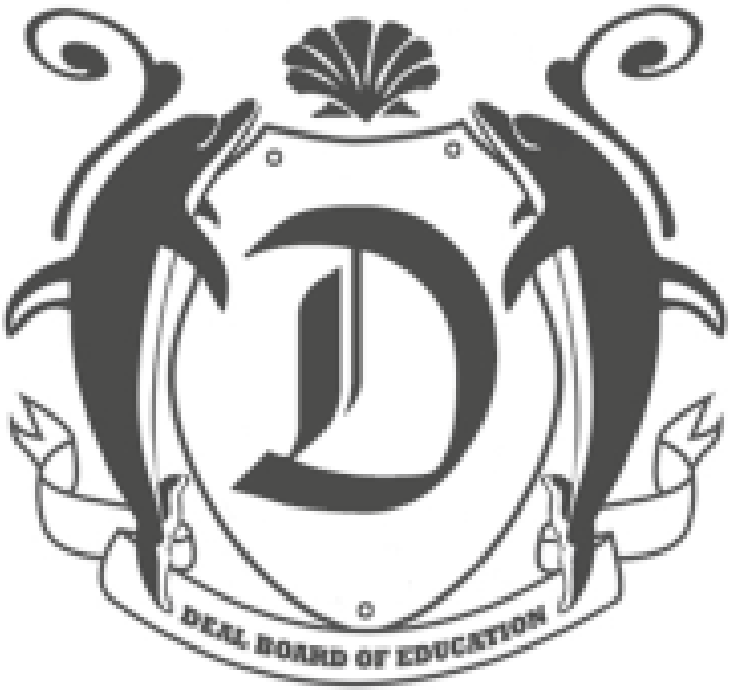
Deal School Curriculum



Gifted and Talented

Curriculum Guide
Grades K-8

Deal School

Deal, New Jersey

2024
Board of Education

Kay Jannarone, President
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Developed and Written

August – November 2014

Revised

December 2018
January - May 2024

Board Approved

August 2024

Deal Elementary School
Content Area: Gifted and Talented- Navigators Exploratory Program
Grade Span: K-1
Revised By: Lindsey Pietrocola

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Deal School Curriculum- Gifted and Talented (K-1)

STATE STANDARDS

Interdisciplinary & Cross Curricular Connections and Standards:
2019 Pre-K-Grade 12 Gifted Programming Standards
2020 New Jersey Student Learning Standards – Computer Science and Design Thinking Introduction
2020 New Jersey Student Learning Standards – Career Readiness, Life Literacies, and Key Skills Introduction
2023 NJSLS-ELA
2023 NJSLS Mathematics
2020 New Jersey Student Learning Standards Science Kindergarten through Grade 12

Standards	**Cumulative Progress Indicator (CPI)**
National Association for Gifted Children	**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 in 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. **1.6. Cognitive and Affective Growth**. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs. **1.7. Cognitive and Affective Growth**. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire. **1.8. Cognitive and Affective Growth**. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support).
2020 NJSLS Science	***Engineering Design*** **K-2-ETS1-1** Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved

	object or tool. **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. **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.
2020 Career Readiness, Life Literacies and Key Skills	***9.1.2.CAP.1*** Make a list of different types of jobs and describe the skills associated with each job.
2023 NJSLS Mathematics	*MP.2* *MP.2D* *MP.4* *MP.5* *K.CC.A* *K.MD.A.1* *K.MD.A.2*
2023 NJSLS ELA	*RI.K.1* *W.K.2* *W.K.7* *SL.K.3*
2020 NJSLS Computer Science and Design Thinking	**8.2.2.ED.1:** Communicate the function of a product or device. **8.2.2.ED.2:** Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. **8.2.2.ED.4:** Identify constraints and their role in the engineering design process. **8.2.2.ITH.1:** Identify products that are designed to meet human wants or needs. **8.2.2.ITH.2:** Explain the purpose of a product and its value. **8.2.2.ITH.3:** Identify how technology impacts or improves life. **8.2.2.ITH.4:** Identify how various tools reduce work and improve daily tasks. **8.2.2.ITH.5:** Design a solution to a problem affecting the community in a collaborative team and explain the intended impact of the solution. **8.2.2.NT.1:** Model and explain how a product works after taking it apart, identifying the relationship of each part, and putting it back together. **8.2.2.NT.2:** Brainstorm how to build a product, improve a designed product,

	fix a product that has stopped working, or solve a simple problem. **8.2.2.ETW.1:** Classify products as resulting from nature or produced as a result of technology. **8.2.2.ETW.2:** Identify the natural resources needed to create a product. **8.2.2.ETW.3:** Describe or model the system used for recycling technology. **8.2.2.ETW.4:** Explain how the disposal of or reusing a product affects the local and global environment. **8.2.2.EC.1:** Identify and compare technology used in different schools, communities, regions, and parts of the world.

UNIT 1: EXPLORATION

Unit 1: EXPLORATION

Students will develop a sense of curiosity and wonder about the world around them, while practicing essential skills like observation, communication, and collaboration.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can cultivate curiosity and a sense of wonder about the world around them, fueling their intellectual development.

NAGC Standard 2: Creative Development: Gifted learners can generate original ideas and questions through exploration and observation, fostering their creative thinking.

NAGC Standard 3: Leadership Development: Gifted learners can develop strong communication and collaboration skills by sharing their ideas, thoughts, and questions with others.

NAGC Standard 4: Ethical Development: Gifted learners can cultivate empathy and understanding for others by actively listening to their perspectives.

NAGC Standard 5: Social Development: Gifted learners can develop flexible thinking and adaptability through exploration and experimentation.

Essential Questions

What does it mean to be creative?
What can our imagination be used for?
How can our imagination be used to solve a problem?
What does it mean to be innovative?
How can we come up with new ideas to solve a problem?
What does it mean to be a problem- solver?

What can we learn from our mistakes?
What must you know about a problem before you can develop a solution?
How can making mistakes be an important part of learning?
Why is it important to know the resources you have to solve a problem?
What are some advantages to planning before starting a project?

Learners will be able to…

- Identify personal passions and interests.
- Ask thoughtful questions about the world.
- Observe and gather information using all senses.
- Communicate ideas and thoughts effectively to peers.
- Collaborate with others to share and explore ideas.
- Develop flexible thinking and adaptability.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
Daily Journals
Quick Checks
Project Specific Rubrics
Exit Slips
Student Self-Assessment
Peer review
Pre-Assessments

Alternative Assessment:
Class Discussion
Teacher Observation
Class Participation
ePortfolios

Suggested Learning Plan

All students in grades K/1 will be pulled into small groups for a 5 week period that will rotate for all students.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction
- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in group reflection

Unit Activities:

1. **Passion Exploration:**
    - Students will discuss their favorite things and interests.
    - They will create drawings or collages to represent their passions.
2. **Questioning and Wondering:**
    - Students will brainstorm questions about the world around them.
    - They will learn to use "I wonder..." statements to express curiosity.
3. **Sensory Exploration:**
    - Students will engage in activities that involve all five senses (sight, sound, touch, taste, smell).
    - They will describe their observations and experiences using descriptive language.
4. **Communication and Collaboration:**
    - Students will participate in group discussions and activities.
    - They will learn to share their ideas and listen respectfully to others.
5. **Flexible Thinking:**
    - Students will engage in activities that encourage creative problem-solving and open-mindedness.
    - They will learn to consider different perspectives and adapt to new situations.

List of Core Instructional and Supplemental Materials

Animationish
Seesaw
Google Sketchup
Google Earth
Brain Pop
Code.org
Diversity, Equity & Inclusion Educational Resources

UNIT 2- Problem-Solving and Innovation

Students will develop critical thinking, problem-solving, and creative thinking skills to identify and address simple challenges.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can develop critical thinking skills to identify and analyze problems from a global perspective.

NAGC Standard 2: Creative Development: Gifted learners can use their imagination and creativity to generate innovative solutions to complex problems.

NAGC Standard 3: Leadership Development: Gifted learners can demonstrate independent thinking and

problem-solving abilities, taking initiative in their learning.

NAGC Standard 4: Ethical Development: Gifted learners can develop a sense of responsibility and persistence, persevering through challenges and setbacks.

NAGC Standard 5: Social Development: Gifted learners can integrate various disciplines and perspectives to approach problem-solving in a holistic manner.

Essential Questions

What does it mean to be creative?
What can our imagination be used for?
How can our imagination be used to solve a problem?
What does it mean to be innovative?
How can we come up with new ideas to solve a problem?
What does it mean to be a problem- solver?
What can we learn from our mistakes?
What must you know about a problem before you can develop a solution?
How can making mistakes be an important part of learning?
Why is it important to know the resources you have to solve a problem?
What are some advantages to planning before starting a project?

Learners will be able to…

Identify simple problems and express needs.
Think creatively to generate solutions.
Work collaboratively to solve problems.
Persist through challenges and setbacks.
Demonstrate curiosity and a willingness to explore.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
Daily Journals
Quick Checks
Project Specific Rubrics
Exit Slips
Student Self-Assessment
Peer review
Pre-Assessments

Alternative Assessment:
Class Discussion
Teacher Observation
Class Participation
ePortfolios

Suggested Learning Plan

All students in grades K/1 will be pulled into small groups for a 5 week period that will rotate for all students.

Unit Activities:

1. **Problem Identification:**
    - Students will identify simple problems in their classroom or community (e.g., a broken toy, a messy area).
    - They will express their needs and concerns using simple language.
2. **Creative Thinking:**
    - Students will engage in brainstorming activities to generate ideas for solving problems.
    - They will learn to use "what if" questions to explore possibilities.
3. **Collaborative Problem-Solving:**
    - Students will work together to solve simple problems.
    - They will learn to share ideas, listen to others, and compromise.
4. **Persistence and Resilience:**
    - Students will practice perseverance by trying different approaches to solve problems.
    - They will learn to celebrate their successes and learn from their mistakes.
5. **Exploration and Curiosity:**
    - Students will explore their surroundings and ask questions.
    - They will learn to be curious and open-minded.

Differentiation:

- Provide a variety of problem-solving activities that are age-appropriate and engaging.
- Offer opportunities for individual, small group, and whole-class work.
- Provide additional support or guidance for students who may need it.
- Encourage students to explore problems that are relevant to their own lives and interests.

List of Core Instructional and Supplemental Materials

Animationish
Seesaw
Google Sketchup
Google Earth
Brain Pop
Code.org
https://makezine.com/
Make: The Magazine for Makers
Tinkering by Curt Gabrielson
Invent to Learn by Martinez and Stager

http://makered.org/wp-content/uploads/2014/09/Makerspace-Playbook-Feb-2013.pdf
Diversity, Equity & Inclusion Educational Resources

UNIT 3- Sharing our Learning

Students will develop effective communication and presentation skills, while sharing their learning experiences with others.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can effectively communicate their ideas and findings through a variety of mediums, demonstrating their understanding of complex concepts.

NAGC Standard 2: Creative Development: Gifted learners can utilize multimedia applications and innovative strategies to present their work in engaging and creative ways.

NAGC Standard 3: Leadership Development: Gifted learners can effectively organize and document their learning process, demonstrating their ability to reflect on and articulate their growth.

NAGC Standard 4: Ethical Development: Gifted learners can communicate their ideas in an ethical and responsible manner, considering the audience and purpose of their presentation.

NAGC Standard 5: Social Development: Gifted learners can collaborate with others to share their learning and perspectives, fostering a sense of community and shared understanding.

Essential Questions

What does it mean to be creative?
What can our imagination be used for?
How can our imagination be used to solve a problem?
What does it mean to be innovative?
How can we come up with new ideas to solve a problem?What does it mean to be a problem-solver?
What can we learn from our mistakes?
What must you know about a problem before you can develop a solution?
How can making mistakes be an important part of learning?
Why is it important to know the resources you have to solve a problem?
What are some advantages to planning before starting a project?

Learners will be able to…

- Share their ideas and thoughts clearly and effectively.
- Use multimedia applications to create presentations.
- Organize and document their learning process.
- Collaborate with others to share their learning experiences.

- Reflect on their growth and learning.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
Daily Journals
Quick Checks
Project Specific Rubrics
Exit Slips
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Peer review
Pre-Assessments

Alternative Assessment:
Class Discussion
Teacher Observation
Class Participation
ePortfolios

Suggested Learning Plan

All students in grades K/1 will be pulled into small groups for a 5 week period that will rotate for all students.

Unit Activities:

1. **Sharing Ideas and Stories:**
    - Students will share their favorite stories, experiences, or ideas with their classmates.
    - They will learn to express themselves clearly and confidently.
2. **Multimedia Presentations:**
    - Students will create simple presentations using multimedia applications (e.g., drawing apps, storytelling tools).
    - They will learn to incorporate images, sounds, and text into their presentations.
3. **Documenting Learning:**
    - Students will create simple journals or portfolios to document their learning.
    - They will learn to organize their thoughts and ideas.
4. **Collaborative Presentations:**
    - Students will work together to create group presentations.
    - They will learn to collaborate, share ideas, and support each other.
5. **Reflection and Growth:**
    - Students will reflect on their learning experiences and growth.

- They will learn to identify their strengths and areas for improvement.

Differentiation:

- Provide a variety of multimedia tools and resources to accommodate different learning styles.
- Offer opportunities for individual, small group, and whole-class presentations.
- Provide additional support or guidance for students who may need it.
- Encourage students to share their learning in different ways, such as through drawings, stories, or songs.

List of Core Instructional and Supplemental Materials

K-1 Guide
Animationish
Seesaw
Google Sketchup
Google Earth
Brain Pop
Code.org
Diversity, Equity & Inclusion Educational Resources

Accommodations and Modifications

Gifted and Talented

- Provide appropriate challenges for wide ranging skills and development areas.
- Participate in inquiry and project-based learning units of study.

English Language Learners

- Pair visual prompts with verbal presentations
- Provide students with visual models, sentence stems, concrete objects, and hands on materials.

Students with IEPs/504

- Review student individual educational plan and/or 504 plan
- Establish procedures for accommodations and modifications for assessments as per IEP/504
- Modify classroom environment to support academic and physical needs of the students as per IEP/504

At Risk Learners

- Differentiated instruction
- Basic Skills

Deal Elementary School
Content Area: Gifted and Talented- Navigators
Grade Span: 2-3
Revised By: Lindsey Pietrocola

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Deal School Curriculum- S.T.E.A.M. (2-3)

STATE STANDARDS

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PACING GUIDE																			
Month	September				October				November				December				January			
Unit	Program Evaluation				1	1	1	1	1	1 2	1 2	1 2	1 2	2	2	2	2	2	2	1 2 3
Month	February				March				April				May				June			
Unit	1 2 3	1 2 3	1 2 3	2 3	2 3	2 3	2 3	3	3	3	3	3	3	3	3	3	3	3	3	3

UNIT 1: EXPLORATION

Gifted and talented students will develop a deep sense of curiosity and wonder about the world around them, while practicing advanced critical thinking, problem-solving, and communication skills.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can cultivate a deep sense of curiosity and wonder about the world, fueling their intellectual development and lifelong learning.

NAGC Standard 2: Creative Development: Gifted learners can develop advanced critical thinking skills to analyze and interpret information, fostering their creativity and innovation.

NAGC Standard 3: Leadership Development: Gifted learners can develop strong communication and collaboration skills, demonstrating their ability to work effectively with others and express their ideas clearly.

NAGC Standard 4: Ethical Development: Gifted learners can cultivate empathy, understanding, and respect for diverse perspectives, fostering ethical and responsible behavior.

NAGC Standard 5: Social Development: Gifted learners can develop flexible thinking and adaptability, allowing them to navigate complex challenges and embrace new ideas.

Essential Questions

How can I cultivate a deeper sense of curiosity and wonder about the world?
What role does curiosity play in lifelong learning?
How can I explore my passions and interests in a meaningful way?
What does it mean to think critically?
How can I develop my critical thinking skills?
How can I apply critical thinking to analyze complex information?
What does it mean to think critically?
How can I develop my critical thinking skills?
How can I apply critical thinking to analyze complex information?
What are the benefits of effective communication and collaboration?
How can I improve my communication and collaboration skills?
How can I work effectively with people from different backgrounds and perspectives?
What is empathy, and why is it important?
How can I develop empathy and understanding for others?
How can I behave ethically and responsibly in different situations?
What does it mean to be flexible and adaptable?

How can I develop flexible thinking and adaptability?
How can I overcome challenges and setbacks?

Learners will be able to…

- Challenge themselves and push the boundaries when it comes to interests, strengths, identities, and needs.
- Identify complex passions and interests.
- Ask thought-provoking questions and explore their curiosity.
- Observe and analyze the world around them using critical thinking.
- Develop advanced communication and collaboration skills.
- Demonstrate flexible thinking and adaptability.
- Progress through the three phases of the cycle of inquiry.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
Daily Journals
Quick Checks
Project Specific Rubrics
Exit Slips
Student Self-Assessment
Peer review
Pre-Assessments

Alternative Assessment:
Class Discussion
Teacher Observation
Class Participation
ePortfolios

Suggested Learning Plan

Students will be working on a project of their choice within the project topic.

The structure of the daily lesson will be in the format of a 44 minute period.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction
- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in group reflection

These phases are designed to be carried out over the course of one marking period. Each day targets will be reviewed. Students will then implement those within their chosen engagement. They will work at their own pace and teacher will set goals on individual or group basis. Students will self monitor by keeping a journal of their findings, new skills and understandings, and the development of theories.

Phase 1: Exploration- What…?
What do you wonder about?
Identify passions.
Support curiosity and awe through discussion and observation of the world around us.
Create quality questions.
Gather data through all senses.
Work with me.
Develop collaboration and communication between students through sharing of ideas, thoughts, and questions.
Develop flexible thinking.
Build the skill for listening to others with understanding and empathy.

Unit Activities:

1. **In-Depth Passion Exploration:**
    - Students will conduct in-depth research on their passions and interests.
    - They will identify specific areas of focus and develop research questions.
2. **Advanced Questioning and Inquiry:**
    - Students will learn to formulate complex and thought-provoking questions.
    - They will engage in inquiry-based learning activities to explore their curiosities.
3. **Critical Observation and Analysis:**
    - Students will develop critical thinking skills to analyze and interpret observations.
    - They will learn to identify patterns, relationships, and cause-and-effect relationships.
4. **Advanced Communication and Collaboration:**
    - Students will participate in advanced discussions and debates on complex topics.
    - They will learn to express their ideas clearly, listen actively, and collaborate effectively with peers.
5. **Flexible Thinking and Adaptability:**
    - Students will engage in activities that challenge their assumptions and encourage them to think creatively.
    - They will learn to adapt to new information and perspectives.

Differentiation:

- Provide opportunities for independent study and research.

- Offer advanced resources and materials to support students' learning.
- Encourage students to explore complex topics and challenging questions.
- Provide opportunities for students to collaborate with experts in various fields.
- Foster a culture of intellectual curiosity and exploration.

List of Core Instructional and Supplemental Materials

Animationish
Seesaw
Google Sketchup
Google Earth
Brain Pop
Code.org
Diversity, Equity & Inclusion Educational Resources

UNIT 2- Problem Solving and Innovation

Gifted and talented students will develop advanced critical thinking, problem-solving, and creative thinking skills to identify and address complex challenges.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can develop critical thinking and problem-solving skills to address complex challenges from a global perspective.

NAGC Standard 2: Creative Development: Gifted learners can use their imagination and creativity to generate innovative and original solutions to problems.

NAGC Standard 3: Leadership Development: Gifted learners can demonstrate independent thinking and problem-solving abilities, taking initiative in their learning.

NAGC Standard 4: Ethical Development: Gifted learners can develop a sense of responsibility and persistence, persevering through challenges and setbacks.

NAGC Standard 5: Social Development: Gifted learners can integrate various disciplines and perspectives to approach problem-solving in a holistic manner.

Essential Questions

What does it mean to be creative?
What can our imagination be used for?
How can our imagination be used to solve a problem?
What does it mean to be innovative?
How can we come up with new ideas to solve a problem?
What does it mean to be a problem- solver?
What can we learn from our mistakes?
What must you know about a problem before you can develop a solution?
How can making mistakes be an important part of learning?
Why is it important to know the resources you have to solve a problem?
What are some advantages to planning before starting a project?

Learners will be able to…

- Based on self understanding, awareness and needs, and cognitive and affective growth, students will be able to choose a project in domains they are passionate about.
- Progress through the three phases of the cycle of inquiry.
- Identify complex problems and analyze their root causes.
- Think critically and creatively to generate innovative and original solutions.
- Demonstrate independent thinking and problem-solving abilities at a high level.

- Persist through challenging problems and setbacks.
- Demonstrate curiosity, a willingness to explore, and a passion for learning.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
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Suggested Learning Plan

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The structure of the daily lesson will be in the format of a 44 minute period.

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- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in group reflection

These phases are designed to be carried out over the course of one marking period. Each day targets will be reviewed. Students will then implement those within their chosen engagement. They will work at their own pace and the teacher will set goals on an individual or project basis. Students will self monitor by keeping a journal of their findings, new skills and understandings, and the development of theories.

Phase 2: Expression - What if…?
What's your Problem?
Gain a global perspective on problem-solving.
Think and communicate clearly.
Think independently.
Develop the ability to reason.

What's next?
Use creative and critical thinking.
Create, imagine and innovate an original idea.
Full STEAM Ahead!
Integrate the arts into the inquiry process.
Take responsible risks.
Persist.
Think about thinking and reflect.
Implement the EDP to develop an idea into a prototype that can be tested and improved.

Unit Activities:

1. **Complex Problem Identification:**
    - Students will identify complex problems in their community or the world.
    - They will analyze the root causes of these problems and consider different perspectives.
2. **Advanced Creative Thinking:**
    - Students will engage in advanced brainstorming techniques to generate a variety of innovative and original ideas.
    - They will learn to think abstractly and connect seemingly unrelated concepts.
3. **Independent Research and Inquiry:**
    - Students will conduct independent research to gather information related to their chosen problems.
    - They will learn to ask probing questions and seek out diverse sources of information.
4. **Prototype Development and Testing:**
    - Students will develop prototypes of their solutions and test them rigorously.
    - They will learn to iterate and improve their designs based on feedback and results.
5. **Interdisciplinary Problem-Solving:**
    - Students will explore how different disciplines (e.g., science, math, art, technology) can be integrated to solve complex problems.
    - They will work on projects that require interdisciplinary thinking and collaboration.

Differentiation:

- Provide opportunities for independent study and research.
- Offer advanced problem-solving activities and challenges.
- Encourage students to explore complex problems related to current events or global issues.
- Provide opportunities for students to collaborate with experts in various fields.
- Foster a culture of intellectual curiosity and exploration.

List of Core Instructional and Supplemental Materials

Animationish
Seesaw

Google Sketchup
Google Earth
Brain Pop
Code.org
https://makezine.com/
Make: The Magazine for Makers
Tinkering by Curt Gabrielson
Invent to Learn by Martinez and Stager
http://makered.org/wp-content/uploads/2014/09/Makerspace-Playbook-Feb-2013.pdf
Diversity, Equity & Inclusion Educational Resources

UNIT 3- Sharing Our Learning

Gifted and talented students will develop advanced communication and presentation skills, while effectively sharing their learning experiences with others.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can effectively communicate complex ideas and concepts through a variety of mediums, demonstrating their understanding of the learning process.

NAGC Standard 2: Creative Development: Gifted learners can utilize multimedia applications and innovative strategies to present their work in engaging and creative ways.

NAGC Standard 3: Leadership Development: Gifted learners can effectively organize and document their learning process, demonstrating their ability to reflect on and articulate their growth.

NAGC Standard 4: Ethical Development: Gifted learners can communicate their ideas in an ethical and responsible manner, considering the audience and purpose of their presentation.

NAGC Standard 5: Social Development: Gifted learners can collaborate with others to share their learning and perspectives, fostering a sense of community and shared understanding.

Essential Questions

How can I effectively communicate my ideas and findings to others?
What are the benefits of using different mediums to present information?
How can I ensure that my communication is clear, engaging, and informative?
What are some creative ways to present information?
How can I use multimedia applications to enhance my presentations?
What makes a presentation engaging and memorable?
Why is it important to document my learning process?
How can I organize my thoughts and ideas effectively?
How can I reflect on my growth and identify areas for improvement?
What are the ethical considerations when communicating ideas?
How can I tailor my communication to different audiences?
What is the purpose of my presentation, and how should it influence my approach?
What are the benefits of collaborating with others?
How can I effectively work with others to share my learning?
How can I contribute to a positive and inclusive learning environment?

Learners will be able to…

- Communicate complex ideas and concepts clearly and effectively.
- Utilize multimedia applications to create engaging and informative presentations.
- Organize and document their learning process in a meaningful way.
- Collaborate with others to share their learning experiences and perspectives.
- Reflect on their growth and identify areas for improvement.

Assessment Evidence

Summative:
ePortfolios
Project Presentations
Computed based pre and post tests

Formative:
Daily Journals
Quick Checks
Project Specific Rubrics
Exit Slips
Student Self-Assessment
Peer review
Pre-Assessments

Alternative Assessment:
Class Discussion
Teacher Observation
Class Participation
ePortfolios

Suggested Learning Plan

Students will be working on a project of their choice within the project topic.

The structure of the daily lesson will be in the format of a 44 minute period.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction
- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in group reflection

These phases are designed to be carried out over the course of one marking period. Each day targets will be reviewed. Students will then implement those within their chosen engagement. They will work at their own pace and the teacher will set goals on an individual or group basis. Students will self monitor by keeping a journal of their findings, new skills and understandings, and the development of theories.

Phase 3: Exposition & Oration- How…?
Share.

1. Skills
Produce and Publish Writing, utilizing multimedia applications
Present Information, findings, and supporting evidence
Develop and organize documentation of learning
2. Presentations:
Share and express process of learning highlighting the inquiry arc and the engineering design process
Develop and showcase their learning via SeeSaw
Use a variety of mediums, resources, and materials to apply their learning, through implementation of new strategies and skills to share with others, present solutions to design challenges, and solve meaningful problems.

Unit Activities:

1. **Advanced Communication and Presentation Skills:**
    - Students will practice advanced public speaking techniques, such as using gestures, eye contact, and vocal variety.
    - They will learn to adapt their communication style to different audiences and purposes.
2. **Multimedia Presentation Design:**
    - Students will create multimedia presentations using advanced software and tools.
    - They will learn to incorporate a variety of elements, such as images, videos, animations, and audio.
3. **In-Depth Learning Documentation:**
    - Students will develop detailed learning journals or portfolios to document their growth and progress.
    - They will learn to reflect on their experiences and identify key insights.
4. **Collaborative Learning Projects:**
    - Students will work in teams to create collaborative projects that showcase their learning.
    - They will learn to effectively collaborate, share ideas, and provide constructive feedback.
5. **Metacognitive Reflection:**
    - Students will engage in deep reflection on their learning experiences.
    - They will identify their strengths, weaknesses, and areas for growth.

List of Core Instructional and Supplemental Materials

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Accommodations and Modifications

Gifted and Talented

- Provide appropriate challenges for wide ranging skills and development areas.
- Participate in inquiry and project-based learning units of study.

English Language Learners

- Pair visual prompts with verbal presentations
- Provide students with visual models, sentence stems, concrete objects, and hands on materials.

Students with IEPs/504

- Review student individual educational plan and/or 504 plan
- Establish procedures for accommodations and modifications for assessments as per IEP/504
- Modify classroom environment to support academic and physical needs of the students as per IEP/504

At Risk Learners

- Differentiated instruction
- Basic Skills

Deal Elementary School
Content Area: Gifted and Talented- 4-5 Navigators
Grade Span: 4-5
Revised By: Lindsey Pietrocola

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Deal, NJ 07723
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Deal School Curriculum- SUBJECT (Grade)

STATE STANDARDS

Interdisciplinary & Cross Curricular Connections and Standards:
2019 Pre-K-Grade 12 Gifted Programming Standards
2020 New Jersey Student Learning Standards – Computer Science and Design Thinking Introduction
2020 New Jersey Student Learning Standards – Career Readiness, Life Literacies, and Key Skills Introduction
2023 NJSLS-ELA
2023 NJSLS Mathematics
2020 New Jersey Student Learning Standards Science Kindergarten through Grade 12

Standards	**Cumulative Progress Indicator (CPI)**
National Association for Gifted Children	**National Association for Gifted Children Standards:** Standard 1.1-1.8 **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 in 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. **1.6. Cognitive and Affective Growth**. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs. **1.7. Cognitive and Affective Growth**. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire. **1.8. Cognitive and Affective Growth**. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support)

2020 NJSLS Science	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **3-5-ETS1-3** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
2020 Career Readiness, Life Literacies and Key Skills	**9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes. **9.4.5.CI.3:** Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a). **9.4.5.CI.4:** Research the development process of a product and identify the role of failure as a part of the creative process (e.g., W.4.7, 8.2.5.ED.6). **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process (e.g.,2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2). **9.4.5.CT.2:** Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g.,2.1.5.CHSS.1, 4-ESS3-1). **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems. **9.4.5.CT.4:** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g.,6.1.5.CivicsCM.3). **9.4.5.GCA.1:** Analyze how culture shapes individual and community perspectives and points of view (e.g., 1.1.5.C2a, RL.5.9, 6.1.5.HistoryCC.8). **9.4.5.IML.1**: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g.,Social Studies Practice - Gathering and Evaluating Sources). **9.4.5.IML.2:** Create a visual representation to organize information about a problem or issue(e.g., 4.MD.B.4, 8.1.5.DA.3). **9.4.5.IML.3:** Represent the same data in multiple visual formats in order to tell a story about the data. **9.4.5.IML.6:** Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions (e.g., RI.5.7, 6.1.5.HistoryCC.7, 7.1.NM.IPRET.5). **9.4.5.IML.7**: Evaluate the degree to which information meets a need including social emotional learning, academic, and social (e.g., 2.2.5. PF.5). **9.4.5.TL.4:** Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a). **9.4.5.TL.5:** Collaborate digitally to produce an artifact (e.g., 1.2.5CR1d).
2023 NJSLS Mathematics	*MP.2* *MP.4* *MP.5*

	3.MD.A.2 *3.MD.B.3*
2023 NJSLS ELA	*RI.3.1* *RI.3.3* *RI.3.8* *RI.3.9* *W.3.7* *W.3.8* *SL.3.3*
2020 NJSLS Computer Science and Design Thinking	8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. 8.1.5.DA.2: Compare the amount of storage space required for different types of data. 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data. 8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim. 8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data. 8.2.5.ED.1: Explain the functions of a system and its subsystems. 8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models. 8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task. 8.2.5.ED.4: Explain factors that influence the development and function of products and systems (e.g., resources, criteria, desired features, constraints). 8.2.5.ED.5: Describe how specifications and limitations impact the engineering design process. 8.2.5.ED.6: Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process.

PACING GUIDE																	
Month	September	October				November				December				January			
Unit	Program Evaluation	1	1	1	1	1	1 2	1 2	1 2	1 2	2	2	2	2	2	2	1 2 3

Month	February				March				April				May				June			
Unit	1 2 3	2 3	2 3	2 3	2 3	2 3	2 3	3	3	3	3	3	3	3	3	3	3	3	3	3

UNIT 1: Units of Inquiry: Discovering your Passion

This unit is designed to introduce new students to the gifted and talented program while also providing a foundation for future explorations. Students will delve into their personal interests and passions, learn about the inquiry cycle, and engage in community-building activities.

Enduring Understandings

Gifted and talented individuals possess unique intellectual and creative capacities that allow them to think critically, creatively, and problem-solve at a high level.

The inquiry cycle is a powerful tool for advanced learning, enabling individuals to explore complex topics and develop deep understandings.

Effective communication and collaboration are essential skills for gifted and talented individuals to succeed in various academic and personal endeavors.

Self-awareness and passion are key to personal growth and academic success.

Goal setting and perseverance are essential for achieving ambitious goals and overcoming challenges.

Lifelong learning is a fundamental aspect of being a gifted and talented individual, requiring a continuous pursuit of knowledge and skill development.

Essential Questions

How can I identify and leverage my unique intellectual and creative strengths?
What strategies can I use to think critically and creatively about complex problems?
How can I apply my problem-solving skills to real-world challenges?
What is the inquiry cycle, and how can I use it to deepen my understanding of topics?
How can I effectively gather, analyze, and synthesize information?
What are the benefits of conducting independent research and exploration?
How can I develop strong communication and collaboration skills?
What are the characteristics of effective leaders?
How can I contribute positively to a team or group?
What are my passions and interests, and how can I pursue them?
How can I set meaningful goals and persevere through challenges?
What role does lifelong learning play in my personal and academic development?

Learners will be able to…

- Identify their personal interests and passions.
- Understand the steps of the inquiry cycle.
- Develop a sense of belonging within the gifted and talented program.
- Set personal goals for their academic and personal development.

Assessment Evidence

Portfolio including:

- Completed journal
- Project ePortfolio highlighting process and product
- Self-Assessment using rubric
- Student Created- Individualized

Formative:

- Quick Checks
- Project Specific Rubrics
- Exit Slips
- Student Self-Assessment
- Peer review
- Peer to peer- Peer critiques
- Outside Feedback
- Class Discussion
- Teacher Observation
- Class Participation
- Pre-Assessments

Suggested Learning Plan

Students will be working on a project of their choice within the project topic.

The structure of the daily lesson will be in the format of a 44 minute period.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction
- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in journal and group reflection

These phases are designed to be carried out over the course of one marking period. Students will then implement those within their chosen engagement. They will work at their own pace and the teacher will set goals on an individual or group basis. Students will self monitor by keeping a daily journal of their findings, new skills and understandings, and the development of theories.

Unit Activities:

1. Passion Exploration:

- **Interest Inventories:** Students will complete various interest inventories to identify their areas of strength and passion.
- **Mind Mapping:** Students will create mind maps to visually represent their interests and connections.
- **Research Projects:** Students will conduct mini-research projects on topics that interest them.

2. Inquiry Cycle Introduction:

- **Define:** Students will learn about the importance of defining a clear question or problem.
- **Gather Information:** Students will explore different sources to gather information related to their chosen topic.
- **Analyze:** Students will analyze the information they have gathered and draw conclusions.
- **Create:** Students will create a product or presentation based on their findings.
- **Reflect:** Students will reflect on their learning experience and identify areas for improvement.

3. Community Building:

- **Icebreaker Activities:** Students will participate in icebreaker activities to get to know each other.
- **Group Projects:** Students will work together on small group projects to foster collaboration and teamwork.
- **Mentorship Programs:** Students will be paired with older students or mentors to provide guidance and support.

4. Goal Setting:

- **SMART Goals:** Students will learn about the SMART goal-setting framework (Specific, Measurable, Achievable, Relevant, Time-bound).
- **Goal Setting Worksheets:** Students will complete worksheets to set personal and academic goals.
- **Goal Tracking:** Students will track their progress toward their goals throughout the year.

Extensions and Modifications:

- For advanced students, you could introduce more complex research projects or inquiry-based learning activities.
- For students who need additional support, you could provide more scaffolding and guidance throughout the unit.
- You could also integrate other subjects into this unit, such as language arts, math, or science.

List of Core Instructional and Supplemental Materials

The Gifted Guide

NJAGC Sharefest Resource Folder

Creative Learning Systems
Make: The Magazine for Makers
Tinkering by Curt Gabrielson
Invent to Learn by Martinez and Stager
Diversity, Equity & Inclusion Educational Resources
Diversity, Equity & Inclusion Educational Resources

UNIT 2- Crafting your Voice- Expression and Research

This unit is designed to foster gifted and talented students' ability to express themselves effectively through writing, presentation, and research. Students will explore advanced concepts and techniques in these areas, developing their critical thinking, creativity, and communication skills.

Enduring Understandings

Effective communication requires strong critical thinking, creativity, and problem-solving skills.

Language is a powerful tool for expressing ideas, emotions, and perspectives.

Multimedia can enhance communication and engagement by combining various forms of expression.

Advanced writing techniques and literary devices can elevate the quality and impact of writing.

Effective communication involves understanding and using various rhetorical strategies.

In-depth research is essential for developing informed and persuasive arguments.

Effective communication is a key leadership skill that enables individuals to influence others and achieve goals.

Public speaking requires confidence, preparation, and strong communication skills.

Collaboration and teamwork are essential for achieving complex goals.

Self-reflection and goal setting are crucial for personal and professional growth.

Lifelong learning is essential for staying relevant and competitive in a rapidly changing world.

Essential Questions

How can I use language and multimedia to express my unique ideas and perspectives?
What strategies can I employ to think critically and creatively about complex topics?
How can I develop my ability to analyze and synthesize information from various sources?
How can I explore advanced writing techniques and literary devices to enhance my writing?
What are the key elements of effective communication, both written and oral?
How can I conduct in-depth research on challenging topics and present my findings persuasively?
How can I develop my leadership skills and inspire others?

What are the characteristics of effective public speaking?
How can I collaborate effectively with others to achieve common goals?
How can I use my voice to make a difference in the world?
What is the role of creativity and innovation in problem-solving and decision-making?
How can I reflect on my learning experiences and set goals for future growth?

Learners will be able to…

- Write effectively in various genres and styles, demonstrating advanced writing techniques.
- Use multimedia applications to create innovative and engaging presentations.
- Conduct in-depth research on topics related to their passions and interests.
- Analyze and synthesize information from complex sources.
- Present their ideas and findings in a clear, persuasive, and engaging manner.
- Organize and document their learning effectively, reflecting on their growth and development.

Assessment Evidence

Portfolio including:

- Completed journal
- Project ePortfolio highlighting process and product
- Self-Assessment using rubric
- Student Created- Individualized

Formative:

- Quick Checks
- Project Specific Rubrics
- Exit Slips
- Student Self-Assessment
- Peer review
- Peer to peer- Peer critiques
- Outside Feedback
- Class Discussion
- Teacher Observation
- Class Participation
- Pre-Assessments

Suggested Learning Plan

Students will be working on a project of their choice within the project topic.

The structure of the daily lesson will be in the format of a 44 minute period.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction

- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in journal and group reflection

These phases are designed to be carried out over the course of one marking period. Students will then implement those within their chosen engagement. They will work at their own pace and the teacher will set goals on an individual or group basis. Students will self monitor by keeping a daily journal of their findings, new skills and understandings, and the development of theories.

Unit Activities:

- **Passion Project Research:**
  - Students identify a passion or interest they want to explore further.
  - They develop research questions and hypotheses.
  - They gather information from credible sources and analyze their findings.
  - They present their research findings to the class in a creative and engaging way.
- **Multimedia Project Challenges:** Create multimedia projects that incorporate complex elements, such as animation, sound design, or interactive features.
- **In-Depth Research Projects:** Conduct research on challenging topics related to their passions and interests, using advanced research methods and sources.
- **Critical Thinking and Analysis Activities:** Analyze complex texts, arguments, and data to develop critical thinking skills.
- **Leadership and Communication Workshops:** Develop leadership skills, such as public speaking, teamwork, and collaboration.
- **Presentation Skills Training:** Students learn about public speaking techniques, body language, and audience engagement.
- **Peer Review and Feedback:** Provide constructive feedback to classmates and receive feedback on their own work.
- **Reflection and Goal Setting:** Students reflect on their progress and set goals for future improvement.

Extensions and Modifications:

- For advanced students, you could explore more complex writing genres or research topics.
- For students who need additional support, you could provide more scaffolding and guidance throughout the unit.
- You could also integrate other subjects into this unit, such as language arts, history, or science.

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UNIT 3-Showcasing Solutions

This unit is designed to serve as a culminating capstone for gifted and talented students, focusing on the application of their learning and skills through the creation of solutionary showcases. Students will present their projects, highlighting the inquiry arc and engineering design process, and share their insights and experiences.

Enduring Understandings

The design and creation process requires critical thinking, creativity, and problem-solving skills.

Prototyping and testing are essential steps in the development of innovative solutions.

Effective problem-solving involves identifying problems, generating ideas, and evaluating solutions.

The inquiry arc and engineering design process are valuable frameworks for solving complex problems.

Advanced research and analysis are essential for developing innovative solutions.

Reflection and iteration are crucial for improving the quality of designs and solutions.

Effective communication is essential for collaborating with others and presenting ideas.

Public speaking skills are valuable for sharing knowledge and influencing others.

Leadership involves taking initiative, inspiring others, and overcoming challenges.

The ability to apply knowledge and skills to real-world problems is essential for success.

Lifelong learning is necessary for staying relevant and competitive in a rapidly changing world.

Essential Questions

How can I apply my critical thinking, creativity, and problem-solving skills to design and create innovative solutions?
What is the role of prototyping and testing in the development of effective solutions?
How can I identify and address challenges and obstacles in the design and creation process?
What is the inquiry arc, and how can I use it to guide my problem-solving process?
How can I conduct in-depth research to inform my design and development process?
What strategies can I use to evaluate and improve my designs?
How can I effectively collaborate with others to create innovative solutions?
What are the key elements of a persuasive and engaging presentation?

How can I use multimedia to enhance my presentations and communicate my ideas effectively?
What is the impact of my solution on the world around me?
How can I measure the success of my solution?
What can I learn from my experiences and apply to future projects?

Learners will be able to…

- Design, create, and test prototypes or models related to their solutionary showcases.
- Effectively present their solutionary showcases, highlighting the inquiry arc, engineering design process, and their prototypes or models.
- Articulate their learning and insights gained throughout the unit.
- Collaborate with others to create and present their showcases.
- Use multimedia effectively to enhance their presentations.
- Reflect on their growth and development throughout the unit.

Assessment Evidence

Portfolio including:

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- Self-Assessment using rubric
- Student Created- Individualized

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Unit Activities:

- **Prototype or Model Creation Workshops:** Students learn about design thinking, prototyping methods, and materials.
- **Design Challenges:** Students participate in design challenges to practice their problem-solving and creativity skills.
- **Testing and Iteration:** Students test their prototypes or models, gather feedback, and make improvements.
- **Presentation Planning and Development Workshops:** Students learn about effective presentation techniques, storytelling, and visual aids.
- **Peer Review and Feedback:** Students provide constructive feedback on each other's presentations and prototypes or models.
- **Multimedia Training:** Students learn to use multimedia tools effectively to enhance their presentations.
- **Public Speaking Practice:** Students practice delivering their presentations in front of a variety of audiences.
- **Reflection and Self-Assessment:** Students reflect on their learning journey, including their experiences with prototyping or model creation.

Extensions and Modifications:

- For advanced students, you could introduce more complex prototyping techniques or require them to create more elaborate prototypes or models.
- For students who need additional support, you could provide more scaffolding and guidance throughout the unit.
- You could also integrate other subjects into this unit, such as science, technology, engineering, or math.

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- Differentiated instruction
- Basic Skills

Deal Elementary School
Content Area: Gifted and Talented- Navigators
Grade Span: 6-8
Revised By: Lindsey Pietrocola

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Deal School Curriculum- Gifted and Talented

STATE STANDARDS

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2020 New Jersey Student Learning Standards Science Kindergarten through Grade 12

Standards	**Cumulative Progress Indicator (CPI)**
National Association for Gifted Children	**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 in 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. **1.6. Cognitive and Affective Growth**. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs. **1.7. Cognitive and Affective Growth**. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire. **1.8. Cognitive and Affective Growth**. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support).

2020 NJSLS 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.
2020 Career Readiness, Life Literacies and Key Skills	9.2.8.CAP.1: Identify offerings such as high school and county career and technical school courses, apprenticeships, military programs, and dual enrollment courses that support career or occupational areas of interest. 9.2.8.CAP.2: Develop a plan that includes information about career areas of interest. 9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income. 9.2.8.CAP.4: Explain how an individual's online behavior (e.g., social networking, photo exchanges, video postings) may impact opportunities for employment or advancement. 9.4.8.CI.1: Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4). 9.4.8.CI.2: Repurpose an existing resource in an innovative way 9.4.8.CI.3: Examine challenges that may exist in the adoption of new ideas 9.4.8.CI.4: Explore the role of creativity and innovation in career pathways and industries. 9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change, and use critical thinking skills to predict which one(s) are likely to be effective (e.g., MS-ETS1-2). 9.4.8.CT.2: Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1). 9.4.8.CT.3: Compare past problem-solving solutions to local, national, or global issues and analyze the factors that led to a positive or negative outcome. 9.4.8.GCA.2: Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal. 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement,

	and spatial grouping. • 9.4.8.IML.4: Ask insightful questions to organize different types of data and create meaningful visualizations. • 9.4.8.IML.5: Analyze and interpret local or public data sets to summarize and effectively communicate the data.
2023 NJSLS Mathematics	*MP.2* *MP.4* *6.RP.A.3* *6.NS.C.5* *8.EE.A.3* *6.SP.B.4* *6.SP.B.5*
2023 NJSLS ELA	*RST.6-8.1* *RST.6-8.3* *RST.6-8.7* *WHST.6-8.7* *WHST.6-8.8*
2020 NJSLS Computer Science and Design Thinking	*Engineering Design* 8.2.8.ED.1: Evaluate the function, value, and aesthetics of a technological product or system,from the perspective of the user and the producer. 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.4: Investigate a malfunctioning system, identify its impact, and explain the step-by-step process used to troubleshoot, evaluate, and test options to repair the product in a collaborative team. 8.2.8.ED.5: Explain the need for optimization in a design process. 8.2.8.ED.6: Analyze how trade-offs can impact the design of a product. 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). *Interaction of Technology and Humans* 8.2.8.ITH.1: Explain how the development and use of technology influences economic, political, social, and cultural issues. 8.2.8.ITH.2: Compare how technologies have influenced society over time. 8.2.8.ITH.3: Evaluate the impact of sustainability on the development of a designed product or system. 8.2.8.ITH.4: Identify technologies that have been designed to reduce the negative consequences of other technologies and explain the change in impact.

	8.2.8.ITH.5: Compare the impacts of a given technology on different societies, noting factors that may make a technology appropriate and sustainable in one society but not in another. *Nature of Technology* 8.2.8.NT.1: Examine a malfunctioning tool, product, or system and propose solutions to the problem. 8.2.8.NT.2: Analyze an existing technological product that has been repurposed for a different function. 8.2.8.NT.3: Examine a system, consider how each part relates to other parts, and redesign it for another purpose. 8.2.8.NT.4: Explain how a product designed for a specific demand was modified to meet a new demand and led to a new product. *Effects of Technology on the Natural World* 8.2.8.ETW.1: Illustrate how a product is upcycled into a new product and analyze the short- and long-term benefits and costs. 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). 8.2.8.ETW.3: Analyze the design of a product that negatively impacts the environment or society and develop possible solutions to lessen its impact. 8.2.8.ETW.4: Compare the environmental effects of two alternative technologies devised to address climate change issues and use data to justify which choice is best. *Ethics and Culture* 8.2.8.EC.1: Explain ethical issues that may arise from the use of new technologies. 8.2.8.EC.2: Examine the effects of ethical and unethical practices in product design and development.

PACING GUIDE																				
Month	September				October				November				December				January			
Unit	Program Evaluation				1	1	1	1	1	1	1	1	1	1	1	1	1	1 2	1 2	1 2
Month	February				March				April				May				June			
Unit	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

UNIT 1: Units of Inquiry and Research Development

Students will learn the basis for identifying areas of interest that can support inquiry thinking through backwards design. They will understand and develop ideas/topics of interest/research, and cultivate questions of inquiry for their capstone project: Passion Project.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can identify and cultivate their passions and interests as a foundation for lifelong learning and inquiry.

NAGC Standard 2: Creative Development: Through exploration and experimentation, gifted learners can develop original ideas and questions that drive meaningful inquiry and problem-solving.

NAGC Standard 3: Leadership Development: Gifted learners can take initiative in identifying their areas of interest and designing their own learning experiences, demonstrating self-direction and agency.

NAGC Standard 4: Ethical Development: Gifted learners can recognize the importance of ethical considerations in their inquiry and research, ensuring that their work is responsible and respectful.

NAGC Standard 5: Social Development: Gifted learners can collaborate with others to share ideas, explore different perspectives, and deepen their understanding of complex issues.

Essential Questions

How can I identify my unique passions and interests?
What role do passions and interests play in lifelong learning and inquiry?
How can I develop a deeper understanding of my passions and interests?
What makes an idea or question "original"?
How can I explore and experiment to generate new ideas and questions?
How can I use inquiry and problem-solving to delve deeper into my areas of interest?
What does it mean to be self-directed and have agency?
How can I take initiative in identifying my areas of interest?
What strategies can I use to design my own learning experiences?
What are ethical considerations in inquiry and research?
How can I ensure that my work is responsible and respectful?
What are the consequences of not considering ethical implications in my research?
How can collaboration enhance my learning and understanding?
What are the benefits of exploring different perspectives?

How can I effectively collaborate with others on my inquiry projects?

Learners will be able to…

- Learners will challenge themselves and push the boundaries when it comes to interests, strengths, identities, and needs.
- Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
- Students identify and define authentic problems and significant questions for investigation.
- Students interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
- Learners will identify future career goals that match their talents and abilities and resources needed to meet those goals.
- Learners will 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.
- Students communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- Learners recognize their preferred approaches to learning and expand their repertoire.

Assessment Evidence

Portfolio including:

- Completed journal
- Project ePortfolio highlighting process and product
- Self-Assessment using rubric
- Student Created- Individualized

Formative:

- Quick Checks
- Project Specific Rubrics
- Exit Slips
- Student Self-Assessment
- Peer review
- Peer to peer- Peer critiques
- Outside Feedback
- Class Discussion
- Teacher Observation
- Class Participation
- Pre-Assessments

Suggested Learning Plan

Students will be working on a project of their choice within the project topic.

The structure of the daily lesson will be in the format of a 44 minute period.

- 5-10 minutes – Do/Now summary debrief and/or whole group instruction
- 30-35 minutes – Independent work with teacher monitoring and guidance
- 4 minutes – Wrap up/review in journal and group reflection

These phases are designed to be carried out over the course of one marking period. Students will then implement those within their chosen engagement. They will work at their own pace and teachers will set goals on an individual or project basis. Students will self monitor by keeping a daily journal of their findings, new skills and understandings, and the development of theories.

Unit Activities:

1. **Topic Inquiry and Brainstorming:**
    - Students will engage in discussions to explore potential topics of interest.
    - They will brainstorm ideas, consider their personal passions, and identify areas of curiosity.
2. **Research Plan Development:**
    - Students will create a detailed research plan outlining their topic, goals, and objectives.
    - They will define key questions to be answered, identify potential sources, and establish a timeline for their research.
    - Students will also create a checklist to track their progress and ensure they meet all deadlines.
3. **Research and Information Gathering:**
    - Students will conduct thorough research using a variety of reliable sources, such as books, articles, websites, and databases.
    - They will collect relevant information, take notes, and organize their findings.
4. **Data Analysis and Organization:**
    - Students will analyze their collected information and identify key themes, patterns, and trends.
    - They will organize their findings in a logical and coherent manner.

Differentiation:

- Provide students with a variety of research resources and tools to accommodate different learning styles.
- Offer opportunities for peer collaboration and feedback to support students' learning.
- Allow students to choose topics that align with their interests and abilities.
- Provide additional support or guidance for students who may need it.

List of Core Instructional and Supplemental Materials

The Gifted Guide

NJAGC Sharefest Resource Folder

Creative Learning Systems
Make: The Magazine for Makers
Tinkering by Curt Gabrielson
Invent to Learn by Martinez and Stager

Diversity, Equity & Inclusion Educational Resources

UNIT 2- Design and Development

Students will demonstrate their ability to communicate complex ideas effectively through clear and engaging presentations, utilizing visual aids and models to enhance their delivery.

Enduring Understandings

NAGC Standard 1: Intellectual Development: Gifted learners can effectively communicate complex ideas and concepts through clear and engaging presentations.

NAGC Standard 2: Creative Development: Gifted learners can utilize visual aids and models to enhance their presentations and make their ideas more accessible to others.

NAGC Standard 3: Leadership Development: Gifted learners can confidently deliver presentations to a variety of audiences, demonstrating their ability to adapt their communication style to different contexts.

NAGC Standard 4: Ethical Development: Gifted learners can engage in respectful and constructive feedback, both giving and receiving, to improve their communication skills.

NAGC Standard 5: Social Development: Gifted learners can collaborate with others to develop and deliver effective presentations, demonstrating their ability to work effectively in teams.

Essential Questions

What does it mean to be innovative?
Why is it important to know the resources you have to solve a problem?
What are some advantages to planning before starting a project?
How can I effectively communicate complex ideas to a diverse audience?
What makes a presentation engaging and memorable?
How can I tailor my communication style to different audiences?
What types of visual aids can be used to enhance a presentation?
How can I create visually appealing and informative aids?
When is it appropriate to use models or prototypes in a presentation?
What factors should I consider when adapting my communication style to different audiences?
How can I build confidence in my presentation skills?
What strategies can I use to overcome stage fright?
What qualities make feedback constructive and helpful?
How can I provide effective feedback to my peers?
How can I use feedback to improve my own presentations?
What are the benefits of collaborating on a presentation?

How can I effectively work with others to develop a cohesive presentation?
What roles can different team members play in a presentation?

Learners will be able to…

- Learners will 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.
- Learners recognize their preferred approaches to learning and expand their repertoire.
- Learners will identify future career goals that match their talents and abilities and resources needed to meet those goals.
- Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
- Students apply existing knowledge to generate new ideas, products, or processes.
- Students create original works as a means of personal or group expression.
- Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- Students interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- Students communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
- Deliver presentations to a variety of audiences, adapting their communication style to different contexts.
- Provide and receive constructive feedback on presentations, focusing on content, organization, delivery, and overall effectiveness.

Assessment Evidence

Portfolio including:

- Completed journal
- Project ePortfolio highlighting process and product
- Self-Assessment using rubric
- Student Created- Individualized

Formative:

- Quick Checks
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Unit Activities:

1. **Presentation Structure and Development:**
    - Students will learn about the components of a well-structured presentation, including the introduction, body, and conclusion.
    - They will practice developing clear and concise main points and supporting evidence.
2. **Visual Aid Creation:**
    - Students will explore different types of visual aids, such as models, prototypes, slides, and handouts.
    - They will learn how to create visually appealing and informative aids that enhance their presentations.
3. **Presentation Practice and Feedback:**
    - Students will practice delivering their presentations to peers or small groups.
    - They will receive feedback on their content, organization, delivery, and overall effectiveness.
    - Students will also provide feedback to their peers, focusing on constructive criticism and suggestions for improvement.
4. **Presentation Delivery and Adaptation:**
    - Students will deliver their presentations to a variety of audiences, such as classmates, teachers, or parents.
    - They will learn how to adapt their communication style to different contexts and audiences.

5. **Feedback and Reflection:**
    - Students will reflect on their presentations and the feedback they received.
    - They will identify areas for improvement and set goals for future presentations.

Differentiation:

- Provide students with a variety of research resources and tools to accommodate different learning styles.
- Offer opportunities for peer collaboration and feedback to support students' learning.
- Allow students to choose topics that align with their interests and abilities.
- Provide additional support or guidance for students who may need it.

List of Core Instructional and Supplemental Materials

The Gifted Guide

NJAGC Sharefest Resource Folder

Diversity, Equity & Inclusion Educational Resources

Accommodations and Modifications

Gifted and Talented

- Provide appropriate challenges for wide ranging skills and development areas.
- Participate in inquiry and project-based learning units of study.

English Language Learners

- Pair visual prompts with verbal presentations
- Provide students with visual models, sentence stems, concrete objects, and hands on materials.

Students with IEPs/504

- Review student individual educational plan and/or 504 plan
- Establish procedures for accommodations and modifications for assessments as per IEP/504
- Modify classroom environment to support academic and physical needs of the students as per IEP/504

At Risk Learners

- Differentiated instruction
- Basic Skills