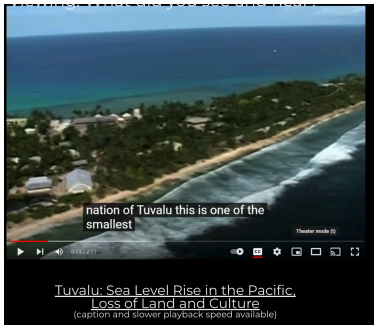
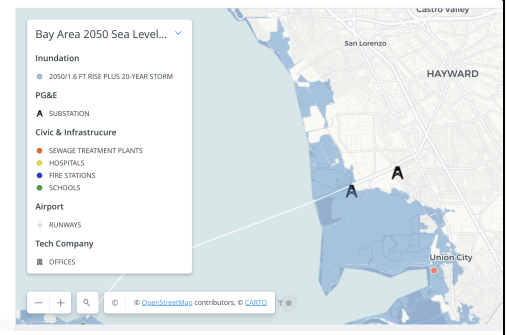
Sea Level Rise Unit Plan

Phenomenon and Essential Questions

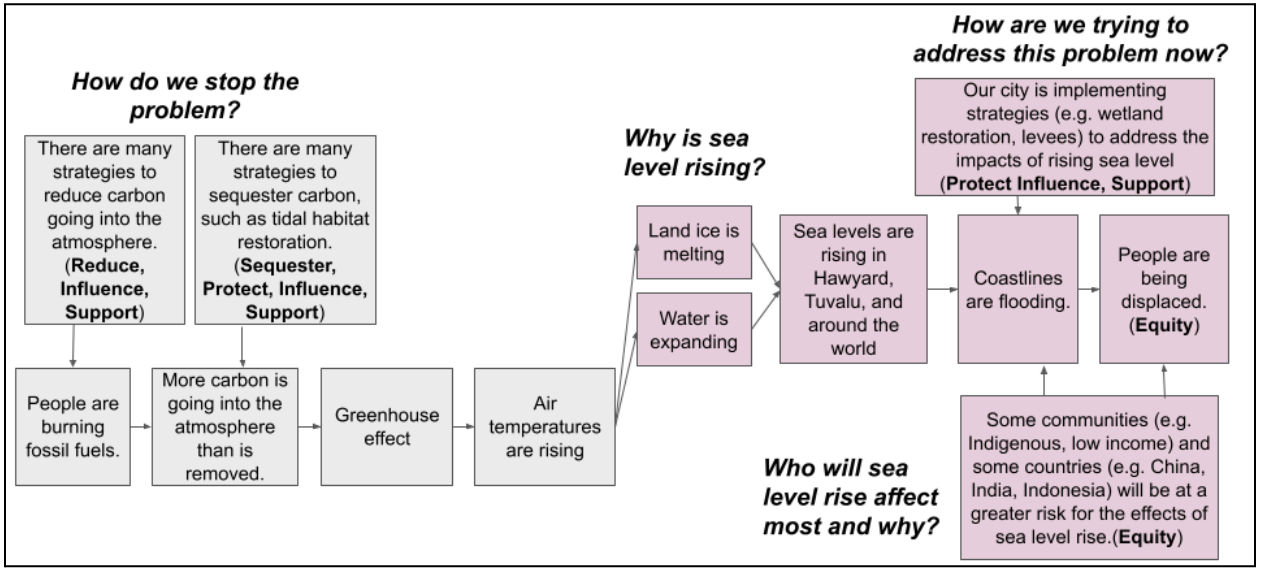
Phenomenon: Sea level is projected to rise about 1 foot by 2050. People are being displaced from their homes around the world because sea level is rising. Sea level is projected to rise here along the Hayward Shoreline.

Essential questions: Why is sea level rising? Who will this affect? How are we trying to address this problem now? How do we stop the problem?





Learning Goals



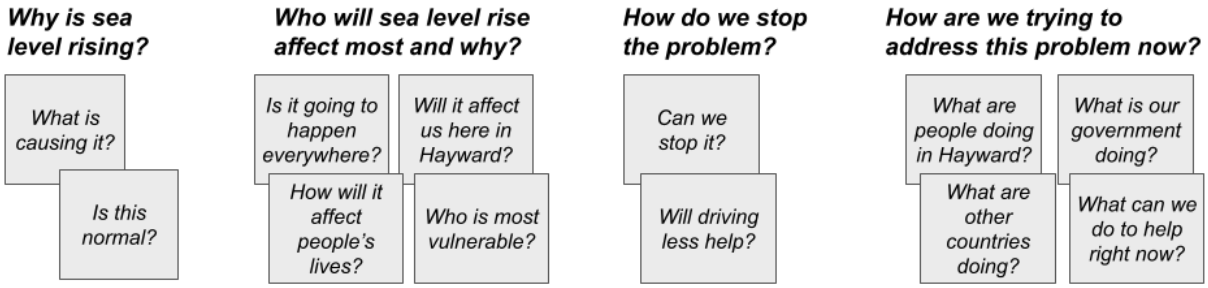
Key Activists/ Movements

Global: Anote Tong, President of Kiribati and Pacific Islander climate change activists

Local: Bay Farm Island, Alameda Caroline Choi

Learning Activities Across Classrooms and Disciplines

- **Introduce the phenomenon and generate questions to motivate the unit**
  - Climate refugees and sea level rise in Tuvalu and Hayward **(ELA/ELD)*****
    - Explore what is happening in Tuvalu and Hayward



  - Introduce activists and/or social movements **(Any discipline)**
    - Introduce Caroline Choi's writing or Pacific Islander climate change activists
  - Graph or interpret data about sea level rise projections **(Math and/or Science)**

- **Why is sea level rising?**
  - Investigate what kind of melting ice contributes to sea level rise **(Science)*****
    - Melting ice lab
  - Investigate how warming waters contribute to sea level rise **(Science)**
    - Thermal expansion lab
  - Connect warming water and melting ice to the greenhouse effect and carbon emissions (developed in a prior unit but revisited now) **(Science)**
- **Who will sea level rise affect most and why?**
  - Investigate how social and economic inequities are leading some communities (e.g. Indigenous, low income) and some countries (e.g. China, India, Indonesia) to be at a greater risk for the effects of sea level rise. (**Social studies)**

- **How are we trying to address this problem now?**
  - Investigate sea level adaptation strategies that were considered in the Hayward shoreline plan **(History/ Social studies)*****
  - Calculate area of marches planned for protection or length of levees **(Math)**
  - Field trip to Hayward shoreline **(Any discipline)**

- **How do we stop the problem?**
  - Revisit carbon cycling and leverage points for reducing/ sequestering carbon (developed in a prior unit) **(Science)**
  - Profile an artist doing sea level rise activism and art and create an art piece inspired by this approach **(Art)**
  - Walk and Roll to School day (**PE**)
  - Revisit activists and/or social movements **(Any discipline)**
    - Revisit Caroline Choi's writing or Pacific Islander climate change activists

- **Unit culminating task**
  - 3 paragraph writing / multimedia/ slide/ art/ tiktok piece that answers the unit essential questions

*** Modeled during CELI Summer Workshop