Califon Public School
Innovation Lab Curriculum

Subject: Innovation Lab	Grades: 3-5		

OVERVIEW*:*

Students use research, planning, and design strategies to solve a presented problem. Many of the jobs that exist today did not exist twenty, ten or even five years ago. If current trends continue, it's likely that many of our children will go into careers that don't yet exist and demand a great deal of adaptability. We can prepare them for this shifting landscape with two essential problem-solving skills: empathy and grit. These two skills are the backbone of our innovation program and design thinking. Each of the students' projects begin with a challenge that needs solving. Next, they go through the design process, which consists of four steps: find it (research), sketch it (brainstorming), build it (prototyping), and share it (gathering feedback). As students go through these steps, they learn to see things from another person's perspective and to adapt ideas to fix complex problems.

Unit References	
Big Ideas	Essential Questions
- Research - Brainstorming - Prototyping - Gathering feedback	- How can you show your learning? - How did you solve the problem?
Objectives	
- Students will be able to research a topic in order to evaluate a solution. - Students will be able to identify the aspects of a problem in order to determine a solution. - Students will be able to design a solution to a problem. - Students will be able to prepare a prototype to solve a problem.	
Assessment	
Final projects	

- Presentations

Technology Infusion

Teacher Technology:
- Chromebooks

Student Technology:
- Chromebooks
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Activities:
- Students will use chromebooks to: activate prior knowledge, build schema, watch videos, collect data.
- Students will use chromebooks to plan, design, and build a prototype.

Standard	Standard Description
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.2	Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
8.1.5.A.3	Use a graphic organizer to organize information about a problem or issue.
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Integration

Activities:
- Students will be able to create a presentation in order to show a solution to a problem.
- Students will be able to use technology in order to create solutions for presented problems.

Standard	Standard Description
3.5.K.2.NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
3.5.K.2.NJSLSA.W6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
3.5.K.3.NJSLSA.W7	Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

21st Century Life Skills

Activities:
- Students will work in groups to collaborate, at times taking leadership roles to communicate project ideas to the whole class.

Standard	Standard Description
9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career

Careers

Activities:
- Students will create a visual representation of their own design to solve a problem.

Standard	Standard Description
CRP4	Communicate clearly and effectively and with reason.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
- Provide modifications & accommodations as listed in the student's IEP - Position student near helping peer or have quick access to teacher - Modify or reduce assignments/tasks - Reduce length of assignment for different mode of delivery - Increase one-to-one time - Prioritize tasks - Use graphic organizers - Use online resources for skill building - Provide teacher notes - Use collaborative grouping strategies such as small groups - NJDOE resources - http://www.state.nj.us/education/specialed/	- Provide text-to-speech - Use of translation dictionary or software - Provide graphic organizers - NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm - Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	- Tiered interventions following RTI framework - Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ - Interventional Central - http://www.interventioncentral.org/	- Process should be modified: higher order thinking skills, open-ended thinking, discovery - Utilize project-based learning for greater depth of knowledge - Utilize exploratory connections to higher grade concepts - Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations - Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied - NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm

Califon Public School
Genius Hour Curriculum

OVERVIEW:

Genius hour gives students the opportunity to pursue things that matter to them. This will help guide students into becoming creative thinkers, collaborative classmates, pursue ambitious dreams, and become confident learners. Students choose a topic, a passion, or an interest, then take their ideas to design projects to learn more about animation, website design, animals, homelessness, sewing, etc. Students spend their time researching information, learning by doing, collaborating with experts, and designing a product that can be shared with an authentic audience. Passion projects give students an opportunity to learn by doing by applying the teaching standards. By applying the standards, students can begin to see real-world connections and understand that their learning can go beyond the classroom.

Subject: Genius Hour	Grades: 6-8		

Unit References	
Big Ideas	**Essential Questions**
- Research - Brainstorming - Prototyping - Gathering feedback	● How can you show your learning? ● ● How did you solve the problem?
Objectives	
● Students will be able to research a topic in order to determine a solution. ● Students will be able to identify the aspects of a problem in order to determine a solution. ● Students will be able to design, plan, and build a prototype to solve a problem ● Students will be able to present their learning to an authentic audience	
Assessment	

- Final projects
- Presentations

Technology Infusion	

Teacher Technology:
- Chromebooks

Student Technology:
- Chromebooks
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Activities:
- Students will use chromebooks to: activate prior knowledge, build schema, watch videos, collect data.
- Students will use chromebooks to plan, design, and build a prototype.

Standard	Standard Description
8.1.8.A.1	Demonstrate knowledge of a real world problem using digital tools.
8.1.8.A.2	Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.
8.1.8.A.3	Use and/or develop a simulation that provides an environment to solve a real world problem or theory.
8.1.8.A.4	Graph and calculate data within a spreadsheet and present a summary of the results
8.1.8.A.5	Create a database query, sort and create a report and describe the process, and explain the report results.

Interdisciplinary Integration

Activities:

- Students will be able to create a presentation in order to show a solution to a problem.

- Students will be able to use technology in order to create solutions for presented problems.

Standard	Standard Description
3.5.K.2.NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
3.5.K.2.NJSLSA.W6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
3.5.K.3.NJSLSA.W7	Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating an understanding of the subject under investigation.

21st Century Life Skills
Activities: ● Students will work in groups to collaborate, at times taking leadership roles to communicate project ideas to the whole class.

Standard	Standard Description
9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career

Careers
Activities: ● Students will create a visual representation of their own design to solve a problem.

Standard	Standard Description
CRP4	Communicate clearly and effectively and with reason.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
- Provide modifications & accommodations as listed in the student's IEP - Position student near helping peer or have quick access to teacher - Modify or reduce assignments/tasks - Reduce length of assignment for different mode of delivery - Increase one-to-one time - Prioritize tasks - Use graphic organizers - Use online resources for skill building - Provide teacher notes - Use collaborative grouping strategies such as small groups - NJDOE resources - http://www.state.nj.us/education/specialed/	- Provide text-to-speech - Use of translation dictionary or software - Provide graphic organizers - NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm - Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	- Tiered interventions following RTI framework - Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ - Interventional Central - http://www.interventioncentral.org/	- Process should be modified: higher order thinking skills, open-ended thinking, discovery - Utilize project-based learning for greater depth of knowledge - Utilize exploratory connections to higher grade concepts - Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations - Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied - NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm