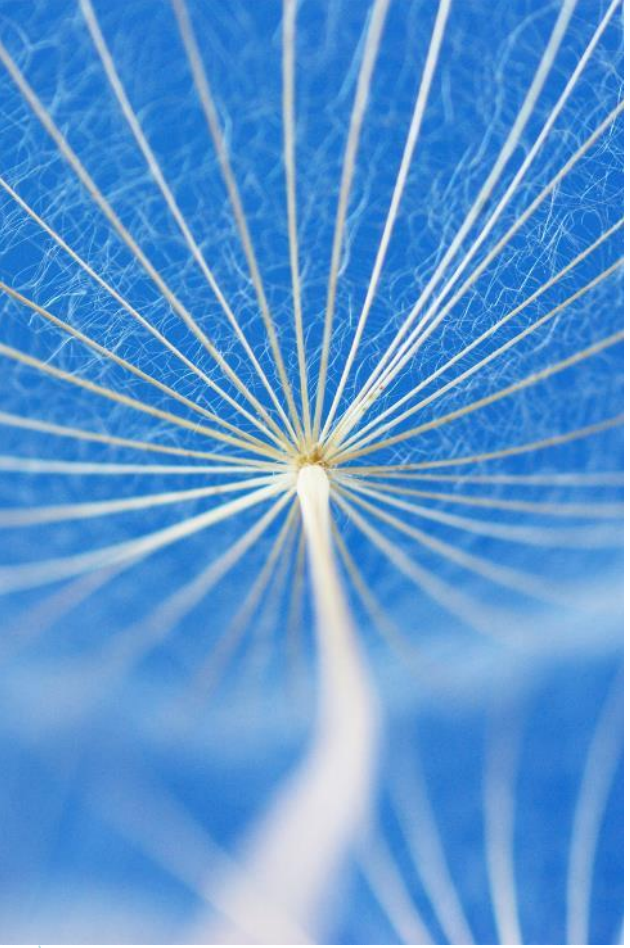


# TEAM Green Crab

2022 ORSEA Capstone Presentation

OREGON MARINE SCIENTIST AND EDUCATOR ALLIANCE

# Team Green Crab

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# ANCHORING PHENOMENA / DRIVING QUESTION

## Invasion of the crabs!

## Are green crabs invading Oregon estuaries and causing harmful impacts?

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# EDUCATION GOALS, OBJECTIVES, AND STAN DARDS ADDRESSED

## Learning Goals

1. Green crabs are an invasive species that we accidentally introduced from western Europe.
2. Invasive species can harm native species and our environment.
3. We monitor green crabs to measure the abundance through time.
4. We can use basic statistics to understand and summarize the green crab invasion.

**Science standards**

**NGSS Performance Expectation(s):**

**HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. [Clarification Statement: Examples of mathematical representations include finding the average, determining trends, and using graphical comparisons of multiple sets of data.] [Assessment Boundary: Assessment is limited to provided data.]**

**HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.* [Clarification Statement: Examples of human activities can include urbanization, building dams, and dissemination of invasive species.]**

**Math Standards**

**HS.DR.C Analyze, summarize and describe data**

**HS.DR.C.8 Identify appropriate ways to summarize and then represent the distribution of univariate and bivariate data with graphs and or tables. Use technology to present data that supports interpretation.**

**HS.DR.D Interpret data and answer investigative questions**

**HS.DR.D11 Use statistical evidence from analysis to answer statistical investigative questions and communicate the findings in a variety of formats to support informed data-based decisions.**

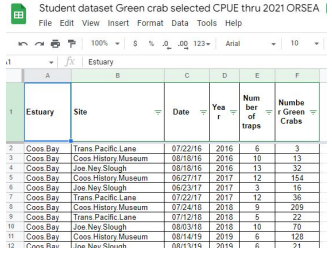
# 5-E LESSON MODEL AND ASSOCIATED ACTIVITIES

## Engage

Variety of videos are used to facilitate discussion of invasive native and species, ecological concepts and societal issues.

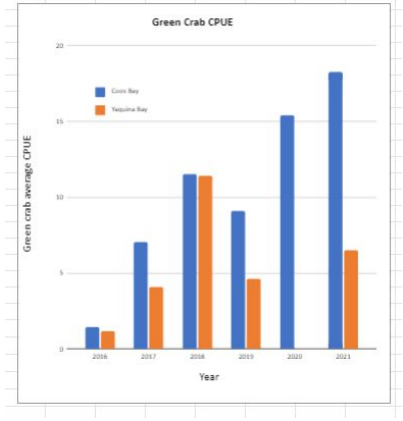

## Explore

Using magazine articles and data sets students degin to ask and answer questions about crab populations and spatial variation.




## Explain

Students dig deeper into two data sets for two estuaries and look for relationships.




## Elaborate

Students expand to proposing ways to study green crab population effect on other population, design better traps,or propose solutions to mitigate effects of green crabs.

## Evaluate

Students create presentation posters for citizen scientist to identify invaders or present scientific analysis of data sets.

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