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ANIMAL SYSTEMS CAREER PATHWAY

TEACHER RESOURCE GUIDE

POSITIVE ANIMAL HANDLING (STOCKMANSHIP) ON DAIRY FARMS

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TEACHER RESOURCE GUIDE

INTRODUCTION

The SAY Project has developed a National Clearinghouse that assists youth educators with identifying agricultural safety and health curriculum and educational resources that align with to Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards.

The purpose of this resource guide is to highlight examples of specific curricula provided in the SAY Clearinghouse and suggestions for integrating the resource within your current classroom activities. This teacher resource guide focuses on the curriculum resource that aligns to the standard:

- AS.02. ***Utilize best-practice protocols based on upon animal behaviors for animal husbandry and welfare.***

Within the teacher resource guide, you will find:

1. ***Overview*** • An overview of the sampled curriculum
   Positive Animal Handling (Stockmanship) on Dairy Farms
2. ***Standards Alignment*** • How the curriculum aligns to the standards
3. ***Sample Objectives*** • Sample objectives you can use
4. ***Activities*** • Descriptions of activities provided in the curriculum
5. ***Personalized Sample Activities*** • Ideas of additional activities you can utilize
6. ***Evaluation*** • How students' learning can be evaluated

OVERVIEW OF POSITIVE ANIMAL HANDLING (STOCKMANSHIP) ON DAIRY FARMS

The ***Positive Animal Handling*** Curriculum was designed by the Upper Midwest Agricultural Safety and Health Center (UMASH). This resource includes five videos which were developed as training tools for dairy farm owners and workers. The accompanying lesson plans were developed by University of Minnesota Agricultural Education faculty, staff, and students as part of a collaborative initiative to advance agricultural safety education within school-based agriculture.

The curriculum is led by teachers using the pre-made lesson plans designed by UMASH. Along with the lessons and videos, lesson plans and student note sheets are included.

ALIGNMENT FOR MEASURABLE STUDENT ACTIVITIES

Academic standards outline the knowledge and skills students need for future success within a discipline. Specifically, the AFNR standards serve as a guide for the development of rigorous, well-planned curriculum and assessments for an agricultural career pathway. This livestock safety resource can be integrated within current formal (High School programs) and informal (4-H) agricultural education efforts.

This alignment integration provides sample measurements that students might carry out to indicated achievement of knowledge or skills related to a core standard. The levels of proficiency of each measurement are indicated by the last letter within the standard code.

A letter code "a" indicates a proficiency level of "awareness". Letter code "b" indicate proficiency level of "intermediate" and letter code "c" indicate proficiency level of "advanced". *Positive Animal Handling (Stockmanship) on Dairy Farms (PAHDF)* curriculum aligns to the following measurable activities:

- AS.02.01.01.a. ***(Proficiency level "Awareness") Explain the implications of animal welfare and animal rights for animal systems.***
- AS.02.01.01.b. ***(Proficiency level "Intermediate") Design programs that assure the welfare of animals and prevent abuse or mistreatment***
- AS.02.01.01.c. ***(Proficiency level "Advanced") Implement and evaluate quality-assurance programs and procedures for animal production.***
- AS.02.01.02.a. ***(Proficiency level "Awareness") Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.).***
- AS.02.01.02.b. ***(Proficiency level "Intermediate") Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and re-straining animals***
- AS.02.01.02.c. ***(Proficiency level "Advanced") Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses***

SAMPLE LESSON OBJECTIVES

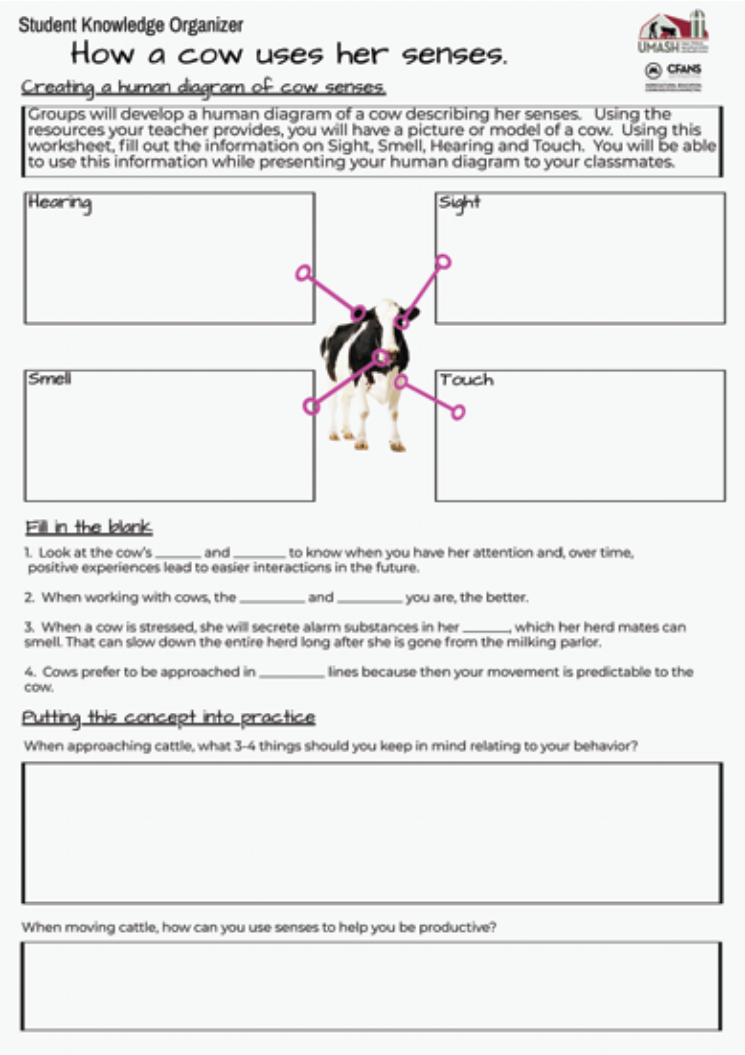
Objectives help you plan your lessons or trainings to ensure that what your students are learning align to how they will be evaluated. Using the **ABCD** method, objectives should include an **A**udience, **B**ehavior, **C**onditions, and **D**egree of mastery needed. Bloom's Taxonomy of cognitive learning is a hierarchical framework that instructors can use to promote higher order thinking and learning. Below are example objectives at various levels of Bloom's Taxonomy that teachers can use in their lesson plans with *PAHDF.*
By the end of this lesson, students will be able to:

- Define stockmanship and explain ways it can be practiced.
- Identify at least 3 items to consider when approaching dairy cattle.
- Describe the zip-zag method to moving cattle and how it works effectively.
- Explain how using the pressure point in relation to an animal's flight zone is more effective in reducing stress.

INTEGRATION ACTIVITIES

PAHDF curriculum can be broken down into five sections with 5 lessons. Each lesson has an accompanying teacher lesson plan and student organizer sheet.

Each task sheet contains written information, pictures, and diagrams for students to read and analyze. There are also activities and questions provided throughout each task sheet for students to apply what they've learned. For example, these pictures are from the lessons "How a cow uses her senses" and "Moving cows more effectively"., The Work Environment. After students learn the background information through teacher facilitation, complete pre-lesson questioning, and watch the UMASH video for the lesson as a class, the task sheets follow. Also included are ways for students to expand their knowledge for each subject by working in teams, teaching classmates, etc. The curriculum also provides ideas for extra activities that correspond to the lesson, such as visiting a working dairy farm.



Student Knowledge Organizer

How a cow uses her senses.

Creating a human diagram of cow senses

Groups will develop a human diagram of a cow describing her senses. Using the resources your teacher provides, you will have a picture or model of a cow. Using this worksheet, fill out the information on Sight, Smell, Hearing and Touch. You will be able to use this information while presenting your human diagram to your classmates.

Hearing

Sight

Smell

Touch

Fill in the blank

1. Look at the cow's _____ and _____ to know when you have her attention and, over time, positive experiences lead to easier interactions in the future.
2. When working with cows, the _____ and _____ you are, the better.
3. When a cow is stressed, she will secrete alarm substances in her _____, which her herd mates can smell. That can slow down the entire herd long after she is gone from the milking parlor.
4. Cows prefer to be approached in _____ lines because then your movement is predictable to the cow.

Putting this concept into practice

When approaching cattle, what 3-4 things should you keep in mind relating to your behavior?

When moving cattle, how can you use senses to help you be productive?

Figure 1. provides a PAHDF example of a student activity.

PERSONALIZED SAMPLE ACTIVITIES FOR STUDENT LEARNING

Modalities of Modalities of learning are ways in which students use their senses throughout the learning process to acquire new skills. Using different modalities when teaching new material can help make sure that all students receive instruction in a way that best matches their personal learning style. Students retain information better when they have a chance to apply what they've learned and use their new skills in a hands-on way. Below are example activities teachers can use to enhance their students' learning.

- Students can work with a partner or a small group to complete some sections of each task sheet. Other sections can be completed individually or be taught to other classmates.
- Students can work individually or with a partner to become "experts" on one of the lessons, and then design an artifact (poster/model/etc.) to be displayed in the classroom.
- Students can demonstrate skills and techniques learned in the lessons by traveling to a working dairy and participating in activities such as running the parlor and moving cattle.

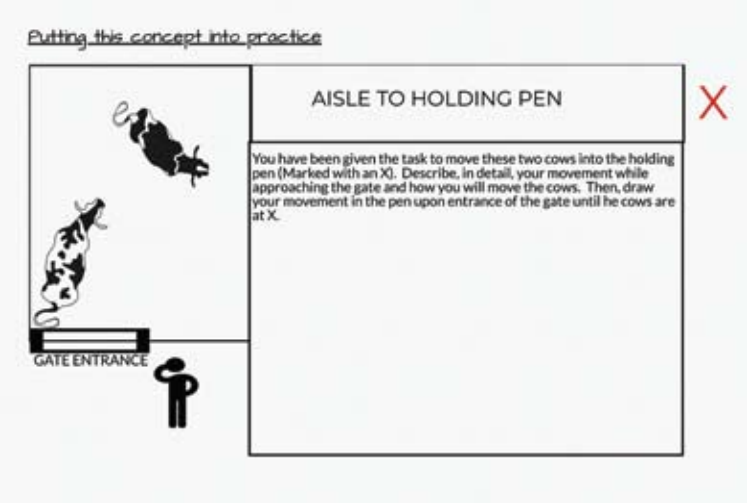


Figure 2. provides an example of a PAHDF student worksheet.

EVALUATION OF STUDENTS

Evaluation is an essential part of safety training as it gives students a chance to show what they know, as well as an opportunity for teachers to document how well students have achieved the learning objectives. This feedback is important for improving curriculum as well as help teachers determine if they need to provide additional instruction or have students continue to the next lesson/unit.

PAHDF curriculum has corresponding student worksheet that serve as summative evaluation associated with the video content. Instructors are provided alternative activities to provide supplemental experiences for learners. Additional evaluations can be designed to personalize the assessment such as a field lab experiment with animals that are accessible to the program. These performance-based assessments allow students to demonstrate techniques and handling skills on live dairy cattle.

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