

21st Century Classroom Lesson Plan

IDAHO STATE DEPARTMENT OF EDUCATION
DEVELOPED ACCORDING TO THE CHARLOTTE DANIELSON FRAMEWORK AND
UNIVERSAL DESIGN FOR LEARNING (UDL)

Charlotte Danielson Framework - This lesson plan incorporates all of the components found in **Domain 1: Planning and Preparation** of the Danielson Framework for Teaching; **1a: Demonstrating Knowledge of Content and Pedagogy**; **1b: Demonstrating Knowledge of Students**; **1c: Setting Instructional Goals**; **1d: Demonstrating Knowledge of Resources**; **1e: Designing Coherent Instruction**, and; **1f: Assessing Student Learning**.

UDL – This lesson plan incorporates the primary components of Universal Design for Learning (UDL) which is an educational approach with three primary principles including;

1. **Multiple means of representation**, to give diverse learners options for acquiring information and knowledge,
2. **Multiple means of action and expression**, to provide learners options for demonstrating what they know,
3. **Multiple means of engagement**, to tap into learners' interests, offer appropriate challenges, and increase motivation

Lesson plans created by educators for submission into Idaho's Learning Management System (LMS) Schoolnet must include these components. For information on Universal Design for Learning including a tutorial and model lessons access the Center for Applied Special Technology (CAST) website at <http://www.cast.org/>

Bloom's Revised Taxonomy – This lesson plan includes Bloom's Revised Taxonomy as a component.

*NOTE: Not all areas are required for every lesson. * INDICATES OPTIONAL areas to be included only if applicable to the specific content/grade level lesson. This lesson plan template is based upon the CAST UDL Lesson Plan Builder but includes extra fields specific for submission into Idaho's Schoolnet Learning Management System and must be completely filled in (unless labeled * for optional) to facilitate entry into a searchable state-wide and national online database. Educators are not limited to the space provided as the table will expand to fit the entries.

Name: SDE-Child Nutrition Programs	Email: childnutrition@sde.idaho.gov
District Name:	School Name:
District Number:	School Address:
School Phone:	Administrator Name:

Lesson Overview

Unit: Incredible Edible Idaho Farm to School Lesson Series	
Lesson Title: Idaho Cherries	
Subject: Idaho Cherries *Subheading: A Healthy Choice	
Duration: 40 minutes	Grade Level(s): 3rd-5th
Course: Social Studies, Science, Math	
Big Idea or Focused Investigation: Cherry production is an important industry in Idaho. Cherries are a delicious summer fruit that many people enjoy eating. Besides being delicious, why are cherries a healthy treat?	
Enduring Understandings: Idaho cherries are part of a healthy meal. Idaho cherries provide many nutrients that help us learn, play, and grow. Cherry production is an important industry in Idaho. There are many steps in the production of Idaho cherries from tree to plate.	
Essential Question/s: Why is cherry production important to Idaho and its citizens?	

Description

Lesson Description: Describe the primary nature (e.g. hands-on, inquiry, project based etc.), whether interdisciplinary or single-subject and how it relates to a broader unit. Being clear, descriptive, and specific will help to develop the online keyword searches within Schoolnet. Make sure you provide enough information on this lesson plan that it can be replicated.

Description: This lesson plan is designed to provide students with information on cherries from both an agricultural and a nutritional perspective. Students will learn where Idaho cherries are grown and about different types of cherries. Additionally, students will become aware of nutrition facts related to cherries. An optional cherry sensory activity and 2 math activity sheets accompany this lesson. A handout containing cherry nutrition facts and a recipe can be sent home with students at the end of this lesson.

Goals and Objectives

(Framework Domain 1c: Setting Instructional Goals)

Goals and Objectives: The overall goal, as well as objective, outlining the concept, knowledge, skill, or application students can demonstrate upon lesson completion. This may be the same as or very similar to the content standard; however, it could be narrower or perhaps broader. Objectives may be stated in the form of critical questions students should be able to answer.

Unit/Lesson Goal/s: Students will gain a greater appreciation for cherry production in Idaho. Students will make connections between locally grown products and healthy eating.

Lesson Objectives: The learner will restate and summarize why cherries are good/healthy for us. The learner will solve mathematical word problems using their skills in multiplication and addition/subtraction of fractions.

Standards

Standards: A lesson may address a single content standard, two or more content standards from the same subject area, or content standards from two or more subject areas and or grades. (Use the drop down menu provided for each if submitting online within Schoolnet or use the internet links provided to access, then copy and paste into the document)

Idaho State Content Standards:

3-5.H.1.1.1 Describe the relationship between healthy behaviors and personal health.
3-5.H.5.1.5 Choose a healthy option when making a decision.

Idaho Core Standards (CCSS):

Speaking and Listening:

SL.3-4.4: Present information, findings and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

Math:

3.OA.3: Use multiplication within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.

4.OA.2: Multiply to solve word problems involving multiplicative comparison.

4.NF.3a: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

4.NF.3d: Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

***National Education Technology Standards:**

*Professional Technical Standards
*English Language Development (ELD) Standards:
Idaho Extended Content Objectives: (Standards for Students With Significant Cognitive Disabilities)

Learning Outcomes – Begin with the end in mind

(Framework Domain 1e: Designing Coherent Instruction)

Learning Outcomes: How does this lesson support the unit goals / enduring understandings? How does this lesson build on the previous lesson in this instructional sequence? How does this lesson support the next lesson in this instructional sequence?

Create, Present, Perform, Exhibit, Report, Respond/Reflect. Students will be able to:

Learning Outcome: Students will respond to questions about why Idaho cherries are healthy and/or good for us.
*Learning Outcome: Students will accurately complete the “Cherry Multiplication” and “Cherry Delight Bakery” math activity worksheets.
Checking for Understanding Questions: Why are Idaho cherries healthy and good for us to eat? Why is cherry production important to Idaho and its citizens? What makes Idaho an ideal climate for growing cherries?

Bloom’s Revised Taxonomy

Which levels of Bloom’s Revised Taxonomy are targeted? Check one or more.

(Use drop down online within Schoolnet or checkbox)

X	Remembering	X	Analyzing
X	Understanding	X	Evaluating
X	Applying	X	Creating

Methods and Instructional Strategies

(Framework Domain 1a: Demonstrating Knowledge of Content and Pedagogy)

Vocabulary: List all key vocabulary words necessary for students to understand the concepts as well as meet the standards, goals and objectives of the lesson.

Tart – sour or acid in taste; sharp; biting
Pit – the hard seed at the center of an apricot, cherry, plum, or certain other fruits
Nutrient – a nourishing substance in a food
Phytochemical – a naturally occurring substance in food that the body can use to protect from disease
Ton – a unit of weight equal to two thousand pounds or 907.185 kilograms, used in the United States and Canada; short ton

Introduction/Anticipatory Set:

1. Before you begin the lesson, make sure you prepare materials. You will need to:
 - Read the PowerPoint presentation and print out all slides, including notes. The notes will not be visible when you are viewing the PowerPoint, so it is important to print them out beforehand. To print the slides WITH notes, select "Print," then under the print menu, select the dropdown menu labeled "Print What." Select "Notes Pages." When you print, it will print each slide, along with the notes at the bottom.
 - Discussion information for each PowerPoint slide is contained below the slide within the presentation.
 - Italicized instructor cues include questions for the class.
 - Hang up the "Incredible Edible Idaho: Cherry" poster in the front of the class to use as a visual aid.
 - Make enough copies of the Cherry Delight Festival worksheet, the Cherry Multiplication worksheet, and the Idaho Cherry Take Home Handout for each student in your class.

To begin the lesson:

2. Display the first slide in the Power Point and introduce the lesson: Idaho Cherries.
3. While displaying slide two, please pose the following question: "How many students in the class have tried a cherry before?" (Pause for a show of hands.) "Talk with your neighbors or at your tables and share how cherries taste or when you have eaten cherries before."

Instructional Strategies: direct instruction, whole class, partners

Build, Apply Knowledge:

4. Next, go through slides 2-8. After completing the information in Slide 8: Parts of a Cherry, teachers can do the optional activity of having students complete a "sensory experiment" with a fresh Idaho cherry. Encourage students to explore a cherry with their 5 senses: sight, taste, smell, sound, and touch. Make a classroom chart with 5 sections – one for each of the 5 senses. Label each section appropriately. Ask students to volunteer words to describe how a cherry: feels, tastes, looks, smells, and sounds. Write the words on the classroom chart.
5. Continue through the slides 9-11. After presenting the information, have students turn to a neighbor and restate and summarize why cherries are good for us to eat. Teacher should observe students correctly explaining to a classmate why cherries are good and/or healthy for us to eat.
6. Next, complete presentation of information in slides 11-21.

***Higher Order Thinking Questions:** How does Idaho cherry production help the economy in the state?

***Provide Guided Practice:**

7. Teacher should hand out the "Idaho Cherries Take Home Handout." Read through the information together as a review of what was learned. Discuss information presented on the handout. Send this paper home when finished.

***Provide Independent Practice:**

8. On slide 22, the teacher needs to explain the worksheets and have students complete the assignments, "Cherry Multiplication" and "Cherry Delight Bakery." For students working at different levels, please follow the differentiated instruction ideas at the bottom of this lesson plan (labeled: Extension and Remediation) or in the Notes section of the Power Point presentation at the bottom of slide 22.

Wrap Up/Synthesis/Closure:

9. To close the lesson, redirect students to the essential question: "Now that we have finished our lesson, let's review why cherries are a healthy treat."

Materials

(Framework Domain 1d: Demonstrating Knowledge of Resources)

*Digital eLearning Materials: URL (Web Site Link/s) to online digital text or materials, games, activities, programs, tools or video – List as many as necessary.

Title: Idaho Cherry PowerPoint Presentation

URL: <http://www.sde.idaho.gov/site/cnp/farmToSchool/lessonPlans/>

Annotation: This PowerPoint presentation is designed to provide students with information on cherries from both an agricultural and a nutritional perspective. Students will learn where Idaho cherries are grown and about different types of cherries. Additionally, students will become aware of nutrition facts related to cherries. An optional sensory activity and two math activity sheets accompany this lesson. A handout containing cherry nutrition facts and a recipe can be sent home with students at the end of this lesson.

Title: Idaho Cherry Take Home Handout

URL: <http://www.sde.idaho.gov/site/cnp/farmToSchool/lessonPlans/>

Annotation: This handout provides students with a resource, including a recipe, to share with family members, reinforcing the connection between home and school.

Title: “Cherry Delight Bakery” & “Cherry Multiplication” Activity Worksheets

URL: <http://www.sde.idaho.gov/site/cnp/farmToSchool/lessonPlans/>

Annotation: Students will complete the “Cherry Delight Bakery” and “Cherry Multiplication” math worksheets as part of this lesson progression. The teacher should determine the best format for this portion of the lesson based on students’ needs.

***Technology Tools and Equipment (Including UDL-Assistive Technology Software and Hardware):** Examples of technology tools might include hardware as well as software; e.g. document camera, digital camera, tablet, iPad, iPod, Interactive Board, calculator, geotracking, etc. Examples of UDL -assistive technology; e.g. text to speech, speech to text, switch or adapted keyboard, screen reader or word prediction etc. (List as many as necessary)

1. Computer
2. LCD Projector

***Other Materials:** Those required by teacher and/or students, include preparation or other special instructions; e.g. paper based materials such as text books, science equipment or supplies, art materials or equipment. (List technology items in the previous field.) (List as many as necessary)

1. Print enough copies of “Cherry Multiplication” worksheet (if used), “Cherry Delight Bakery” worksheet, and “Idaho Cherry Take Home Handout” for the entire class prior to teaching this lesson.
2. Pencils
3. Scratch/notebook paper

***Safety Considerations** (e.g. for Science and Professional Technical Education Plans)

UDL - Differentiation According to Student Needs

(Framework Domain 1b: Demonstrating Knowledge of Students)

Differentiation of curriculum, instruction and assessment using (UDL) Universal Design for Learning

Principles to address diverse student needs including students with an IEP or 504, cultural linguistic needs e.g., (ELL, SIOP) as well as providing opportunities for extension and remediation if indicated.

UDL: Multiple means of;

- **Action and Expression** – Students will have the opportunity to talk with elbow neighbors multiple times, including explaining/summarizing why Idaho cherries are healthy for us.
- **Engagement** – Students will have the opportunity to work in many different ways throughout this lesson: whole group discussion, elbow neighbors or pairs, small group, and individually.
- **Representation** – Students can work to demonstrate their math skills on the 2 accompanying math worksheets. Extension activities offer students the chance to create their own word problem for the “Cherry Delight Bakery” worksheet.

ELL, SIOP: (Modifications to Instruction) Focus on difficult vocabulary to help students who are ELL. Consider working with students or having them work in groups to complete the math worksheets.

***Other Means of Differentiation:**

Extension: Modifications for students who already know or can do the primary learning objective, e.g. activities that apply the concept to new content or extend opportunities for further research and exploration.

***1. Extension:** For higher grades, the “Cherry Multiplication” worksheet may be left out as it is meant for beginning multipliers. After completing the “Cherry Delight Bakery” worksheet, students who are advanced or need extension activities should write their own story problem(s) to go along with the “Cherry Delight Bakery” worksheet. This can be done individually or in partners.

Remediation: Explain what may be done for students who need extra preparation or assistance before, during, or after the lesson.

***1. Remediation:** Depending on the abilities of the students, worksheets can be completed individually, in partners, small groups, or a combination of the above. If the skills being worked on in the “Cherry Multiplication” or “Cherry Delight Bakery” activity worksheets are budding or new skills for the entire class, teachers can do the math problems together with the students, modeling the proper mathematical techniques.

Assessment

(Framework Domain 1f: Assessing Student Learning)

Assessment: (Optional) May indicate the type of assessment most appropriate, or it may provide sample questions, entire tests, portfolio guidelines or rubrics if available submitted along with the lesson plan as attachments.

***Formative/Ongoing Assessment:**

***Summative/End Of Lesson Assessment:** Teachers can evaluate student worksheets to see if students have mastered the skills. Students working on multiplication skills will successfully complete the “Cherry Multiplication” math worksheet. Students will successfully solve mathematical word problems on the “Cherry Delight Bakery” worksheet using their skills in addition/subtraction of fractions at proficiency for grade level. Students will correctly explain to a classmate why cherries are good and/or healthy for us.

Educator Self-Reflection

Please use this area to self-reflect on the successes and areas of improvement for your own planning purposes. (You may use this area then delete for submission online as the contents of the self-reflection section is not intended to be shared.)

***Self-Reflection – Successes and Areas of Improvement**

The State Department of Education- Child Nutrition Programs thanks Megan Cuellar of Potlatch Elementary, Leah Clark from the Idaho Department of Agriculture, and Tracy Son for their efforts to create this lesson.

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