

Adopt A Cow



South Dakota 4-H: Science of Agriculture



**Lessons for:
3rd-5th Grades**



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ACKNOWLEDGEMENTS

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Introduction to Adopt a Cow

Overview

The “Adopt A Cow” program virtually takes students to Garfield Dairy near Bryant, SD. Students follow their “adopted” cow and calf through-out the school year. The program starts right after the cow gives birth and follows the cow and calf through different stages of growth and development throughout the school year.

The “Adopt A Cow” program is an excellent opportunity for students to interactively learn how food gets from farm to fork while having fun. In addition to updates on their cow/calf, videos will include content designed to meet state curriculum standards. Content is geared towards 3rd-5th grade learning levels. The “Adopt A Cow” program is a collaboration between SD county 4-H programs and Riverview, LLP.

Facilitators using an online platform, from experience can use a pre-developed training created by South Dakota State University 4-H Youth Program Advisors and Riverview LLP.

Getting Connected to Adopt a Cow (Connecting to Traininghouse)

Educators who are interested in bringing Adopt A Cow to their students should contact:

- Kelly Brandlee at kelly.brandlee@riverviewllp.com
- Sara Koepke at sara.koepke@sdstate.edu
- Christine Wood at christine.wood@sdstate.edu

Educators will receive instructions for creating an account to access TrainingHouse as well as an access code for the Adopt A Cow course. Once their TrainingHouse account is created and they are self-enrolled in the course, teachers will have a pre-survey to complete which will grant them access to all of the lesson plans and supplementary materials.

There will also be pre- and post- surveys for youth to complete. Educators can print these out for youth to complete or they can request to create a classroom in TrainingHouse so that they can set up each of their students with their own access to the course (note: this requires an email account for each student). This would allow the youth to complete the surveys electronically as well as access the supplementary materials, like videos, on their own.

Throughout the program there will be various videos to engage with, but also opportunities to write and receive Moo-Mail. This is where the class can send and receive letters from their calf. This can be done solely from the educator’s account, or if the students have their own access they can each individually write to their calf.

Adopt A Cow Lesson Overview

Lesson 1: Who am I? (30 min)

In this lesson, youth will be introduced to their cow and calf pair. After birth, youth will learn how the calf is cared for.

Lesson 2: What’s in my ear? (20-30 min)

Youth will about the importance of animal identification.

Lesson 3: My Living Environment (30 min)

Youth will get a behind the scenes look into a milk parlor, what dairy cattle eat and where they hang out.

Lesson 4: What’s for lunch? (30 min)

Nutrition is important for dairy cattle. Students will learn about what they eat and how manure is used for fertilizer. Youth will make their own total mixed ration (TMR).

Lesson 5: Explore Dairy Careers and Products (30 min)

In this lesson, youth will learn about the many hands it takes in the dairy industry.

Lesson 6: Farm to Table (30 min)

Students wrap up their Adopt a Cow experience by making butter.

Education Standards: 3rd – 5th Grade

Lesson 1: Who Am I?

Educational Technology

- **K.ET.EL.2.1** Participate in teacher-led collaboration with peers and experts using video, audio, and text based resources.
- **1.ET.EL.2.2** Students will use instructional videos during learning and collaboration.
- **2.ET.EL.2.2** Use online learning spaces to engage in learning both in and out of the classroom.
- **2.ET.CT.2.1** Independently, analyze data and look for similarities in order to identify patterns and categories.

Math

- **4.MD.A** Solving problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- **5.MD.A** Convert like measurement units within a given measurement system.

Lesson 2: What's In My Ear

Educational Technology

- **K.ET.CT.1.1** With support, create a model or graph to express possible solutions to a problem.
- **1.ET.CT.1.1** Create a model or graph to visually demonstrate an understanding of a concept in a collaborative group.

Lesson 3: My Living Environment

Educational Technology

- **K.ET.EL.2.1** Participate in teacher-led collaboration with peers and experts using video, audio, and text based resources.
- **1.ET.EL.2.2** Students will use instructional videos during learning and collaboration.
- **2.ET.EL.2.2** Use online learning spaces to engage in learning both in and out of the classroom.

Math

- **3.OA.A** Represent and solve problems involving multiplication and division.
- **4.OA.A** Use the four operations with whole numbers to solve problems.
- **5.OA.A** Write and interpret numerical expressions.

ELA

- **4.RI.1** Explain what a text says explicitly and draw inferences by referring to details and examples in the text.
- **5.RI.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Lesson 4: What's For Lunch?

Educational Technology

- **K.ET.EL.2.1** Participate in teacher-led collaboration with peers and experts using video, audio, and text based resources.
- **1.ET.EL.2.2** Students will use instructional videos during learning and collaboration.
- **2.ET.EL.2.2** Use online learning spaces to engage in learning both in and out of the classroom.

Math

- **2.NBT.A** Understand Place Value.
- **2.NBT.B** Use place Value understanding and properties of operations to add and subtract.
- **3.NBT.A** Use place value understanding and properties of operation to perform multi-digit arithmetic.
- **4.NBT.A** Generalize place value understanding for multi-digit whole numbers.
- **4.NBT.B** Use place value understanding and properties of operations to perform multi-digit arithmetic.

Lesson 5: Dairy Career and Products

Educational Technology

- **K.ET.EL.2.1** Participate in teacher-led collaboration with peers and experts using video, audio, and text based resources.
- **K.ET.ID.2.1** With support, examine the possible issues of a suggested solution or prototype.
- **K.ET.ID.2.2** Demonstrate perseverance when completing a challenging task even when a task fails.
- **K.ET.ID.2.3** Verbally share suggested improvements to be made to the solution or prototype.
- **1.ET.EL.2.2** Students will use instructional videos during learning and collaboration.
- **1.ET.ID.2.1** With support, students will test ideas to determine possible solution to problems.
- **1.ET.ID.2.2** Demonstrate an understanding of given problem(s) and persevere in solving.
- **2.ET.EL.2.1** Collaborate with others using digital tools.
- **2.ET.ID.2.1** Independently test ideas to determine possible solutions to problems.
- **2.ET.ID.2.2** Reflect on the results of trial and error during problem-solving to plan next steps and improve solutions.
- **3.ET.ID.1.2** Develop a design process to solve real life problems.
- **3.ET.ID.2.1** Assess information to examine prototypes and solution to solve open-ended problems.
- **3.ET.CC.1.1** Select and use videoconferencing to communicate and learn from others. Such as: online discussions, communicate virtually.
- **4.ET.ID.1.1** Plan and implement a design process to a given problem and share your results with an authentic audience.
- **4.ET.ID.2.1** Research and solve open-ended problems.
- **4.ET.ID.2.2** Develop, test and refine prototypes as part of a cyclical design process.
- **5.ET.ID.1.1** Plan and implement a design process: identify the problem, brainstorm solutions, design solution, test and evaluate solutions, present the solution.
- **5.ET.ID.1.2** Generate ideas using or not using technology tools for a variety of projects.
- **5.ET.ID.2.1** Give an engineering design challenge, with an end goal in mind, synthesize the process collaboratively using digital tools to simulate, record, reiterate or present solutions.

Lesson 6: Farm To Cart

Educational Technology

- **K.ET.CT.1.1** With support, create a model or graph to express possible solutions to a problem.
- **1.ET.CT.1.1** Create a model or graph to visually demonstrate an understanding of a concept in a collaborative group.

Science

- **5-PS1-3** Make observations and measurements to identify materials based on their properties.

ELA

- **K.W.8** With guidance and support provide a response to a question using a combination of drawing, dictating, and writing by recalling information from experiences or gathering information from provided sources.
- **1.W.8** With guidance and support, use background knowledge and/or information gathered from sources to respond in writing to a question.
- **2.W.8** Use background knowledge and/or information gathered from sources to respond in writing to a question.

Agriculture Literacy

Plants and Animals for Food, Fiber and Energy Outcomes

- Explain how farmers/ranchers work with the lifecycle of plants and animals (planting/breeding) to harvest a crop
- Identify animals involved in agriculture production and their uses (i.e., work, meat, dairy, eggs)
- Identify examples of feed/food products eaten by animals and people

Culture, Society, Economy and Geography Outcomes

- Discuss what a farmer does
- Trace the sources of agriculture products used daily