated directions Differentiate based on proficiency Provide word banks Allow for translators, dictionaries

Unit Title: ***Unit 2: Shark Tank Junior***

Stage 1: Desired Results

NAGC:-Gifted Education Programing Standards:

Standard 1: Learning and Development

1.1 Self Understanding - Students with Gifts and Talents demonstrate self-knowledge with respect to their interests, strengths, identities, and needs in socio-emotional development and intellectual, academic, creative leadership, and artistic domains.

1.2 Self Understanding - Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow; they recognize the influences of their beliefs, traditions, and values on their learning and behavior.

1.4. Awareness of Needs - Students with gifts and talents access resources from the community to support cognitive and affective needs, including social interactions with others having similar interests and abilities or experiences, including same-age peers and mentors or experts.

1.5. Cognitive, Psychosocial, and Affective Growth - Students with gifts and talents demonstrate cognitive growth and psychosocial skills that support their talent development as a result of meaningful and challenging learning activities that address their unique characteristics and needs.

Standard 2: Assessment

2.4. Learning Progress - As a result of using multiple and ongoing assessments, students with gifts and talents demonstrate growth commensurate with abilities in cognitive, social-emotional, and psychosocial areas.

2.5. Learning Progress - Students self assess their learning progress.

Standard 3: Curriculum Planning & Development

3.1. Curriculum Planning - Students with gifts and talents demonstrate academic growth commensurate with their abilities each school year.

3.2. Talent Development - Students with gifts and talents demonstrate growth in social and emotional and psychosocial skills necessary for achievement in their domain(s) of talent and/or areas of interest.

3.3. Responsiveness to Diversity - Students with gifts and talents develop knowledge and skills for living in and contributing to a diverse and global society.

3.5. Instructional Strategies - Students with gifts and talents become independent investigators.

Standard 4: Learning Environments

4.1. Personal Competence - Students with gifts and talents demonstrate growth in personal competence and dispositions for exceptional academic and creative productivity. These include self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking.

4.2. Social Competence - Students with gifts and talents develop social competence manifested in positive peer relationships and social interactions.

4.3. Responsibility and Leadership - Students with gifts and talents demonstrate personal and social responsibility

4.5. Communication Competence - Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills and creative expression. They

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display fluency with technologies that support effective communication and are competent consumers of media and technology.

Standard 5: Programming

5.4. Collaboration - Students with gifts and talents are able to continuously advance their talent development and achieve their learning goals through regular collaboration among families, community members, advocates, and the school.

Career Readiness, Life Literacies and Key Skills

Standard	Performance Expectations	Core Ideas
9.4.8.CI.3	Examine challenges that may exist in the adoption of new ideas.	Complex issues require complex thought and critical thinking. Real-world issues and problems are integral to the success of humanity.
9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.	Problems are most effectively solved through multiple diverse perspectives. Respectful discussions can provoke thought and inspire new tracks of thinking.
9.4.8.TL.6	Collaborate to develop and publish work that provides perspectives on a real-world problem	A project is strengthened through responsible peer review and feedback. Multiple perspectives are a critical part of a successful project.

Central Idea/Enduring Understanding:

- Problems can be solved in many different ways, one is to create an innovation.
- Feedback is an essential part of the innovation process.
- Innovation can be shown in many ways, one is through the creation of a Rube Goldberg machine.

Essential/Guiding Question:

- What is the difference between patents and trademarks?
- How can we build a prototype to solve a problem?
- How did Rube Goldberg demonstrate innovation?
- How can feedback be analyzed to help improve a product?
- How can you apply for a patent?
- How can you create a small business in the state of New Jersey?
- What compelling case can I use to convince someone to invest in my product?

Content:

- Identify the difference between a patent and a trademark.
- Identify a problem and develop a solution.
- Develop a blueprint for building a prototype.
- Develop a working prototype
- Construct a Rube Goldberg Machine
- Take feedback on product and make adjustments as needed
- Learn about and complete a patent application
- Learn how to create a small business in New Jersey

Skills(Objectives):

- The students will distinguish between patents and trademarks.
- The students will determine a problem they would like to solve and brainstorm possible ideas.
- The students will discuss the rules of brainstorming.
- The students will create a personalized blueprint for building a prototype of their idea.
- The students will continue to imagine ideas for and plan the construction of an innovation.

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• Create a compelling case for someone to invest in their product • Present ideas to a panel, i.e. Shark Tank	• The students will be introduced to and create a Rube Goldberg Machine. • The students will begin the process of creating a physical prototype of their innovation. • The students will demonstrate the prototype of their innovation. • The students will demonstrate their collaborative Rube Goldberg machine. • The students will analyze innovation feedback and determine how the product can be improved. • The students will complete an application for a provisional patent. • The students will explore what it takes to create a small business in their state. • The students will create a compelling case for why an investor should invest in their idea. • The students will present and defend their idea in front of a panel, the “Shark Tank.”

Interdisciplinary Connections:

Science:

MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

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Computer Science and Design Thinking:

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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

Language Arts:

W.WR.7.5. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

SL.UM.7.5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points

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Stage 2: Assessment Evidence

Performance Task(s):

- Work Logs
- Student Innovation Demonstration
- Collaboration Evaluation
- Completed Patent including:
  - Cover Sheets
  - Patent Drawings
  - Preamble to my Patent
- Student Shark Tank Presentations

Other Evidence:

- Group Discussions
- Observation
- Student Workbook Check-ins
- Group Discussions
- Whip Around Activity
- Exit Ticket
- Shark Feedback

Stage 3: Learning Plan

Learning Opportunities/Strategies:

- Blueprint to Innovation Activity
- Hall of Fame Nomination Activity
- User Feedback
- Group Discussions
- Complete student workbook entries
- Create a prototype of an innovation

Resources:

Lesson 15:

- Extraordinary Innovations Video: https://www.youtube.com/watch?v=FWFb-8hFutY
- Race to the USPTO Handout: https://www.uspto.gov/kids/RaceToTheUSPTOFlyer.pdf
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Lesson 18:

- Choice #1: https://www.uspto.gov/kids/
- Choice#2: https://makerfaire.com/
- Bio of Rube Goldberg: https://www.rubegoldberg.org/all-about-rube/a-cultural-icon/
- Honda Commercial: https://www.youtube.com/watch?v=YWk9N92-wvg
- Breakfast at Pee Wee Herman's House: https://www.youtube.com/watch?v=KVdqwD_bcPs
- Purdue's 300 Step Machine: https://www.youtube.com/watch?v=mTjJzF_Oaow
- OK Go-This Too Shall Pass: https://www.youtube.com/watch?v=qybUFnY7Y8w

Lesson 24:

- Evolution of the iPhone: https://www.computerworld.com/article/2604020/the-evolution-of-apples-iphone.html#slide1

Lesson 25:

- Inventor's Oath Form: https://www.uspto.gov/sites/default/files/documents/aia0001.pdf
- Patent Cover Sheet: https://www.uspto.gov/sites/default/files/documents/sb0016.pdf

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	• Ann Makosinski and the Hollow Flashlight: https://www.youtube.com/watch?v=RCWVIDwnpIA • How to Create Patent Drawing Video: https://www.youtube.com/watch?v=Y84e-KLQ0oo Lesson 27: • 12 Steps to Starting a Business in New Jersey: https://howtostartanllc.com/start-a-business-in-new-jersey • Shark Tank Video: https://www.youtube.com/watch?v=qFShW-qxPM4 LGBT and Disabilities Resources: • LGBTQ-Inclusive Lesson & Resources by Garden State Equality and Make it Better for Youth • LGBTQ+ Books DEI Resources: • Learning for Justice • GLSEN Educator Resources • Supporting LGBTQIA Youth Resource List • Respect Ability: Fighting Stigmas, Advancing Opportunities • NJDOE Diversity, Equity & Inclusion Educational Resources • Diversity Calendar

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Optional enrichment activities using higher grade level reading materials Student will create a higher-level activity or experiment of their choosing, on a smaller scale, to complete and report upon in their own time Student can act as a mentor to peers who are struggling and provide support/feedback as necessary Student may perform a critical analysis of any higher-level reading materials	Clear and explicit directions and materials that are on (or above) grade-level Students provided with high-quality, rigorous materials and supports that provoke scholarly thought and critical thinking skills Differentiation of learning strategies: visual, auditory, kinetic and cooperative	Provide daily classroom agenda in advance Partner student with a high-achieving peer for check-ins Frequently check for understanding Break large tasks down into smaller pieces If necessary, a review with student / guardians /	Any student requiring further accommodations and/or modifications will have them individually listed in their 504 Plan or IEP. These might include, but are not limited to: breaking assignments into smaller tasks, giving directions through several channels (auditory, visual, kinesthetic, model), and/or small group instruction for reading/writing ELL supports should include, but are not limited to, the following:: Extended time Provide visual aids

Differentiation of learning strategies: visual, auditory, kinetic and cooperative		administration as needed regarding expectations and program requirements Provide a highly structured, predictable learning environment One-on-one instruction	Repeated directions Differentiate based on proficiency Provide word banks Allow for translators, dictionaries

Unit Title: ***Unit 3: Maker Faire***

Stage 1: Desired Results

Standards & Indicators:
NAGC:-Gifted Education Programing Standards:

Standard 1: Learning and Development
1.3. Self-Understanding - Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their cognitive and chronological peer groups and others in the general population.
1.4. Awareness of Needs - Students identify and access supplemental, outside-of-school resources that support the development of their gifts and talents

Standard 2: Assessment
2.4. Learning Progress - As a result of using multiple and ongoing assessments, students with gifts and talents demonstrate growth commensurate with abilities in cognitive, social-emotional, and psychosocial areas.

Standard 3: Curriculum Planning and Instruction
3.3. Responsiveness to Diversity - Students with gifts and talents develop knowledge and skills for living in and contributing to a diverse and global society.
3.4. Instructional Strategies - Students with gifts and talents demonstrate their potential or level of achievement in their domain(s) of talent and/or areas of interest.
3.6. Resources. Students with gifts and talents are able to demonstrate growth commensurate with their abilities as a result of access to high-quality curricular resources.

Standard 4: Learning Environments
4.2. Social Competence - Students with gifts and talents develop social competence manifested in positive peer relationships and social interactions.
4.3. Responsibility and Leadership - Students with gifts and talents demonstrate personal and social responsibility.

Standard 5: Programming
5.4. Collaboration - Students with gifts and talents are able to continuously advance their talent development and achieve their learning goals through regular collaboration among families, community members, advocates, and the school.

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Career Readiness, Life Literacies and Key Skills		
Standard	**Performance Expectations**	**Core Ideas**
9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.	Awareness of and appreciation for cultural differences is critical to avoid barriers to productive and positive interaction.
9.4.8.IML.13	Identify the impact of the creator on the content, production, and delivery of information	There is a need to produce and publish media that has information supported with quality evidence and is intended for authentic audiences.
9.4.8.TL.6	Collaborate to develop and publish work that provides perspectives on a real-world problem.	Digital tools allow for remote collaboration and rapid sharing of ideas unrestricted by geographic location or time.

Central Idea/Enduring Understanding:

- Many people we meet everyday are makers
- Students can plan and create their own Makers Faire

Essential/Guiding Question:

- What can we learn from informal makers to become makers ourselves?
- How can we plan and execute our own Makers Faire?
- How can I share my skills with my peers?

Content:

- Learn from and attempt the hobbies of informal makers
- Provide peers with a tutorial on a hobby
- Work as a class to create committees to host a Maker Faire at the school
- Host a Maker Faire

Skills(Objectives):

- The students will be introduced to multiple informal makers and learn the skills of his or her hobby.
- The students will present a five-minute tutorial explaining how to make something of their choosing.
- The students will begin planning and creating the materials for a Maker Faire.
- The students will host a Maker Faire.

Interdisciplinary Connections:

Science:

MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

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.

Computer Science and Design Thinking:

8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.

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8.2.8.ED.3: Develop a proposal for a solution to a real-world problem that includes a model (e.g., physical prototype, graphical/technical sketch).

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

Stage 2: Assessment Evidence

Performance Task(s):
- 5 Minute Maker Tutorial
- Class Hosts a Makers Faire

Other Evidence:
- Observation
- Group Discussions
- Student Workbook Check-ins
- Materials and Equipment List for Maker Faire
- Whip Around Activity

Stage 3: Learning Plan

Learning Opportunities/Strategies:
- Learn the trade of various Makers
- Create a tutorial for something you make
- Plan a Maker Faire with class

Resources:

Lesson 34:
- Choice 1: https://www.thehenryford.org/explore/innovation-nation/

LGBT and Disabilities Resources:
- LGBTQ-Inclusive Lesson & Resources by Garden State Equality and Make it Better for Youth
- LGBTQ+ Books

DEI Resources:
- Learning for Justice
- GLSEN Educator Resources
- Supporting LGBTQIA Youth Resource List
- Respect Ability: Fighting Stigmas, Advancing Opportunities
- NJDOE Diversity, Equity & Inclusion Educational Resources
- Diversity Calendar

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Optional enrichment activities using higher grade level reading materials Student will create a higher-level activity or experiment of their choosing, on a smaller scale, to complete and report upon in their own time	Clear and explicit directions and materials that are on (or above) grade-level Students provided with high-quality, rigorous materials and supports that provoke scholarly	Provide daily classroom agenda in advance Partner student with a high-achieving peer for check-ins Frequently check for understanding	Any student requiring further accommodations and/or modifications will have them individually listed in their 504 Plan or IEP. These might include, but are not limited to: breaking assignments into smaller tasks, giving directions through several channels (auditory, visual, kinesthetic, model), and/or

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Student can act as a mentor to peers who are struggling and provide support/feedback as necessary Student may perform a critical analysis of any higher-level reading materials Differentiation of learning strategies: visual, auditory, kinetic and cooperative	thought and critical thinking skills Differentiation of learning strategies: visual, auditory, kinetic and cooperative	Break large tasks down into smaller pieces If necessary, a review with student / guardians / administration as needed regarding expectations and program requirements Provide a highly structured, predictable learning environment One-on-one instruction	small group instruction for reading/writing ELL supports should include, but are not limited to, the following:: Extended time Provide visual aids Repeated directions Differentiate based on proficiency Provide word banks Allow for translators, dictionaries

Pacing Guide

Content	Resources	Standards
Unit 1 (21 days)		
Lesson 1: Pretest/ Intro to Feats and Flops (2 days) **Lesson 2:** Innovation Formula: Blue-sky Thinking (1 day) **Lesson 3:** Innovation Formula: Creativity/ SCAMPER (2 days) **Lesson 4:** Innovation Formula: Curiosity (1 day) **Lesson 5:** Innovation Formula: Mistakes (1 day) **Lesson 6:** Innovation Formula: Persistence/ Fixed vs. Growth Mindset (1 day) **Lesson 7:** Innovations R Us- Problem Solving (2 days) **Lesson 8:** Research Questions and Brainstorming (2 days) **Lesson 9:** Finalize Idea and Create Presentation (2 days)	Lesson 1- • Famous Failures Video: https://www.youtube.com/watch?v=zLYECIjmnQs Lesson 2- • Blue-Sky Disney Video: https://www.youtube.com/watch?v=pWRVRAoSWo0 Lesson 3- • SCAMPER App: http://scamper.site44.com/ • Creativity 101 App: http://creativity101.site44.com/ Lesson 4- • Ronco Veg-o-matic Commercial: https://www.youtube.com/watch?v=FGo7W_mbWCE • Ronco Mr. Microphone Commercial: https://www.youtube.com/watch?v=hqIrzkPDtrk • Ronco Pocket Fisherman Commercial: https://www.youtube.com/watch?v=p3wv5X2GbUU Lesson 11-	**NAGC Standards:** 1.1 Self Understanding 1.2 Self Understanding 1.3 Self Understanding 1.4 Awareness of Needs 1.5 Awareness of Needs 2.5 Learning Progress 3.3 Responsiveness to Diversity 4.1 Personal Competence 4.2 Social Competence 4.3 Responsibility and Leadership 4.4 Cultural Competence 5.3 Career Pathways 5.4 Collaboration 5.8 Evaluation of Programming and Services **Career Readiness, Life Literacies & Key Skills:** 9.4.8.CI.3 9.4.8.GCA.2 9.4.8.TL.6 **Science:** MS-ETS1-1 MS-ETS1-2 MS-ETS1-3 MS-ETS1-4 **2020 NJSLS – Computer Science and Design Thinking:** 8.2.8.ED.2

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Lesson 10: Present Ideas to Companies (2 days) **Lesson 11:** Make Revisions and Compose Ads (2 days) **Lesson 12:** Finalize Advertisements (2 days) **Lesson 13:** Makers: Formal vs. Informal (1 day)	• Ethos, Pathos, Logos Video: https://www.youtube.com/watch?v=FeCz5fy02JE • Additional Ronco Commercials:https://www.youtube.com/watch?v=XQZtlvDiJ4s Lesson 14: • Engineering Design Process Video: https://www.youtube.com/watch?v=pSmz1r3l3tE	8.2.8.ED.3 8.2.8.ED.7 **Language Arts:** W.WR.7.5 SL.UM..7.5.
Unit 2 (19 days)		
Lesson 15: Patents vs. Trademarks/ Brainstorming (2 days) **Lesson 16:** Brainstorming and Product Blueprint (2 days) **Lesson 17:** Plan Product Construction (2 days) **Lesson 18:** Imagine (1 days) **Lesson 19-22:** Create prototype (3 days) **Lesson 23:** Demonstrate Prototype (2 days) **Lesson 24:** Analyze and Improve Invention/Prototype (2 days) **Lesson 25 & 26:** Patent Process (2 days) **Lesson 27:** Creating a Small Business/ Prepare for Investment Meeting (1 days) **Lesson 28:** Shark Tank Pitch (2 days)	Lesson 15: • Extraordinary Innovations Video: https://www.youtube.com/watch?v=FWFb-8hFutY • Race to the USPTO Handout: https://www.uspto.gov/kids/RaceToTheUSPTOFlyer.pdf • Lesson 18: • Choice #1: https://www.uspto.gov/kids/ • Choice#2: https://makerfaire.com/ Lesson 24: • Evolution of the iPhone: https://www.computerworld.com/article/2604020/the-evolution-of-apples-iphone.html#slide1 Lesson 25: • Inventor's Oath Form: https://www.uspto.gov/sites/default/files/documents/aia0001.pdf • Patent Cover Sheet: https://www.uspto.gov/sites/default/files/documents/sb0016.pdf • Ann Makosinski and the Hollow Flashlight: https://www.youtube.com/watch?v=RCWVIDwnplA • How to Create Patent Drawing Video: https://www.youtube.com/watch?v=Y84e-KLQ0oo Lesson 27: • 12 Steps to Starting a Business in New Jersey: https://howtostartanllc.com/start-a-business-in-new-jersey	**NAGC Standards:** 1.1 Self Understanding 1.2 Self Understanding 1.4 Awareness of Needs 1.5 Awareness of Needs 2.4 Learning Progress 2.5 Learning Progress 3.1 Curriculum Planning 3.2 Talent Development 3.3 Responsiveness to Diversity 3.5 Instructional Strategies 3.6 Resources 4.1 Personal Competence 4.2 Social Competence 4.3 Responsibility and Leadership 4.5 Communication Competence 5.4 Collaboration 5.8 Evaluation of Programming and Services **Career Readiness, Life Literacies & Key Skills:** 9.4.8.CI.3 9.4.8.GCA.2 9.4.8.TL.6 **Science:** MS-ETS1-1 MS-ETS1-2 MS-ETS1-3 MS-ETS1-4 **2020 NJSLS – Computer Science and Design Thinking:** 8.2.8.ED.2 8.2.8.ED.3 8.2.8.ED.7 **Language Arts:** W.WR.7.5 SL.UM..7.5.

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	• Shark Tank Video: https://www.youtube.com/watch?v=qFShW-qxPM4	
Unit 3 (6 days)		
Lessons 32-34: Student Maker Tutorials/Plan Maker Faire (5 days) **Lesson 35:** Host a Maker Faire (1 day)	Lesson 34: • Choice 1: https://www.thehenryford.org/explore/innovation-nation/	**NAGC Standards:** 1.6 Cognitive Growth and Career Development 2.4 Learning Progress 2.5 Learning Progress 3.3 Responsiveness to Diversity 3.4 Instructional Strategies 3.6 Resources 4.2 Social Competence 5.3 Career Pathways **Career Readiness, Life Literacies & Key Skills:** 9.4.8.GCA.2 9.4.8.IML.13 9.4.8.TL.6 **Science:** MS-ETS1-1 MS-ETS1-2 MS-ETS1-3 MS-ETS1-4 **2020 NJSLS – Computer Science and Design Thinking:** 8.2.8.ED.2 8.2.8.ED.3 8.2.8.ED.7