CTSC/Yonkers SMART Start 2021-22
School Name: HOSTOS
Teacher Designer Names: Amanda Marinato & Marianna Conti

Name of Project: Rising Sea Levels
Grade: 7th Grade

Unit #: N/A
Design Date Start: November 2021
Est. Launch Date: 3/07/2022

Big Idea: Action
Duration of Project/Unit: 3 weeks

STAGE 1: DESIRED RESULTS

Enduring Understandings:

- What causes rising sea levels?
- What are possible solutions to rising sea levels in Yonkers?
- What would happen to Yonkers if all of the ice melted in the world?
- Is there a way to stop rising sea levels?
- How can Yonkers prepare for rising sea levels over the years?
- What similarities and differences can we see between different cities all around the world in regards to rising sea levels?

Essential Question(s):
(MEANT TO BE SHARED WITH STUDENTS)

- What is a solution to rising sea levels in Yonkers?
- Would a floating city be the solution to rising sea levels in Yonkers, New York, why or why not?
- How can we inform people about rising sea levels?

Established Goals (Standards, Performance Indicators, Learning Goals):
*choose relevant standards to unit/project plan timing and learning goals; do not need to use all disciplines below.
** unpack into SWK and SWBAT under identified standards as this will lead to aligned assessment design
Standards Unpacking Examples

Science Standards:
MS-ESS3-3 Earth and Human Activity
Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Italian Standards:
Standard 4: Relating Cultural Practices and Products to Perspectives
- Learners use the target language to identify, describe, and explain the practices and products of the cultures studied as well as the cultural perspectives they suggest.

Standard 5: Cultural Comparisons
- Learners use the target language to compare the products and practices of the cultures studied and their own.

Social Studies Standards:
Skills-
Public speaking
Looking at different point of views
Analyzing documents

ELA Standards:
7SL2: Analyze the central ideas and supporting details presented in diverse formats (e.g., including visual, quantitative, and oral) and explain how the ideas clarify and/or contribute to a topic, text, or issue under study.

7SL1: Engage effectively in a range of collaborative discussions with diverse partners; express ideas clearly and persuasively, and build on those of others.

7W5: Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply the grade 7 Reading Standards to both literary and informational text, where applicable.

7W6: Conduct research to answer questions, including self-generated questions, drawing on multiple sources and refocusing the inquiry when appropriate. Generate additional related questions for further research and investigation.

Technology Standards:
Standard 1: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Social Justice Standards:
Diversity 6- DI.6-8.6: I interact with people who are similar to and different from me, and I show respect to all people.

AC.6-8.20: I will work with friends, family and community members to make our world fairer for everyone, and we will plan and coordinate our actions in order to achieve our goals.

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

Unpacking Standards Verbs

STAGE 2: EVIDENCE & ASSESSMENTS:

Performance Task Narrative:

Goal: Find a solution to rising sea levels in Yonkers, New York.

Role: Students are given an investigative role where they will have to research, analyze, and compare and contrast information on floating cities in the world and use that information to design a solution to rising sea levels in Yonkers. Student will collect notes/research from various content areas to be create a proposal to the class answering the question: "What is a solution to rising sea levels in Yonkers?"

Audience: Yonkers, New York

Situation: Rising sea levels are a major issue in the world. But how does that relate to us and our everyday lives? What if I told you, Yonkers would be underwater if all of the ice melted in the world. Students will have to design a solution to rising sea levels here in Yonkers by taking different engineering roles. Students will present their proposal to the "city of Yonkers". Students will explore various "floating cities" around the world and explore how they function and adapt to rising sea levels.

Product(s):
- ∉ Multiple thinking maps constructed by students to organize information collected from Italian, science, and social studies lessons.
- ∉ Student will create an argumentative essay answering the questions "Would a floating city be the solution to rising sea levels in Yonkers, New York, why or why not?"
- ∉ Students will create a poster of a "new construction" that's coming to Yonkers as a solution to the rising sea levels we are facing. Students will choose a possible solution we have discussed in class and advertise this idea and why they think it would be good for Yonkers. (Coming Soon to Yonkers!)
- ∉ Students will create a proposal for rising sea levels in Yonkers including appropriate Italian vocabulary.

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

- ❑ Create 5 thinking maps

- ❑ Proposal of solution to rising sea levels (group project/presentation)
- ❑ Student self-assessment (students will complete individually)
- ❑ Student Reflection- focus on how the inter-disciplinary subjects connect and how it connects to the real-world

Other Evidence/Assessments:

STAGE 3: THE LEARNING PLAN:

Learning Activities

(potential layout below. Can be daily, divided by periods, or even using the Engineering Design Process to divide into stages such as Ask, Imagine, Plan, Create, Improve)

Week 1- Intro & Research

Learning Goals:
Science:

- SWBAT compare and contrasts reasons for rising sea levels (thermal expansion & melting ice sheets).
- SWBAT interpret data based on rising sea levels in Yonkers.

Italian:

- SWBAT explore and identify the geographical features of the city of Venice.

Learning Events:
Science:

- Inquiry Video 1: Students will write down 3 things they notice in the video and describe what is happening. https://www.youtube.com/watch?v=VbiRNT_gWUQ
- Article 1: https://oceanservice.noaa.gov/facts/sealevel.html
- Video 2: https://www.youtube.com/watch?v=ZIpyxJY2Cd8
- Website Exploration: https://seeing.climatecentral.org/#12/40.7300/-74.0070?show=lockinAnimated&level=0&unit=feet&pois=hide
- Review of self-assessment rubric

Italian: Videos can be Edpuzzle options.
Reading in Italian and English- "*Venezia e le sue isole*"
Video- LA CITTÀ DELLE SIRENE / TRAILER
Comparison Video: https://www.youtube.com/watch?v=1TzF0brDZ8M
Article- Mani che sostengono Venezia: l'installazione ambientalista di Lorenzo Quinn alla Biennale
Video- Climate change challenges sinking city of Venice
Video- The Surprising Foundations of Venice
Video- The $7BN Megaproject to Save Venice
Example of Venetian PSA poster

Formative Assessments:
Science:

- TM Circle Map listing things noticed from the video (intro to rising sea levels)
- TM Double Bubble comparing ice sheets and thermal expansion
- Reflection questions- Exit Tickets

Italian:

- Circle Map: Tell everything you know about Venezia
- Circle Map: List important facts from the article, *The Sinking City*
- Kahoot! (Questions based on the readings)

Linguistic Supports for Multilingual Learners:
modified article, modified questions, and academic vocabulary translated into native language

Modifications for Individual Students and/or Student Groups:
modified article, modified questions, and small groups for these students

Notes/Resources:
Italian Vocabulary:

- Island
- Dam
- Solution
- Canal
- Water
- Sea
- Urgency
- Weather
- Flooding
- Bridge
- Water taxi
- Changes
- Means of transportation