

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 Leafy Greens	
Subject: Health, Language Arts *Subheading: Nutrition	
Duration: 40 minutes	Grade Level(s): 3rd-5th
Course: –	
Big Idea or Focused Investigation: Eating vegetables, like Idaho leafy greens, is an important part of a healthy diet. Many farms in Idaho produce leafy greens such as lettuce, spinach, cabbage, kale, brussels sprouts, and collards.	
Enduring Understandings: Idaho leafy greens are part of a healthy meal. Idaho leafy greens provide many vitamins and nutrients that help our bodies grow and stay healthy. There are many different varieties of leafy greens that can be grown in Idaho.	
Essential Question/s: Why should the consumption of vegetables, such as Idaho leafy greens, be a part of a healthy diet? Which leafy greens are highest in nutrition? Where do leafy greens 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 leafy greens from both an agricultural and a nutritional perspective. Students will learn where Idaho leafy greens are grown and about different types of leafy greens. Additionally, students will become aware of nutrition facts related to leafy greens. Students will work in a group to write the recipe for a balanced “whole meal” salad that includes Idaho leafy greens. A handout containing leafy greens 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 leafy greens production in Idaho. Students will make connections between locally grown products and healthy eating. Students will collaborate in a group to create a recipe for a “whole meal” salad with leafy greens.

Lesson Objectives: The learner will observe and gather information during the PowerPoint presentation and corresponding video clips. The learner will collaborate with others in a group to create a recipe for a “whole meal” salad including Idaho leafy greens.

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.1.1.6 Describe the impact of health behaviors on body systems.

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.

SL.4.4: Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

L.4.6: Acquire and use accurately grade-appropriate general academic and domain specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife*, *conservation*, and *endangered* when discussing animal preservation).

***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 observe and gather information during the PowerPoint presentation and corresponding video clips.

Learning Outcome: Students will take on an active role in creating a recipe for a “whole meal” salad including Idaho leafy greens.

Checking for Understanding Questions: Why are Idaho leafy greens healthy and good for us to eat? What are some of the different kinds of leafy greens we grow in Idaho? How can we tell which leafy greens are more nutritious just by looking at them?

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.

Hydroponics – the growing of plants in nutrient solutions

Leafy – having broad leaves or consisting mainly of leaves

Commercially – buying and selling of goods especially on a large scale and between different places

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," under the print menu and 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: Leafy Greens" poster in the front of the class to use as a visual aid.
- Make enough copies of "Idaho Leafy Greens Salad Recipe" (for students to take home as an *optional* homework assignment), the "My Idaho Plate" placemat, and the "Idaho Leafy Greens" take home handout for **each student in your class**.
- Also, make enough copies of "Build-A-Meal: Salad Bar Matchups" (+1 extra copy to use as an example), the "Idaho Leafy Greens Salad Recipe," and the "My Idaho Plate" placemat for **each group to have 1 copy**. You may choose to encourage groups to not write on the "Build-A-Meal" activity sheet so these can be used in the future.

1. Write the words "Leafy Greens" on the board. Read the definition for "leafy" as written in the vocabulary section above. Ask students, "Does anyone know what the term 'leafy greens' means? What do you think we will be talking about today?" Invite student answers. Under the term "leafy greens" on the board, start a list of any examples of leafy green vegetables that students give you in their descriptions.
2. "Today, we will be learning about some different kinds of leafy green vegetables. Does anyone know another kind of vegetable that is considered a 'leafy green' that is not already on our list?" Write down any other correct student answers. "We will be listening for more leafy greens to add to our list throughout the lesson today. Be sure to listen carefully to the video clips, as well as the PowerPoint information, to see if you hear any more that can be added."

Instructional Strategies: direct instruction, whole group, small group

Build, Apply Knowledge:

3. Start the PowerPoint presentation. Use discussion information and questions given on the “notes” part for each slide (NOTE: this will not be visible when viewing the PowerPoint. To print this information beforehand, please read through the section above under Introduction/Anticipatory Set.)
4. Go through slides 1-9 and discuss leafy green varieties and nutrition. If you have mentioned other leafy greens that are not already written on your list on the board, make sure to add them as they come up.
5. When you get to slide 10, you will be playing a “Name That Leafy Green!” game as a class. Each time you click the mouse, a picture of a new leafy green will appear. Allow students to guess what the answer is before clicking the mouse again to reveal the name. After students have guessed and you have revealed the name for all 6 leafy greens, click on the word “Video” in the bottom right-hand corner of the screen to view a short (2:47) Discovery Education video segment about growing and harvesting different leafy greens.
6. After reading through the information on slide 11, click on the word “Video” in the bottom right-hand corner of the screen to view a short (1:20) Discovery Education video segment about growing and harvesting lettuce.
7. Slide 12 discusses another method of growing and harvesting lettuce called “hydroponics.” Read through the slide and notes information, then click on the word “Video” in the bottom right-hand corner of the screen to view a short (4:46) Discovery Education video segment about growing hydroponic lettuce. You can discuss with students that this method of growing lettuce is less traditional or conventional, but there are growers in Idaho who grow lettuce using hydroponics.
8. Again, make sure you have added any new leafy greens that may have been discussed in the video segments to your classroom list. Finish up the PowerPoint presentation.

***Higher Order Thinking Questions:** What are some of the benefits of growing hydroponic lettuce? Can you think of reasons why farmers may choose to do traditional field planting instead?

***Provide Guided Practice:**

9. Show students the “Build-A-Meal: Salad Bar Matchups” activity. You will do one example of this activity together as a class. Read through the directions with students. Put up the “My Idaho Plate” placemat for a reference as you are doing the activity.
10. “We are going to choose some ingredients for our salad. Since I don’t need to actually write on my ‘Build-A-Meal’ paper, I will write down my ingredients and amounts for our recipe on the ‘Idaho Leafy Greens Salad Recipe’ paper. You guys are going to help me choose what ingredients will be going in our salad recipe. Remember, we can’t go over the total serving amount provided, but we can choose different ingredients from each group, if we want.” If you have a document camera or an ELMO available, you may choose to do this using those tools.
11. Have students help you choose ingredients and amounts for each food group. Write the ingredients chosen on the “Idaho Leafy Greens Salad Recipe” sheet. Use the key on the “Build-A-Meal” paper to help students make sure they are not going over the serving amount for each food group. After all ingredients and amounts are written on the recipe page, demonstrate with one or two ingredients how the illustrators will write the name of the ingredient, then draw a picture and color it. Tell students they will have only about 10-15 minutes to complete this activity as a group.

***Provide Independent Practice:**

12. Split students up into groups of 4. Each group will have: 1 recorder (to write down the ingredients), 2 illustrators (to draw pictures of the ingredients), and 1 reporter (to share the recipe with the class after they are finished). The reporter can also serve as the task manager/ time keeper during the activity to make sure everyone is using their time wisely and working quickly.
13. Have each group take a moment to share their recipe with the class.

Wrap Up/Synthesis/Closure:

14. "For even more fun you can do the 'Idaho Leafy Greens Salad Recipe' at home. To complete this task, you will need to choose ingredients from each of the 'My Idaho Plate' food groups to be included in your salad. You will write down your ingredients and the amounts on the 'Idaho Leafy Greens Salad Recipe' page and then help your mom or dad make the salad using the ingredients you chose! After you turn in your recipe and report back to me on how you liked your salad, you will get the 'extra credit.'"
15. Pass out copies of "Idaho Leafy Greens Salad Recipe" (for students to take home as an optional homework assignment), the "My Idaho Plate" placemat, and the "Idaho Leafy Greens" take home handout for each student in your class.
16. NOTE: There is another OPTIONAL activity that can be paired with this lesson for math. The assignment is called "Leafy Greens Math Problems" and is about a gardener planting lettuce and spinach crops. Feel free to use this lesson if you have time, substitute it for the "Idaho Leafy Greens Salad Recipe" activity, or use it as an extension activity for students who finish work early.

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 Leafy Greens PowerPoint Presentation

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

Annotation: This PowerPoint presentation is designed to provide students with information on leafy greens from both an agricultural and a nutritional perspective. Students will learn where Idaho leafy greens are grown, how they are harvested, and about different types of leafy greens. Additionally, students will become aware of nutrition facts related to leafy greens. A handout containing leafy greens nutrition facts and a recipe can be sent home with students at the end of this lesson.

Title: "Incredible Edible Idaho: Leafy Greens" poster

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

Annotation: This link provides the poster referred to in the introduction of the lesson. The State Department of Education, Child Nutrition Programs and the Idaho Department of Agriculture support Farm to School activities in the state of Idaho. Several Idaho schools have introduced Farm to School activities in their classrooms and cafeterias.

Title: Idaho Leafy Greens 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: "Build-A-Meal: Salad Bar Matchups" Activity Sheet

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

Annotation: This packet will be a tool for students to use with a group to create their own "whole meal" salad recipe. Encourage students to not write on the packet and save for future use.

Title: “Idaho Leafy Greens Salad Recipe” Activity Sheet

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

Annotation: This paper will be used within student groups to record the ingredients for their recipe and illustrate pictures of the ingredients. You can also choose to send home an extra copy for students to do at home for ‘extra credit.’

Title: “My Idaho Plate” Placemat

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

Annotation: This tool can be sent home with students to accompany their “Idaho Leafy Greens Salad Recipe” optional homework assignment. They will need to refer to this paper to make sure they get ingredients from each of the food groups on “My Idaho Plate” in their salad recipe.

Title: “Leafy Greens Math Problems” Activity Sheet – OPTIONAL

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

Annotation: Help Sally plant her garden! This math assignment can be used as an OPTIONAL activity in any of the following ways: feel free to use this lesson if you have time, substitute it for the “Idaho Leafy Greens Salad Recipe” activity, or use it as an extension activity for students who finish work early.

Title: ‘Growing and Harvesting Leafy Greens’ Discovery Education Video Segment (2:47)

URL: <http://app.discoveryeducation.com/player/view/assetGuid/7D76AD0C-7C71-40ED-9867-E1095A9051E1>

Annotation: This short Discovery Education video shows students about different leafy greens, including how they are grown and harvested.

Title: ‘Growing and Harvesting Lettuce’ Discovery Education Video Segment (1:20)

URL: <http://app.discoveryeducation.com/player/view/assetGuid/5AE1F504-A385-4282-A6F3-BB3E5DF9F4F4>

Annotation: This short Discovery Education video shows students about different kinds of lettuce, including how they are grown and harvested.

Title: ‘Hydroponic Lettuce’ Discovery Education Video Segment (4:46)

URL: <http://app.discoveryeducation.com/player/view/assetGuid/2531292F-1783-4E69-9F19-EF4546D1A725>

Annotation: This Discovery Education video shows students about a different method of growing lettuce called ‘hydroponics.’ It follows a hydroponic lettuce crop through the planting, transplanting, and eventually harvest.

***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
3. ELMO or Document Camera (Optional)

***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 “Idaho Leafy Greens Salad Recipe” (for students to take home as an optional homework assignment), the “My Idaho Plate” placemat, and the “Idaho Leafy Greens” take home handout for each student in your class.
2. Print enough copies of “Build-A-Meal: Salad Bar Matchups” (+ 1 extra copy to use as an example), “Idaho Leafy Greens Salad Recipe,” and the “My Idaho Plate” placemat for each group to have 1 copy.
3. Pencils

***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 work in small groups to create a salad recipe including Idaho leafy greens. The visual aid of having the Idaho Leafy Greens PowerPoint presentation and “Incredible Edible Idaho: Leafy Greens” poster will help students who need visual supports. Also, the video segments may help some students make sense of how leafy greens are grown and harvested.
- **Engagement** – Students will work closely with other members of their group to create a “whole meal” salad recipe including Idaho leafy greens.
- **Representation** – Students will have the opportunity to express themselves through the group project. Whether that is through recording, illustrating, or being the reporter. Students will have the opportunity to work in many different ways throughout this lesson: lecture, whole group discussion, 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 Idaho leafy greens recipe activity.

***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 do more research about Idaho leafy greens. You could give them a topic (for example, leafy greens growth cycle, harvest, hydroponics, nutrition, or history) and have them present their findings to the class.

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

***1. Remediation:** When grouping students for completing the Idaho leafy greens recipe activity, you may choose to have students with stronger language or organizational skills mixed with students who may struggle with those areas. This way, they can offer support when creating the recipe together.

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 leafy greens during the Idaho Leafy Greens PowerPoint presentation. Students can correctly explain why leafy greens are good and/or healthy for us.

***Summative/End Of Lesson Assessment:** Students should successfully participate in creating a salad recipe including Idaho leafy greens. Teacher can observe this to ensure active participation from all. The “Idaho Leafy Greens Salad Recipe” paper can be turned in and scored. You could also create a quick rubric to use when evaluating students on their group participation.

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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