

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 Apples	
Subject: Health, Math *Subheading: Nutrition	
Duration: 30-40 minutes	Grade Level(s): 3rd-5th
Course: –	
Big Idea or Focused Investigation: Consumption of fruits, such as Idaho apples, can be part of a healthy diet. Idaho is the 10th largest producer of apples in the United States. What makes certain parts of Idaho the perfect spot for growing and harvesting apples?	
Enduring Understandings: Idaho apples are part of a healthy meal. Idaho apples provide many nutrients that help our bodies grow and stay healthy. Apple production is an important industry in Idaho.	
Essential Question/s: Why is apple production important to Idaho and its citizens? Where do apples fit into a healthy, balanced diet as shown on the My Idaho Plate model?	

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 apples from both an agricultural and a nutritional perspective. Students will learn where Idaho apples are grown and about different types of apples. Additionally, students will become aware of nutrition facts related to apples. Two papers, "3 Truths & a Lie" and "Apple Fractions!" math activity sheet, provide assessment for this lesson. A handout containing apple 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 apple production in Idaho. Students will make connections between locally grown products and healthy eating. Students will practice fractions using apple slices.

Lesson Objectives: The learner will complete "3 Truths & a Lie" paper to gather facts about apples. The learner will complete the provided "Apple Fractions!" worksheet in groups and identify and write commonly used fractions. The learner will correctly write mathematical sentences using fractions and solve.

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):

SL.4.1:

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

- a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- b. Follow agreed-upon rules for discussions and carry out assigned roles.
- c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
- d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

Math:

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

***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 complete “3 Truths & a Lie” paper to discern facts about Idaho apples from the presentation.

***Learning Outcome:** Students will accurately complete the “Apple Fractions!” math activity worksheet.

Checking for Understanding Questions: Why are Idaho apples healthy and good for us to eat? Why is apple production important to Idaho and its citizens? What makes Idaho an ideal climate for growing apples?

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		Analyzing
X	Understanding		Evaluating
X	Applying		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.

Nutrient – a nourishing substance in a food

Variety – something differing from others of the same general kind

Phytochemicals – a chemical compound (as beta-carotene) occurring naturally in plants

Orchard – a place where people grow fruit trees

Introduction/Anticipatory Set:

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 “Incredible Edible Idaho: Apple” poster in the front of the class to use as a visual aid.
- Make enough copies of “3 Truths & a Lie,” “Apple Fractions!,” and “Idaho Apples” take home handout for each student in your class.

To prepare for the math activity and snack:

- The number of apples you need for this lesson will depend on the number of students in your class. Each student will get $\frac{1}{2}$ of a sliced apple for snack at the end of the lesson. In addition, each group of 4 students will need 11 apple slices for the math lesson. (You may choose to use the math lesson slices as part of the snack for later so you don’t waste apples.) For example, a class of 20 students would need a minimum of 10 apples if you plan to use your math activity apples as part of the snack at the end of the lesson (enough so you could give each student 4 apple slices after the math lesson is done.)
- Depending on class size, students’ desks should be placed in groups of 4.
- Write the numbers 1-4 on paper plates for each group. Each group should have 4 plates.
- Using a knife or 8-piece apple slicer, slice all apples into 8 slices.
- Separate apple slices onto 4 numbered plates for each group as listed below:
 - Plate #1 will contain 1 apple slice
 - Plate #2 will contain 3 apple slices
 - Plate #3 will contain 5 apple slices
 - Plate #4 will contain 2 apple slices

To begin the lesson:

1. Display the first slide in the PowerPoint and introduce the lesson: Idaho Apples.
2. Ask the introductory questions: “How many of you have heard the phrase, ‘An apple a day keeps the doctor away’? What do you think it means? Why would eating an apple keep a doctor away?”

Instructional Strategies: direct instruction, small group, partners

Build, Apply Knowledge:

3. Pass out the papers “3 Truths & a Lie” to students.
4. Move on to slide 2 of the PowerPoint. Read the directions for the “3 Truths” activity: “As we learn about Idaho apples in today’s lesson, I want you to listen carefully to the information. Three of the statements above are true and will be discussed in the PowerPoint presentation. One of the statements is a lie. You will need to identify which statement is a lie, then re-write it to make the statement true. This will need to be turned in before we are finished today.”
5. Continue through the slides 3-10. Note: Slide 6 offers some extension activities in the notes section to learn more about Johnny Appleseed.

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

***Provide Guided Practice:**

6. After presenting the information, encourage students to turn and talk with their neighbor about the “3 Truths & A Lie” activity. Have them share their answer with their partner.
7. Move on to slide 11 and pass out the “Apple Fractions!” worksheet and 4 paper plates prepared ahead of time with numbers and apple slices on them. You will need 4 plates per groups of 4 students.
8. Go through the example for Part 1 on slide 12 with all students.
9. Have students work in their groups to complete Part 1 of the “Apple Fractions!” worksheet. Tell them to STOP when they finish Part 1.
10. Go through the example for Part 2 on slide 13 with all students.
11. Have students work in their groups to complete Part 2 of the “Apple Fractions!” worksheet.

***Provide Independent Practice: —**

Wrap Up/Synthesis/Closure:

12. When groups finish with their assignment, show slide 14 and give them the final instructions for wrapping up the lesson and eating the snack.

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 Apples PowerPoint Presentation

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

Annotation: This PowerPoint presentation is designed to provide students with information on apples from both an agricultural and a nutritional perspective. Students will learn where Idaho apples are grown and about different types of apples. Additionally, students will become aware of nutrition facts related to apples. Two assessments, “3 Truths & A Lie” and “Apple Fractions!” worksheets, accompany this lesson. A handout containing apple nutrition facts and a recipe can be sent home with students at the end of this lesson.

Title: “Idaho Apples” 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: “3 Truths & A Lie” Worksheet

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

Annotation: Students will listen to the PowerPoint presentation and determine which of the 4 statements on the “3 Truths & A Lie” worksheet is not true. Students will then rewrite the lie to make it true.

Title: “Apple Fractions!” Worksheet

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

Annotation: Students will complete this worksheet in groups of 4. They will practice writing and adding fractions together.

Title: “Johnny Appleseed” Storybook Video

URL: <http://app.discoveryeducation.com/player/view/assetGuid/B932E29C-C030-40B7-AD54-68E928010DD7>

Annotation: This is an optional video on Discovery Education to give students more information about Johnny Appleseed. It is 10 minutes in length.

Title: “Johnny Appleseed” Video Quiz

URL: <http://tools.discoveryeducation.com/quiz/viewQuiz.cfm?guidAssetId=77AD9029-70FA-478C-AD57-9B3854DC6A96&assetGuid=77AD9029-70FA-478C-AD57-9B3854DC6A96&bInPopup=1&strEditCopy=Copy&bInPlayer=1>

Annotation: This is a quiz that goes along with the video on Discovery Education about Johnny Appleseed.

***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 the “3 Truths & A Lie” worksheet, “Apple Fractions!” worksheet, and “Idaho Apples” take home handout for the entire class prior to teaching this lesson.
2. Pencils
3. Idaho apples (at least ½ apple per student)
4. Knife or 8-slice apple slicer
5. Small paper plates (4 per group, labeled 1-4)
6. “Incredible Edible Idaho: Apple” poster for reference

***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 partners to check their answers for the “3 Truths & A Lie” worksheet. They will work in small groups to complete the “Apple Fractions!” worksheet. The visual aid of having the Idaho Apples PowerPoint presentation and the “Incredible Edible Idaho: Apple” poster will help students who need visual supports.
- **Engagement** – Extension activities offer students the chance to create their own problem(s) for the “Apple Fractions!” worksheet and solve them.
- **Representation** – Students can work to demonstrate their math skills on the accompanying math worksheet. The use of the apple slices as manipulatives can help students who may have more difficulty with fractions. Students will have the opportunity to work in many different ways throughout this lesson: whole group discussion, partners/pairs, and small group.

ELL, SIOP: (Modifications to Instruction) Focus on difficult vocabulary to help students who are ELL. Make sure ELL students have strong English speaking students in their group to help them with the fractions worksheet.

***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 advanced or older students, you may choose to have them create their own word problem(s) for the “Apple Fractions!” worksheet and answer them.

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

***1. Remediation:** Depending on 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 “Apple Fractions!” activity worksheet 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:** Teacher observations of students who are participating in answering questions about apples during the Idaho Apples PowerPoint presentation. Students can correctly explain why apples are good and/or healthy for us.

***Summative/End Of Lesson Assessment:** Students should successfully complete the “3 Truths & A Lie” and “Apple Fractions!” worksheets. Teachers can evaluate student worksheets to see if students have mastered the skills.

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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