



Grades K-2  
Next Generation Science Standards  
K-ESS3-1

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*Exploring Marine Science and Aquaculture* Grades K-2

# Fish on a Farm

Developed by the University of Maine Cooperative Extension  
Revised and formatted by Maine Agriculture in the Classroom

## Activity Description:

The concept of fish farming is explored with comparisons made between farmed fish and wild fish.

## Learning Objectives:

Students will:

- Understand that fish are not only caught in the wild, but can be raised on farms as well.
- There are limited numbers of wild fish in the entire ocean, but a fish farm can raise many fish in more easily accessible areas

## Essential Questions:

- What is aquaculture?
- Why are fish farms important?

## Background Information:

Aquaculture is the farming of aquatic organisms such as fish, crustaceans, mollusks, and aquatic plants. It is different than commercial fishing, which is the harvesting of wild fish. In aquaculture, conditions are manipulated to cultivate a certain species, typically for human consumption or for use in other products. Aquaculture has been expanding in Maine to create more jobs, resources, and economic stimulation.

Aquaculture is important because it can help feed many people, prevent natural populations from extinction, provide important ingredients for products that people use every day, and can provide jobs for people who like to work on the water, with sea creatures, or marine plants.

Watch this video for an introduction to aquaculture (18:40 minutes):

<https://www.youtube.com/watch?v=6C8tCXIf6BY>



## Vocabulary List:

**Aquaculture:** Aquaculture, also known as aquafarming, is the farming of aquatic organisms such as fish, crustaceans, mollusks and aquatic plants.

## Materials:

- No special supplies required

## Process:

### Engage

1. Access the groups' prior knowledge by recalling some information from the fish printing activity.
  - a. What are the characteristics of fish? List on chart paper or white board.
    - i. *Gills, fins, tail, shape, size, color, mouth, jaw*
  - b. What are some things that help fish from getting eaten?
    - i. *Speed, camouflage, size, type of mouth, schooling*
  - c. What might help them find food to eat?
    - i. *Shape, size, color, type of mouth/jaw, speed, camouflage,*

### Explain

2. Introduce the word aquaculture: the farming of fish and other marine life.
3. Show the video (2:35 minutes), for an introduction to aquaculture:  
<http://oceantoday.noaa.gov/fishonafarm/welcome.html> (will not link directly, copy and paste into address bar)

### Elaborate

4. Facilitate a discussion about the need for aquaculture:
  - a. Why do you think we need fish farms?
  - b. Do you eat fish? Even if you do not eat fish, lots of other people in the world do. What about your dog or cat? Did you know there is often fish in pet food?
5. Demonstrate the need for fish farms
  - a. Let's try an experiment: Pretend that the whole room (or playground) is the ocean, and that you are a fish that can swim all around the whole ocean.
6. Encourage the students to "swim" around the room, and spread out across the whole ocean. Allow them to interact with one another for a few minutes before gaining their attention again.
  - a. What are some things you notice about this ocean?
  - b. Are the fish close together or far apart?
    - a. Do you think it would be easy or hard for someone to catch a fish in this ocean?
7. Explain that they will now demonstrate a fish farm in the ocean.
  - a. Now all of the fish move onto the fish farm in center of the room/playground.
  - b. Remember the fish you saw in the video on the farm? The farm in our ocean is similar.

### Evaluate

8. Facilitate a discussion about the ocean activity:
  - b. What are some things you notice about how the fish on the farm are different from the fish in the wild?
  - c. What are some reasons why humans would choose to farm fish instead of catch them in the wild?
  - d. Do you think anything else could be farmed in the ocean?



**Additional Resources:**

- Aquakids Part 1 (5:32 minutes):  
[https://www.youtube.com/watch?v=V\\_TILVIAmSk&feature=player\\_embedded#%21](https://www.youtube.com/watch?v=V_TILVIAmSk&feature=player_embedded#%21)
- 9. Aquakids Part 2 (3:37 minutes): <https://www.youtube.com/watch?v=ZP8q3rOPmjE>

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