

# Lesson Plan

**COURSE TITLE:** Aquaculture Science

**LESSON LENGTH:**

**TOPIC:** Gender determination and Care

**OVERVIEW:** In this lesson, students will explore the important factors in broodfish management. They will study how to care for broodfish and consider factors like water quality and nutrition. They will experience, first-hand, how to sex broodfish and understand the importance of gender determination.

## **ALABAMA CONTENT STANDARD(S):**

- Determine important properties and content of water as related to aquaculture (AS7)
  - Describing the influence of water quality on aquaculture
- Describe various management techniques and their effectiveness for various types of aquaculture systems (AS8)
  - Nutrition

## **LEARNING OBJECTIVES:**

Students will be able to:

- Discuss why water quality is important to the survival and production of broodfish
- List some methods that can be used to improve water quality
- Determine the sex of a given channel catfish
- Explain why sex determination is important
- Describe the factors that should be considered before stocking broodfish including, site selection, stocking densities, and sex ratios
- Identify the factors to be considered when choosing feed for broodfish production and why it is important

**MATERIALS AND EQUIPMENT NEEDED:**

- Pen/pencil
- Paper
- Handout

**TECHNOLOGY RESOURCES NEEDED:**

- Computer
- Microsoft PowerPoint
- LCD Projector
- Printer

CONTENT	INTEGRATED CONTENT CODE	LEARNING ACTIVITIES	RESOURCES	TIME ON TASK
<p>Materials to be covered in this lesson:</p> <ul style="list-style-type: none"> <li>• Gender Determination</li> <li>• Broodfish care</li> <li>• Stocking densities</li> <li>• Water Quality and Management</li> <li>• Nutrition and Requirements</li> </ul>	R, W	<ul style="list-style-type: none"> <li>• A PowerPoint will be presented discussing gender determination, care, stocking densities, water quality, and nutrition.</li> <li>• Students will take a quiz on the information from the PowerPoint.</li> <li>• Students will be provided with live catfish to explore the sex characteristics and see how sexing is done.</li> </ul>	<p>PowerPoint</p> <p>Quiz</p> <p>Local catfish farm or school aquaculture program</p>	

**VARIED ASSESSMENT STRATEGIES:** Students will be evaluated using a quiz at the end of the presentation to ensure that the information is understood. Students will be exposed to live catfish so they can examine the sex characteristics and see how sexing of fish is done.

**PROVISIONS FOR INDIVIDUAL DIFFERENCES:**

# INTEGRATED CONTENT CODES

## **BASIC SKILLS**

R=READING SKILLS

W=WRITING SKILLS

C=COMMUNICATION SKILLS

SS=SOCIAL STUDIES

M=MATH

S=SCIENCE

IR-INTERPERSONAL RELATIONSHIP SKILLS

CL=COMPUTER LITERACY SKILLS

## **PROCESS SKILLS**

DM=DECISION MAKING SKILLS

PS=PROBLEM SOLVING SKILLS

CT=CRITICAL THINKING SKILLS

## **EMPLOYABILITY**

ES=EMPLOYABILITY SKILLS

MS=MANAGEMENT SKILLS

WA=WORK ATTITUDES

TW=TEAMWORK

## **LEADERSHIP SKILLS**

IM=INTEGRATION OF LEADERSHIP

CTSO=CAREER/TECHNICAL STUDENT ORGANIZATION

LD=LEADERSHIP DEVELOPMENT SKILLS

**THE MORE INTEGRATION THE BETTER**

## **Quiz:**

1. Why is it important to know the sex of the broodfish before stocking them in a pond?
2. What are three factors to be considered before stocking broodfish?
3. Why is water quality important in broodfish ponds?
4. List three methods to improve water quality.
5. What is the importance of choosing the right feed for broodfish and what are some factors to consider?