

Inquiry Project Design Plan

Teacher/Designer Names: Cristina Driver	
Name of Project: The Power of the Corn Kernel	Grade Level: 5
Est Launch Date: end of October, November	Est Duration (in weeks): 3-4
Disciplines Involved: Social Studies, ELA, Science, Computer Science, Math	
Problem Statement Students will learn about the history of corn and what possible impact it will have if it becomes used in bio-technology on their lives	

STAGE 1: DESIRED RESULTS	
Big Idea: Students will learn about the history of corn, multilateral uses from food, farming, production of products, and biotechnology. After research and acquiring information students will select and provide evidence-based rationale and other qualitative evidence provided as support for opinions on whether people should use ethanol for fuel.	
<p>Enduring Understandings:</p> <ul style="list-style-type: none"> ● Students will manifest scientific attitudes ● Early inhabitants of the Americas adapted to environmental challenges in a variety of ways. ● The importance as a global citizen to understand the impact of a resource on their lives 	<p>Essential Question(s): (MEANT TO BE SHARED WITH STUDENTS)</p> <ul style="list-style-type: none"> ● How do we decided which resources we should develop? ● How does corn effect peoples' lives? <ul style="list-style-type: none"> ○ What if corn became a scarce resource? ○ Should we use it as a biofuel and bioplastic?
<p>Established Goals (Standards, Performance Indicators, Learning Goals):</p> <ul style="list-style-type: none"> ● Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations with use of drone, robot and tablets.. 	
<p>Science Standards: 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</p> <p>5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water</p>	
<p>Social Studies Standards:</p> <p>5.1b Human populations that settled along rivers, in rainforests, along oceans, in deserts, on plains, in mountains, and in cold climates adapted to and made use of the resources and environment around them in developing distinct ways of life</p>	
<p>Mathematics Standards:</p>	

Backward Stages: 1. Identify desired results. 2. Determine acceptable evidence. 3. Plan learning experiences and instruction.
 Adapted from Wiggins & McTighe (2005) *Understanding by Design (UbD)*
 Revised April 2021

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NA	
ELA Standards: 5R7- Analyze how visual and multimedia elements contribute to meaning of literary and 4-t	
Technology Standards: NA	
NYS Computer Science: n 4-6.CT.2 Collect digital data related to a real life question or need. 4-6.CY.3 Describe trade-offs between allowing information to be public and keeping information private and secure.	
ISTE: NA	
Social Justice Standards: JU.3-5.15 I know about the actions of people and groups who have worked throughout history to bring more justice and fairness to the world.	
Other (Art, SEL, etc): NA	
Links to Standards/Reference Frameworks: NGSS , NGSS by DCI , Nat'l C3 SS Framework , NYS K-8 SS Standards , Common Core , ISTE , Learning for Justice Social Justice Standards , CASEL SEL Framework , NYS CS and Digital Fluency	
Students will know (SWK):	Students will be able to do (SWBAT):
<ul style="list-style-type: none"> • The history of corn • Aztec production and use of corn • How a corn plant grows • How corn and its bioproducts are a part of their daily lives 	<ul style="list-style-type: none"> • Research on the computer • Take notes (guided) • Connect information and synthesis

STAGE 2: EVIDENCE & ASSESSMENTS:

Performance Task Narrative:

Goal: *Provide a statement of the task. Establish the goal, problem, challenge, or obstacle in the task.*

- As humans continue to consume fossil fuel, alternative clean fuel sources are needed. Your goal is to find alternate fuel sources that humans can heavily consume, but will not damage the environment.

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Role: *Define the role of the students in the task. State the job of the students for the task.*

- Historians/researchers Focus: Aztecs, production in US and NY, use of corn
- Scientists/Environmentalist - byproducts, biodegradable and renewable resources, bioplastic and ethanol
- Storytellers- Learn about the Native American Folklores and share with the class

Audience: *Identify the target audience within the context of the scenario.*

- Board of Directors for research funding
- City of Yonkers Planning Committee
- Regeneron Scientist Panel

Situation: *Set the context of the scenario. Define the narrative.*

- You are a scientist who is proposing ethanol-based solutions to solve climate pollution. You and your team of researchers has been working around the clock to solve this problem!
- Your team has discovered a possible solution that requires additional resources and funding to implement.
- You are presenting your solutions to a board of trustees and local officials, seeking additional resources and increased funding.

Product(s): *Clarify what the students will create and why they will create it.*

- Podcast of findings and research
- Storyboard of corn plant necklace journal
- Debate transcript and recording
- Script for folklore story

Standards (criteria for success): *Provide students with a clear picture of success. Identify specific standards for success.*

- Produce a podcast of their findings on flipgrid and drone (historian group)
- Keep a journal about their living corn plant necklace (whole class)
- Create a debate about ethanol biofuel and bioplastic (scientists/environmentalists)
- Retell the one of the folklore stories using the Dash robot

Other Evidence/Assessments:

- Reflection assignments
- 3-2-1 based on what they learned from other groups