The GATE8 curriculum reflects the theme of POWER & LEADERSHIP throughout the units covered during the year. Student choice is embedded in every unit to give students agency and voice in their learning, either through a choice of topic, product or learning style. Throughout the year of POWER & LEADERSHIP, GATE8 students examine their own lives as leaders by setting goals, learning leadership styles and developing projects with lasting impact (Goal Setting/Leadership Skills Training and Legacy Projects); becoming academics through learning about leaders in history (National History Day, Philosophy and Debate), and creating & leading activities for peers (GATE DATE and Game Design). Students also are challenged by contests and competitions that stress individual strengths and personal creativity (Individual Contests, Photography Challenge and Scavenger Hunting).

G&T N.J.A.C. 6A:8 Standards and Assessment, N.J.S.A. 18A:35-35 Gifted and Talented Students Students who possess or demonstrate a high level of ability, in one or more content areas, when compared with their chronological peers in the local school district and who require modifications of their educational program if they are to achieve in accordance with their capabilities.

Curriculum Scope and Sequence			
<b>Content Area</b>	Gifted & Talented	Course Title/Grade Level:	GATE 8

	Topic/Unit Name	Suggested Pacing (Days/Weeks)
Topic/Unit #1	POWER & LEADERSHIP: Goal Setting/Leadership Skills Training	September (2-4 weeks)
Topic/Unit #2	CHOICE: Legacy Projects	October, January, April (2-10 wks, concurrent with other units)
Topic/Unit #3	POWER & LEADERSHIP: Learning from the Past	November-December (8-10 weeks)
Topic/Unit #4	CHOICE: Contests	January-February (8-10 weeks)
Topic/Unit #5	POWER & LEADERSHIP: Leading the Future	March-April (8-10 weeks)
Topic/Unit #6	CHOICE: Applying Creativity to Odyssey	May-June (8-10 weeks)

Topic/Unit 1 Title	Goal Setting/Leadership Skills Training	Approximate Pacing	2-4 weeks	
STANDARDS				
NAGC (G&T) NJSLS (Content)				

## **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 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.

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

# **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.

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills:
Students are encouraged to develop highly personalized, interdisciplinary goals that they will work to achieve through the skills and projects in the program. Interest surveys, peer discussions, strengths analyzers, and a study of multiple intelligences serve as a basis for identifying individual interests. Students then work collaboratively to identify and appreciate strengths and talents in others forming a support system. For example, a student who is interested in history and art can develop an independent project that combines their interests. As an advocate for students in the program, staff find and develop opportunities for students to pursue their goals while peers also provide a network of strengths and talents to draw from.  ACM/HCM/LGBTQ+M: Mentors and examples will include diversity, inclusivity and culturally responsive topics.	<ul> <li>9.1.8.CR.2: Compare various ways to give back through strengths, passions, goals, and other personal factors.</li> <li>9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options.</li> <li>9.4.8.CI.4: Explore the role of creativity and innovation in career pathways and industries.</li> </ul>
Computer Science and Design Thinking:	
8.2.8.ITH.1: Explain how the development and use of technology influences economic, political, social, and cultural issues.	

**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.

## UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

What gifts and talents do I have? What skills are needed to enhance my talents? How can I use my talents? What talents do I see in others? How can I share and collaborate with others?

What makes a leader? How do academic leaders use their talent and strengths? How is leadership developed? What is your INDIVIDUAL legacy to CHANGE the future?

People have different gifts and talents. People learn and solve problems in different ways. People can acquire new ways to learn and solve problems.

Leaders use a variety of skills to make decisions and impact others.

STUDENT LEARNING OBJECTIVES			
Key Knowledge		Process/Skills/Procedures/Application of Key Knowledge	
Students will know:		Students will be able to:	
What gifts and talents are.		Identify multiple intelligences.	
What their individual gifts and ta	alents are.	Identify their individual gifts and talents.	
That gifts and talents vary between	een individuals.	Identify gifts and talents in others.	
How to identify skills needed to	enhance their talents.	Develop individual gifts and talents.	
How to set goals.		Set short term and long term goals.	
What a leader is.		Formulate a plan to work towards a goal.	
How leaders make decisions.		Identify leadership characteristics and personal leaders.	
		Evaluate and make ethical choices as a leader.	
	ASSESSMENT OF LEARNING		
Summative Assessment	Student portfolio		
(Assessment at the end of the	Project Rubrics		
learning period)			

Formative Assessments (Ongoing assessments during the learning period to inform instruction)	Progress Log/Journal Student conferencing	
Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge,	Student assessment choice is highly encouraged	
understanding and proficiency)  Benchmark Assessments (used to establish baseline achievement data and measure progress towards grade level standards; given 2-3 X per year)	Interest Survey Portfolio Review	
RESOURCES		

Core instructional materials:

Core instructional materials:

**GATE@BCMS Student Application Questions** 

Contest Classroom

Multiple Intelligences (Gardner): https://www.edutopia.org/multiple-intelligences-research

Brainstorming Techniques: https://blog.ed.ted.com/2017/03/10/how-to-lead-a-brainstorm-for-young-introverts-and-extroverts-too/

SMART Goals: https://www.mindtools.com/pages/article/smart-goals.htm One Word/Calm Intentions: https://blog.calm.com/calm-intentions-collection

Clifton Strengths Explorer for 10-14 year olds: https://www.strengths-explorer.com/home.aspx

Renzulli Learning: https://renzullilearning.com/ **Everyday Leadership, Mariam MacGregor:** 

**ELSA (Everyday Leadership Skills Assessment, MacGregor)** 

Supplemental materials:

Varied depending on student choice topics

Modifications for Learners		
See appendix		

Topic/Unit 2 Title	CHOICE: Legacy Projects	Approximate Pacing	4-10 weeks	
STANDARDS				
NAGC (G&T) NJSLS (Content)				
NAGO OK LET AL DE LE OLI IL				

**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.
- **1.4. 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 & 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.
- **3.4. 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.
- **3.5.** Instructional Strategies: Students with gifts and talents become independent investigators.
- **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**

- **4.1. 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.
- **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 display fluency with technologies that support effective communication and are competent consumers of media and technology.

# 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.

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills:
Legacy projects are unique to each student's interests and connect to a variety of disciplinary areas. Legacy projects add leadership and community service elements to independent project ideas. For example, students interested in interior design may propose, design and present options for room redesigns at school. Students interested in history may create a historical building tour and scavenger hunt for the school based on research, interviews and architecture. Projects are not limited to the school community and are encouraged to reach to the broader community.  ACM/HCM/LGBTQ+M: Project examples will include diversity, inclusivity and culturally responsive topics.	9.1 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.  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.  9.4.8.CI.4: Explore the role of creativity and innovation in career pathways and industries.  9.1.8.CR.2: Compare various ways to give back through strengths, passions, goals, and other personal factors.
Computer Science and Design Thinking:	
<ul> <li>8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose.</li> <li>8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.</li> <li>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).</li> </ul>	

# UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

What am I interested in?

What do I already know about it?

What can I do to know more about it?

How can I act like a practicing professional in this field?

How can I give back to my community?

Learning is ongoing and lifelong no matter your age. Impactful research, scholarship, or performance can happen at any age. Service through strengths is leadership.

	STUDENT LEARNING OBJECTIVES			
Key Knowledge		Process/Skills/Procedures/Application of Key Knowledge		
Students will know:		Students will be able to:		
How to choose one topic of inte	erest.	Choose a topic of interest.		
How to inventory what is alread	y known about the topic.	Inventory what they know about the topic.		
How to act like a practicing prof	fessional in the field.	Act like a practicing professional.		
	400F00MFNT	OF LEADNING		
	ASSESSMENT			
Summative Assessment	·	rvice demonstrating understanding and implementation of topic		
(Assessment at the end of the	research			
learning period)	Peer Feedback			
Farmation Assessments	Self Reflection			
Formative Assessments	Drawraga Lag/Jayawal			
(Ongoing assessments during the learning period to inform	Progress Log/Journal			
instruction)	Student conferencing			
Alternative Assessments (Any				
learning activity or assessment				
that asks students to <i>perform</i> to	Student assessment choice is highly encouraged			
demonstrate their knowledge,		ing oncouraged		
understanding and proficiency)				
Benchmark Assessments				
(used to establish baseline				
achievement data and	Interest Survey			
measure progress towards	Portfolio Review			
grade level standards; given				
2-3 X per year)				
RESOURCES				

Core instructional materials:
Brainstorming Techniques
Genius Hour, AJ Juliani
Genius Hour, Chris Kesler
Project management tools and online productivity software (GAfE)
Online and hard copy research related to individual topics
Mentors in topic areas

Supplemental materials:
Varied per project

Modifications for Learners

See appendix

Topic/Unit 3 Title	POWER & LEADERSHIP: Learning from the Past	Approximate Pacing	8-10 weeks	
STANDARDS				
NAGC (G&T) NJSLS (Content)				
NAGC:				
<b>3.3. Responsiveness to Diversity.</b> 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.
- **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 display fluency with technologies that support effective communication and are competent consumers of media and technology.
- **5.1. Comprehensiveness.** Students with gifts and talents demonstrate growth commensurate with their abilities in cognitive, social-emotional, and psychosocial areas as a result of comprehensive programming and services.

#### **NJSLS:**

**NJSLSA.R1**. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

NJSLSA.R2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

**NJSLSA.R3.** Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

**NJSLSA.R4**. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

**NJSLSA.R5**. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.

NJSLSA.R6. Assess how point of view or purpose shapes the content and style of a text.

**NJSLSA.R7**. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

**NJSLSA.R8**. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

**NJSLSA.R9**. Analyze and reflect on how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

**NJSLSA.R10**. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

- **RH.6-8.1.** Cite specific textual evidence to support analysis of primary and secondary sources.
- **RH.6-8.2**. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
- **RH.6-8.3**. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).
- **RH.6-8.4.** Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
- RH.6-8.5. Describe how a text presents information (e.g., sequentially, comparatively, causally).
- **RH.6-8.6**. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). Integration of Knowledge and Ideas

- RH.6-8.7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- RH.6-8.8. Distinguish among fact, opinion, and reasoned judgment in a text. RH.6-8.9. Analyze the relationship between a primary and secondary source on the same topic.

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills:
Students participate in historical research and study through National History Day, Philosophy/Debate or Game Design. Researching through primary and secondary source documents, conducting interviews, analyzing data, drawing conclusions, and participating in collaborative discussions, students act as practicing historians. Research is then presented in a choice of creative products and presented to a local, regional and potentially state and national audience. Technology integration through online researching i  6 of 10  Context: regional and po s included as well as multimedia skills in producing the final product.  ACM/HCM/LGBTQ+M: Examples for each type of project will include a wide range of diversity, inclusivity and culturally responsive topics.	<ul> <li>9.4.8.DC.1: Analyze the resource citations in online materials for proper use.</li> <li>9.4.8.DC.2: Provide appropriate citation and attribution elements when creating media products.</li> <li>9.4.8.IML.1: Critically curate multiple resources to assess the credibility of sources when searching for information.</li> <li>9.4.8.IML.2: Identify specific examples of distortion, exaggeration, o misrepresentation of information.</li> <li>9.4.8.IML.4: Ask insightful questions to organize different types of data and create meaningful visualizations.</li> <li>9.4.8.IML.5: Analyze and interpret local or public data sets to summarize and effectively communicate the data.</li> <li>9.4.8.IML.12: Use relevant tools to produce, publish, and deliver information supported with evidence for an authentic audience.</li> <li>9.4.8.IML.13: Identify the impact of the creator on the content, production, and delivery of information.</li> </ul>
Computer Science and Design Thinking:	
<ul> <li>8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.</li> <li>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).</li> </ul>	

# **UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS**

How do primary and secondary sources provide context?

How does a time period influence an event?

How does a location impact an event?

How do themes tie together historical events?

Using multiple primary and secondary sources increases the likelihood of accuracy of information.

Historical context and geography is important to understanding an event.

Taking a stand requires evidence to support arguments and an understanding of all perspectives.

	STUDENT LEARN	ING OBJECTIVES	
Key Kı	nowledge	Process/Skills/Procedures/Application of Key Knowledge	
Students will know:		Students will be able to:	
How to identify primary source	documents.	Read and interpret historical documents and records.	
How to locate supporting secon	idary source documents.	Set events in historical context/timeline.	
How to place a single event in the	he continuum of historical events.	Create a product that shows an individual event related to a	
How to present local, state and	national historical information	theme in historical context.	
within an individual context.			
	ASSESSMENT	OF LEARNING	
Summative Assessment	Final Product, Performance or Se	Final Product, Performance or Service demonstrating understanding and implementation of topic	
(Assessment at the end of the	research		
learning period)	Peer Feedback		
	Self Reflection		
Formative Assessments			
(Ongoing assessments during	Progress Log/Journal		
the learning period to inform	Student conferencing		
instruction)			
Alternative Assessments (Any			
learning activity or assessment			
that asks students to <i>perform</i> to	Student assessment choice is hig	ghly encouraged	
demonstrate their knowledge,			
understanding and proficiency)			

#### **Benchmark Assessments**

(used to establish baseline achievement data and measure progress towards grade level standards; given 2-3 X per year)

Interest Survey
Portfolio Review

## **RESOURCES**

**Core instructional materials:** 

National History Day resources/theme packet: <a href="https://www.nhd.org/">https://www.nhd.org/</a>

Local historical records and research materials: <a href="https://sclsnj.org/research-learn/local-history-genealogy/">https://sclsnj.org/research-learn/local-history-genealogy/</a> and

https://www.libraries.rutgers.edu/scua/NHD

State and national historical research materials (political, social, economic, etc):

http://memory.loc.gov/ammem/index.html

https://chroniclingamerica.loc.gov/

https://www.hathitrust.org/

https://www.archives.gov/education/history-day/online.html

https://learninglab.si.edu/ http://www.worldcat.org/

https://www.libraries.rutgers.edu/indexes/jerseyclicks

https://help.nytimes.com/hc/en-us/articles/115014772767-Archives

The Examined Life, David A. White

Philosophy for Kids, David A. White

Philosophy for Teens, Kaye & Thomson

Gaming can make a better world, Jane McGonigal

Supplemental materials:

Varied depending on project type and topic for each individual student/project.

#### **Modifications for Learners**

See appendix

Topic/Unit 4 Title	CHOICE: Contests	Approximate Pacing	8-10 weeks
	STANDARDS		
NAGC (G&T) NJSLS (Content)			

## **NAGC:-Gifted Education Programing Standards:**

- 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.
- **3.4. 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.
- **3.5. Instructional Strategies:** Students with gifts and talents become independent investigators.
- **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.
- **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.

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills:

Contest choices are unique to each student's interests in disciplinary areas. For example, students interested in geography may prepare for the National Geography Bee; linguistics may prepare for the Scripps National Spelling Bee; history may prepare for National History Day; art may prepare for Google4Doodle, Teen Arts or other art contests; journalism may prepare for C-SPAN StudentCam; science may prepare for 3M Young Scientist Lab, Lexus EcoChallenge or other science contests; computer science may prepare for CyberPatriot YCDC or a hackathon.

ACM/HCM/LGBTQ+M: Examples for each type of contest will include a wide range of diversity, inclusivity and culturally responsive topics. Contests will also be selected based on diversity, inclusivity and culturally responsiveness.

## **Computer Science and Design Thinking:**

#### For some contests:

- **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.
- **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).

9.1 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.
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

## UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

What am I interested in?

What do I already know about it?

How can I learn more and show my knowledge in a local, state or national forum?

Learning is ongoing and transc	ends local boundaries.	
	STUDENT LEARN	ING OBJECTIVES
Key Kı	nowledge	Process/Skills/Procedures/Application of Key Knowledge
Students	s will know:	Students will be able to:
How to choose one topic of inte		Choose a topic of interest
How to inventory what is alread		Inventory what they know about the topic
How to act like a practicing prof		Act like a practicing professional
	ASSESSMENT	OF LEARNING
Summative Assessment	Final Contest participation	
(Assessment at the end of the	Peer Feedback	
learning period)	Self Reflection	
Formative Assessments		
(Ongoing assessments during	Progress Log/Journal	
the learning period to inform	Student conferencing	
instruction)		
Alternative Assessments (Any		
learning activity or assessment	Student choice is highly encouraged	
that asks students to <i>perform</i> to		
demonstrate their knowledge,		
understanding and proficiency)		
Benchmark Assessments		
(used to establish baseline		
achievement data and	Interest Survey Portfolio Review	
measure progress towards		
grade level standards; given		
2-3 X per year)		
	RESOU	IRCES
Core instructional materials:		
Contest rules/registrations inclu	uding but not limited to:	
National Geography Bee		
Scripps National Spelling Bee		
National Mythology Exam		
Lexus EcoChallenge		

**AMC8 & AMTNJ** math contests

Doodle4Google

**C-SPAN Student Cam** 

**CyberPatriot** 

Content materials specific to theme or topic

**Organizational tools** 

Supplemental materials:

Varied depending on topic

**Modifications for Learners** 

See appendix

Topic/Unit 5 Title	POWER & LEADERSHIP: Leading the Future	Approximate Pacing	8-10 weeks
	STANDARDS		
	NAGC (G&T) NJSLS (Content)		

**NAGC:-Gifted Education Programing Standards:** 

- 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.
- **3.4. 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.
- **3.5. Instructional Strategies:** Students with gifts and talents become independent investigators.
- **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.
- **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.

#### NJSLS:

**NJSLSA.R1**. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

**NJSLSA.R2**. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

**NJSLSA.R7**. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

**NJSLSA.R8**. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

**NJSLSA.R9**. Analyze and reflect on how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

- **RH.6-8.6**. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). Integration of Knowledge and Ideas
- RH.6-8.7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- RH.6-8.8. Distinguish among fact, opinion, and reasoned judgment in a text.

Interdisciplinary Connections:	21st Century Skills:Career Ready Practices
Students will develop & lead thematic, creativity activities for peers in the GATE program (GATE DATE) as a capstone project that demonstrates their leadership, academic and creativity skills. For example, students have built an online Olympic	9.1 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and

challenge including country research, uniforms, events, scoring and awards for students in grades 2-7.

ACM/HCM/LGBTQ+M: Examples will include diversity, inclusivity and culturally responsive topics.

# **Computer Science and Design Thinking:**

**8.1.8.DA.1:** Organize and transform data collected using computational tools to make it usable for a specific purpose.

**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).

problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

**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.

**9.4.8.Cl.4:** Explore the role of creativity and innovation in career pathways and industries.

**9.1.8.CR.2:** Compare various ways to give back through strengths, passions, goals, and other personal factors.

#### UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

Creative environments foster a love for learning, personal and social responsibility, multicultural competence, and interpersonal and technical communication skills for leadership to ensure specific student outcomes

STUDENT LEARNING OBJECTIVES	
Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge
Students will know: How to use project management skills in a collaborative group. How to organize and plan for a large event. How to integrate a theme across multiple activities. How to implement social and emotional learning. How to make age appropriate activities.	Students will be able to: Create hands-on, written and verbal activities for younger students. Apply research skills to theme development and implementation. Use digital tools to organize groups and activities. Organize materials for groups and activities. Provide written and oral directions for multiple activities. Provide feedback for multiple activities.
ASSESSMENT OF LEARNING	

Summative Assessment	Final Activity implementation	
(Assessment at the end of the	Peer Feedback	
learning period)	Self Reflection	
Formative Assessments		
(Ongoing assessments during	Progress Log/Journal	
the learning period to inform	Student conferencing	
instruction)		
Alternative Assessments (Any		
learning activity or assessment		
that asks students to <i>perform</i> to	Student choice is highly encouraged	
demonstrate their knowledge,		
understanding and proficiency)		
Benchmark Assessments		
(used to establish baseline		
achievement data and	Interest Survey	
measure progress towards	Portfolio Review	
grade level standards; given		
2-3 X per year)		
	RESOURCES	
Core instructional materials:		
Content materials specific to the	eme or topic	
Organizational tools (physical a	nd digital)	
Supplemental materials:		
Varied depending on topic	Varied depending on topic	
	Modifications for Learners	
See appendix		

Topic/Unit 6 Title	CHOICE: Applying Creativity	Approximate Pacing	8-10 weeks
	STANDARDS		
	NAGC (G&T) NJSLS (Content)		

# **NAGC:-Gifted Education Programing Standards:**

- 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.
- **3.4. 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.
- **3.5. Instructional Strategies:** Students with gifts and talents become independent investigators.
- **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.

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills:
Small groups of students will create solutions to unique situations. Collaboration, independence, problem-solving, resourcefulness and risk-taking skills are needed by all students to create hands-on solutions. For example, students may choose to create a balsa wood structure that supports weight given a set of parameters, or they may choose to create a skit about a	<ul> <li>9.4.8.Cl.2: Repurpose an existing resource in an innovative way</li> <li>9.4.8.Cl.3: Examine challenges that may exist in the adoption of new ideas</li> <li>9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global</li> </ul>

famous mentor who advises them in creating a new food product. Flexible, fluent thinking is encouraged to connect ideas from multiple disciplines in creative problem solving.

ACM/HCM/LGBTQ+M: Examples will include diversity, inclusivity and culturally responsive ideas.

problem, such as climate change, and use critical thinking skills to predict which one(s) are likely to be effective.

**9.4.8.CT.2:** Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option **9.4.8.GCA.2:** Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal

## **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.

**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.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).

## UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

Applying creative thinking generates multiple solutions to a problem.

Multiple solutions should be examined before selecting an answer to a problem.

The most obvious answer is not always the best answer.

Not every creative answer is successful, but more creativity leads to more choices for solutions.

		1
STUDENT LEARNING OBJECTIVES		
Key Knowledge Process/Skills/Procedures/Application of Key Knowledge		
Students will know:	Students will be able to:	ĺ
How to generate multiple ideas to encourage creative thinking.	Create a solution to a given problem with given parameters.	l
Apply knowledge from a variety of disciplines to specific	Use background knowledge from all subjects to create a unique	l
problems.	solution.	l

	ASSESSMENT OF LEARNING
Summative Assessment (Assessment at the end of the	Final Product or Performance demonstrating creative thinking.  Peer Feedback
learning period)	Self Reflection
Formative Assessments	
(Ongoing assessments during	Progress Log/Journal
the learning period to inform	Student conferencing
instruction)	
Alternative Assessments (Any	
learning activity or assessment that asks students to <i>perform</i> to	Student assessment choice is highly encouraged
demonstrate their knowledge,	Student assessment choice is highly encouraged
understanding and proficiency)	
Benchmark Assessments	
(used to establish baseline	
achievement data and	Interest Survey
measure progress towards	Portfolio Review
grade level standards; given	
2-3 X per year)	
, ,	RESOURCES
Core instructional materials:	
	https://www.odysseyofthemind.com/
	.ed.ted.com/2017/03/10/how-to-lead-a-brainstorm-for-young-introverts-and-extroverts-too/
Project management tools and	online productivity software (GAfE): <a href="https://edu.google.com/products/gsuite-for-education/">https://edu.google.com/products/gsuite-for-education/</a>
Supplemental materials: Varied raw materials for constru	

**Modifications for Learners** 

See appendix