Goals:

## Identify the communities in Washington state that rely on shellfish as a resource and explain why.

## Asses the value and economic contribution of shellfish farming and wild harvest in Washington.

## Translate research findings into fact sheets to share on course website.

## Show how ocean acidification will impact these communities.

Procedure:

## Students will sign up for the community group (see below) they are most interested in learning about.

## Students will be divided into small groups to research and answer the questions below based on their assigned community group. These groups will be called “Expert” groups.

## Below are suggested resources to begin your online search

## Each student will be responsible for completing and submitting the answers to the questions below.

## Students will use knowledge gained from this activity to create a factsheet or infographic that will be used to help students teach their peers about the impact of ocean acidification on their community group. These graphics will also be shared on the course site.

Community Group Options & Resources:

|  |  |  |
| --- | --- | --- |
| **Community Group** | **Watch** | **Explore** |
| Tribes | [Ocean Acidification in the Puget Sound](https://ocean.si.edu/conservation/acidification/ocean-acidification-puget-sound) (Smithsonian; 3:32) | [Northwest Indian Fisheries Commission; Shellfish](https://nwifc.org/about-us/shellfish/)[Shellfish – The Suquamish Tribe](https://suquamish.nsn.us/home/departments/fisheries/shellfish/) |
| Shellfish Industry | [Acidifying Water takes Toll on NW Shellfish](https://www.pmel.noaa.gov/co2/story/Acidifying%2BWater%2BTakes%2BToll%2BOn%2BNorthwest%2BShellfish) (PMEL; 6:27) | [The Pacific Shellfish Institute](http://www.pacshell.org/washington.asp)[Taylor Shellfish Farms](https://www.taylorshellfishfarms.com/about-us) |
| Rural Coastal Resident (not employed by fishing industry) | [Finding the Economic Future of Washington’s Olympic Peninsula](https://www.forbes.com/sites/sorensonimpact/2020/09/09/the-economic-future-of-the-olympic-peninsula/?sh=428bd98d2d0b) (Forbes; 3:12)  | [Fisheries and Coastal Communities](https://toolkit.climate.gov/topics/marine/fisheries-and-coastal-communities)[Economic Dashboard for Washington’s Coastal Communities](http://wsg.washington.edu/coastal-connections/?p=3750)  |
| Washington residents/families who harvest for subsistence | [Razor clam seasons and beaches](https://wdfw.wa.gov/fishing/shellfishing-regulations/razor-clams) | [Washington Department of Fish and Wildlife; Fishing and shellfishing basics](https://wdfw.wa.gov/fishing/basics)[For WA’s ‘razor clam guy,’ digging is a family affair](https://crosscut.com/2019/01/was-razor-clam-guy-digging-family-affair) |

Expert Group Procedure and Roles:

## Before you begin your work together:

## Please introduce yourselves.

## Please assign roles (see below) and record them in the space below.

## **Moderator** - helps facilitate the conversation; a “project manager” who helps the group come up with a plan for using time wisely, and to participate equitably.

## **Note Taker** - records the group’s discussion and solutions to questions in the Google doc (below) for their group. If your group has 5 members or more, 2 of you should share this job.

## **Challenger**—push the group to view the problem or issue from different perspectives.

## **Reporter** - after we regroup as a class, the reporter summarizes results, conclusion, confusions, etc. to the whole class.

## Then read, think, research and record answers in this document.

Warning! Low pH waters were detected off the Washington coast. Shellfish hatchery operations are suspended or being moved to a different location. Restrictions are being placed on commercial and recreational harvest. What will happen to the communities who rely on shellfish as a resource?

# What community or group of people were you assigned?

# How does your community group use shellfish? Include source(s) of information.

# What is the value (heritage/culture, economic, environmental) of shellfish to your assigned community group? Include source(s) of information.

# How would your community group be impacted by a decline in shellfish species due to the acidification of local ocean waters? Include source(s) of information.

# What is your community group currently doing to prepare or mitigate for changing ocean ecosystem conditions and the resulting decline in shellfish? Include source(s) of information.

# What could they do?

# What is your community group currently doing to educate others about the importance of shellfish as a resource to their way of life? Include source(s) of information.

# What could they do?

# What actions could your community group take or what policy could they advocate for to slow ocean acidification and preserve shellfish beds?

# Write 3 multiple-choice questions with answer choices and 2 short answer questions that capture the important points you think your peers need to remember about how declining shellfish population and aquaculture impact your assigned community group. These questions will be compiled with questions from the other expert groups for the unit quiz.