



UNIT 10: AGRICULTURAL TECHNOLOGY

Quick Lesson:

How to Grow a Fish Sandwich

Grade level: Primary

Student Learning Objective

After completing this lesson, students will be able to:

1. Define aquaculture.

Time: 40 minutes

Tools, Equipment, and Supplies: Writing surface, copies of Activity Sheet 28:1, classroom set of almanacs/encyclopedias or the Internet, markers and flipchart paper or poster board.

Key Term: Aquaculture

Background Information

With the popularity and resulting large consumer demand for seafood, and the increased potential for water pollution, **aquaculture** is becoming one of the fastest growing industries in agriculture. Farmers are operating ponds and manmade tanks to produce enough fish and crustaceans to meet the needs of the seafood market. **Aquaculture** is the process of raising freshwater fish and seafood items such as shrimp, crayfish, and oysters for human consumption.

Interest Approach

Write the word "FARMER" on the board before the students enter the room.

What word is on the board?

Students answer "Farmer."

That is correct! Let's take a moment to think to ourselves. Do not share your answers with anyone. What are some things that farmers raise? SHHHH... keep your answers to yourself.



NOTES

Pass out Activity Sheet 28:1 to all the students.

When I say GO, let's draw a picture of all the things that a farmer raises or grows on his or her farm. What questions are there? Okay, GO!

Allow the students to have 2-3 minutes to draw all of the products that they think a farmer produces. Once the students are finished drawing have them share with the class.

OBJECTIVE 1: Define Aquaculture.

Wow! We seem to know a lot about agriculture and farmers; but I did not hear or see anyone mention fish. (If someone mentions fish, say "I did not see many fish.") There are special farmers who only raise fish and other seafood items such as shrimp and crayfish. The process of raising fish and seafood is known as aquaculture.

Let's take a minute to brainstorm what a fish farm might look like.

Have the students start brainstorming. Capture all of their ideas on a writing surface.

Those are some really great ideas. Some **aquaculture** farms have ponds or are close to the ocean and use those areas to raise and harvest their fish; but some **aquaculture** operations use tanks to raise fish and other water-dwelling organisms. Now when I say "tank," you probably think first of the aquarium that you might have at home or have seen at a friend's house.

The idea is the same, but many of these tanks can hold hundreds and sometimes thousands of gallons of water. The tank in your house or a friend's house probably only holds 10-50 gallons of water. These tanks are also equipped with special heaters to keep the water warm, special pumps to keep oxygen in the water, and special filters to help keep the water clean.

Use the Almanac and Encyclopedia e-Moment® to find more information on aquaculture or fish farming. Ask the students to create a poster to illustrate the information that they gathered about aquaculture. To save time in class, you can assign this part of the lesson as homework or a take-home project. Post the posters around the room.



NOTES

REVIEW/SUMMARY

We did a really good job finding out more information about **aquaculture** and fish farmers. Now that we know that fish can be raised on a farm, let's share this information with our friends and family. As our world continues to change, agriculture is changing to meet the needs of the market. As people demand more fish and seafood, **aquaculture** will play a very important role in helping to meet the market's needs.

Use the Show What You Know e-Moment® to have the students review the lessons that they learned about aquaculture and fish farming.

REFLECTIVE REVIEW QUESTIONS:

- What types of fish/seafood have you eaten before? Which of these do you believe are produced by aquaculturalists?
- What are other types of products that we may not be aware of could be produced by agriculturalists?

APPLICATION

APPLICATION 1: Create a bulletin board with all the different types of fish that may be found on an aquaculture farm.

APPLICATION 2: Have the students build a classroom fish farm. There are various plans you can find on the Internet to help you do this, based on the space you have available and appropriate level of complexity for your classroom.



ACTIVITY SHEET 28:1

Farmer Profile

Draw a picture of all the things that a farmer raises or grows on a farm.

NOTES

A FARMER