

# Gifted and Talented Education-Grade 8

**Unit Title:** Genius Hour

## Stage 1: Desired Results

**Standards & Indicators:**

**2020 NJSLS – Computer Science and Design Thinking**

**8.1.8.DA.1:** Organize and transform data to answer questions.

**8.2.8.ED.1:** Communicate the process of a design project.

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

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

**8.2.8.ED.7:** Design a product to address a real-world problem and document the iterative design process, including decisions made as a result of specific constraints and trade-offs

### Computer Science and Design Thinking

Standard	Performance Expectations	Core Ideas
8.1.8.DA.1	Organize and transform data collected using computational tools to make it usable for a specific purpose.	<p>People use digital devices and tools to automate the collection, use, and transformation of data.</p> <p>The manner in which data is collected and transformed is influenced by the type of digital device(s) available and the intended use of the data.</p>
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.	<p>Engineering design is a systematic, creative, and iterative process used to address local and global problems. The process includes generating ideas, choosing the best solution, and making, testing, and redesigning models or prototypes</p>
8.2.8.ED.2	Identify the steps in the design process that could be used to solve a problem	
8.2.8.ED.3	Develop a proposal for a solution to a real-world problem that includes a model (e.g., physical prototype, graphical/technical sketch).	
8.2.8.ED.7	Design a product to address a real-world problem and document the iterative design process, including decisions made as a result of specific constraints and trade-offs (e.g., annotated sketches).	

### Career Readiness, Life Literacies and Key Skills

Standard	Performance Expectations	Core Ideas
9.4.8.CI.4	Explore the role of creativity and innovation in career pathways and industries	Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.
9.4.8.IML.12	Use relevant tools to produce, publish, and deliver information supported with evidence for an authentic audience.	There is a need to produce and publish media that has information supported with quality evidence and is intended for authentic audiences.
9.4.8.TL.2	Gather data and digitally represent information to communicate a real-world problem	Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate

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		for creating text, visualizations, models, and communicating with others.
<p><b>Central Idea/Enduring Understanding:</b> Engage and empower students by connecting them with the ideas, content and opportunities themselves by allowing them to pick something they want to learn more about, do, or accomplish, and then do exactly that following their curiosity through inquiry and research.</p> <p>Each student's central idea is different based on their interest.</p>	<p><b>Essential/Guiding Question:</b> What do you want to learn about? What do you think is interesting? What can you get excited about? Who will be your outside expert? What materials will you need to complete the project? What will you need to do each day to reach your goals? What is my project's purpose? Who is my audience? How will I know that my project has been successful? How will you share your idea with the class? How will you get us on board? What do you need to do today to move forward with your project? What are you creating, making, or designing? What did you create? What can you show us to demonstrate your learning? How do you plan to share your learning? Can you share your idea or project with others? What tools will you use to make your presentation engaging for the audience? Additional essential/guiding questions are determined based on the student's topic of study.</p>	
<p><b>Content:</b> Lesson 1 - Introduction to Genius Hour Lesson 2 - Passion Lesson 3 - Plan Lesson 4 - Pitch Lesson 5 - Project Lesson 6 - Product Lesson 7 - Presentation Lesson 8 - Reflection Wrap-Up &amp; Celebration</p>	<p><b>Skills(Objectives):</b></p> <ul style="list-style-type: none"> <li>● Formulate open-ended, driving questions.</li> <li>● Conduct credible, age-appropriate research using multiple sources.</li> <li>● Summarize and synthesize information.</li> <li>● Distinguish between fact, opinion, and bias.</li> <li>● Identify real-world problems or areas of interest.</li> <li>● Brainstorm and evaluate potential solutions or project paths.</li> <li>● Revise ideas based on feedback or obstacles.</li> <li>● Reflect on outcomes and learning.</li> <li>● Create a timeline or plan with clear milestones.</li> <li>● Set short- and long-term goals.</li> <li>● Track progress and adjust plans as needed.</li> <li>● Manage deadlines and personal accountability.</li> <li>● Practice speaking and listening skills through check-ins or presentations.</li> <li>● Use multimedia tools to present findings.</li> <li>● Share the project with peers, teachers, and the school community.</li> <li>● Receive and give constructive feedback.</li> <li>● Think creatively to develop unique ideas or products.</li> <li>● Combine disciplines in innovative ways.</li> <li>● Take risks and experiment with new tools or approaches.</li> <li>● Reflect on successes, setbacks, and learning throughout the project.</li> </ul>	

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	<ul style="list-style-type: none"> <li>● Demonstrate perseverance when facing challenges.</li> <li>● Recognize personal growth in skills, knowledge, or interests.</li> <li>● Specific objectives are determined by each students' project</li> </ul>
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### Interdisciplinary Connections:

Students have the option to pick a topic from any subject area and these connections change based on the student's topics. General connections can be found below:

#### **English Language Arts:**

- RL.CR.8.1. Cite a range of textual evidence and make clear and relevant connections to strongly support an analysis of multiple aspects of what a literary text says explicitly as well as inferences drawn from the text.
- RI.MF.8.6. Evaluate the choices made (by the authors, directors, or actors) when presenting an idea in different mediums and the advantages and disadvantages of using different mediums or formats (e.g., visually, quantitatively) to address a question or solve a problem.
- W.IW.8.2. Write informative/explanatory texts (including the narration of historical events, scientific procedures/ experiments, or technical processes) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- W.WR.8.5. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
- W.SE.8.6. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation
- SL.PI.8.4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
- SL.UM.8.5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
- SL.AS.8.6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

#### **Science:**

- MS-ETS1-1: Define a design problem that reflects a need or a want.
- MS-ETS1-2: Evaluate competing design solutions.
- MS-ETS1-3: Analyze data from tests to determine design improvements.

#### **Mathematics:**

- MP.1: Make sense of problems and persevere in solving them.
- MP.4: Model with mathematics.
- MP.5: Use appropriate tools strategically.
- MP.6: Attend to precision.

#### **Visual & Performing Arts:**

- 1.2.8.Cn11a: Access, evaluate, and use internal and external resources to create personal art.
- 1.2.8.Pr6a: Adapt presentation formats to reflect the context of the project.
- 1.2.8.Cr1a: Generate and conceptualize artistic ideas and work.
- 1.2.8.Cr2b: Collaboratively develop a proposal for an original work.

#### **Social Studies:**

- 6.3.8.CivicsPR.4: Use evidence and reasoning to support or oppose an idea related to public issues.
- 6.3.8.EconET.1: Explain how innovation affects economic growth.
- 6.3.8.GeoGI.1: Use geographic data to propose solutions to global problems.

### Stage 2: Assessment Evidence

#### Performance Task(s):

- [The Pitch Presentation](#)

#### Other Evidence:

- Online assignments
- Exit Tickets

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<ul style="list-style-type: none"> <li>• <a href="#">The Final Presentation and Reflection Letter</a></li> </ul>	<ul style="list-style-type: none"> <li>• Worksheets</li> <li>• Do Nows</li> <li>• Check-ins</li> </ul>
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### Stage 3: Learning Plan

<p><b><u>Learning Opportunities/Strategies:</u></b></p> <p><b>Lesson 1 - Introduction to Genius Hour:</b> Introduce expectations, examples, and inquiry mindset</p> <p><b>Lesson 2 - Passion:</b> Discover various passions, explore interests, and develop project idea</p> <p><b>Lesson 3 - Plan:</b> Form a driving question, timeline, and research plan</p> <p><b>Lesson 4 - Pitch:</b> Develop an elevator pitch sharing project idea, plans to complete, and worthiness of project. Get feedback and revise plans.</p> <p><b>Lesson 5 - Project:</b> Complete project by working on research, building, creating and iterating.</p> <p><b>Lesson 6 - Product:</b> Finalize project product or deliverable.</p> <p><b>Lesson 7 - Presentation:</b> Create and present findings and product to class and answer peer questions</p> <p><b>Lesson 8 - Reflection:</b> Complete a reflection letter explaining obstacles, successes, and the most important thing student learned</p> <p><b>Wrap-Up &amp; Celebration:</b> Showcase student projects in class and at Family Night, complete peer reviews and celebrate student success.</p>	<p><b><u>Resources:</u></b></p> <ul style="list-style-type: none"> <li>• Lesson Presentations</li> <li>• Google Docs</li> <li>• Google Forms</li> <li>• Google Classroom</li> <li>• diy.org</li> <li>• thrively.com</li> <li>• Tract.app</li> <li>• wonderopolis.org</li> <li>• nepris.com</li> <li>• padlet.com</li> <li>• flipgrid.com</li> <li>• learninginhand.com/blog/2013/7/5/roll-reflect-with-qr-codes</li> <li>• Go.fan.school</li> <li>• bookcreator.com</li> <li>• education.weebly.com</li> </ul> <p>LGBT and Disabilities Law Resources:</p> <ul style="list-style-type: none"> <li>• <a href="#">GLSEN Educator Resources</a></li> <li>• <a href="#">Supporting LGBTQIA Youth Resource List</a></li> <li>• <a href="#">Respect Ability: Fighting Stigmas, Advancing Opportunities</a></li> </ul> <p>DEI Resources:</p> <ul style="list-style-type: none"> <li>• <a href="#">Learning for Justice</a></li> <li>• <a href="#">GLSEN Educator Resources</a></li> <li>• <a href="#">Supporting LGBTQIA Youth Resource List</a></li> <li>• <a href="#">Respect Ability: Fighting Stigmas, Advancing Opportunities</a></li> <li>• <a href="#">NJDOE Diversity, Equity &amp; Inclusion Educational Resources</a></li> <li>• <a href="#">Diversity Calendar</a></li> </ul>
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**Differentiation** \*Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Higher order thinking questions Differentiation of pacing and activities Differentiation of learning strategies: visual, auditory, kinetic and cooperative Enrichment and extension	Differentiation of learning strategies: visual, auditory, kinetic and cooperative Differentiating the lesson activities Lesson tutorials	Provide a highly structured, predictable learning environment Provide organizers Lessons designed to the style of learning that matches the student Cooperative Learning Positive reinforcement	Any student requiring further accommodations and/or modifications will have them individually listed in their 504 Plan or IEP. These might include, but are not limited to: breaking assignments into smaller tasks, giving directions through several channels (auditory, visual, kinesthetic, model), and/or small group instruction for reading/writing

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		Lessons presentation available on google classroom Frequent check for understanding Break down task into manageable units One-on-one instruction Pair student with a high achieving student	ELL supports should include, but are not limited to, the following:: Extended time Provide visual aids Repeated directions Differentiate based on proficiency Provide word banks Allow for translators, dictionaries
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### Pacing Guide

Content	Resources	Standards
Genius Hour (45 Days)	<b>Lessons:</b> Lesson 1- Introduction to Genius Hour: 2 days  Lesson 2 - Passion: 4 days  Lesson 3 - Plan: 4 days  Lesson 4 - Pitch: 2-3 days  Lesson 5 - Project: 12-13 days  Lesson 6 - Product: 6 days  Lesson 7 - Presentation: 7 days  Lesson 8 - Reflection: 3 days  Wrap-Up & Celebration: 4 days  (Each student's exact pacing may be different depending on their project)	8.1.8.DA.1 8.2.8.ED.1 8.2.8.ED.2 8.2.8.ED.3 8.2.8.ED.7