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 Trout	
Subject: Health, Language Arts ***Subheading:** Nutrition	
Duration: 40 minutes	**Grade Level(s):** 3rd-5th
Course: —	
Big Idea or Focused Investigation: Eating meat and protein, like Idaho trout, is an important part of a healthy diet. Idaho is the largest trout producer in the United States. Trout are raised on trout farms.	
Enduring Understandings: Idaho trout are part of a healthy meal. Idaho trout provide many vitamins and nutrients that help our bodies grow and stay healthy. The life cycle of a commercially grown Idaho trout starts as an egg and ends with the fish being sold to restaurants or grocery stores all over the country.	

Essential Question/s: Where do trout fit into a healthy, balanced diet as shown on the My Idaho Plate model? Why should the consumption of protein, such as Idaho trout, be a part of a healthy diet? What is the life cycle of a farm raised Idaho trout?

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 trout from both an agricultural and a nutritional perspective. Students will learn where Idaho trout are farmed and raised. They will be introduced to the different types of trout. Additionally, students will become aware of nutrition facts related to trout. Students will work to complete a trout life cycle assignment by putting the stages of a farm raised Idaho trout in order and then writing a paragraph using the life cycle information. A handout containing trout 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 commercial trout production in Idaho. Students will make connections between locally grown products and healthy eating. Students will sequence the events of a trout's life cycle in order and then write a corresponding paragraph.

Lesson Objectives: The learner will observe and gather information during the PowerPoint presentation and corresponding video clip. The learner will write a paragraph about the life cycle of a trout after putting the life cycle events in the correct order.

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):
RI.4.5: Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
c. Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).
d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
e. Provide a concluding statement or section related to the information or explanation presented.
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 clip.

Learning Outcome: Students will sequence the events in the life cycle of a farm raised Idaho trout.
Learning Outcome: Students will write a paragraph using the life cycle information that they ordered from before.
Checking for Understanding Questions: Why are Idaho trout healthy and good for us to eat? What are some of the different kinds of trout raised on fish farms in Idaho? What is the life cycle of a farm raised Idaho trout?

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.

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 "Incredible Edible Idaho: Trout" poster in the front of the class to use as a visual aid.
- Make enough copies of "Idaho Rainbow Trout at the Farm" assignment (1st page only, the 2nd page is the answer key) and "Idaho Trout" take home handout for each student in your class.

1. Ask students some introductory questions: "How many of you eat fish? Where do fish come from?" (Allow some time for student answers.) "We are going to be talking about one kind of fish today in class: the Idaho trout."

Instructional Strategies: direct instruction, whole group, small group

Build, Apply Knowledge:

2. Go through slides 1-7 from 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).

3. On slide 8, you will be discussing a lot of information about the life cycle of a farm raised Idaho trout. This information will be needed later when students complete the organizing and paragraph writing assignment about trout. Encourage them to pay close attention. You may even choose to have a discussion with students afterward to make sure they understand the process that trout go through as they mature. A link is provided for an OPTIONAL video in the notes section of this slide. It is an informational video segment from Discovery Education (4:45) all about fish farming. Please review the video privately before showing it to your class to make sure you feel it is appropriate for your students.

4. Discuss slides 9-12 about trout health and nutrition we gain when they are eaten.

5. After reading through the information on slide 13, click on the word "Video" in the bottom right-hand corner of the screen to view a short (1:59) Discovery Education video segment about brain neurons. This video correlates with the slide topic of how Omega-3 Fatty Acids help our brain function.

6. Wrap up the presentation with the information on slide 14. Slide 15 will introduce the assignment students will be working on next.

***Higher Order Thinking Questions:** What are some reasons why Idaho leads the country in farm raised trout production?

***Provide Guided Practice:**

7. Introduce the assignment and pass one out to each student. Read through the directions together. Depending on the needs of your class, you may choose to remind them or teach a little about transition words. There are several options for completing the sequencing portion of the assignment. Depending on the time you have and the needs of your classroom, you may choose to: do the sequencing together, having students help you order them correctly 1-9; have students do the sequencing in pairs or small groups; have students do the sequencing independenty.

***Provide Independent Practice:**

8. Give students time to finish the sequencing. I would encourage you to check their work (or have partners check each other's work) before allowing students to begin on their paragraph writing.
9. Students will work on completing their paragraphs independently. If you are short on time or have students who struggle with writing, you may choose to have them work with a partner and split up the writing so they each do part of the paragraph.

Wrap Up/Synthesis/Closure:

10. Have students turn in their paragraphs to you once completed.
11. Pass out copies of the "Idaho Trout" take home handout for each student in your class. Read through the information together, as a review of the day's lesson.

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 Trout PowerPoint Presentation
URL: http://www.sde.idaho.gov/site/cnp/farmToSchool/lessonPlans
Annotation: This PowerPoint presentation is designed to provide students with information on Idaho farm raised trout from both an agricultural and a nutritional perspective. Students will learn where Idaho trout are raised, about their life cycle, and about different types of trout. Additionally, students will become aware of nutrition facts related to trout. A handout containing trout nutrition facts and a recipe can be sent home with students at the end of this lesson.

Title: Idaho Trout 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: "Idaho Rainbow Trout at the Farm" Assignment
URL: http://www.sde.idaho.gov/site/cnp/farmToSchool/lessonPlans
Annotation: This paper will have students correctly number the events in the life cycle of a farm raised Idaho trout from 1-9. Students will then put the events in order to write a paragraph. (NOTE: Page 1 of the assignment is for students to use, page 2 is the answer key.)

Title: "How it All Works: Neurons" Discovery Education Video Segment (1:59)
URL: http://app.discoveryeducation.com/player/view/assetGuid/B43783BF-BEB7-4487-AF95-D53DB35E8102
Annotation: This short Discovery Education video shows students about how neurons in our brains fire to make connections. This video corresponds with the slide about Omega-3 Fatty Acids in Idaho trout and how it improves our brain function.

Title: "Fish Farming" Discovery Education Video Segment (4:45) - OPTIONAL
URL: http://app.discoveryeducation.com/player/view/assetGuid/1ECB1A07-37C3-4F30-8FC0-8A6328D1B887
Annotation: NOTE: Please view this video privately before showing it to your class to make sure it is appropriate for your students. This Discovery Education video shows students about how trout farms work. It discusses and shows in detail how the female trout's eggs are extracted and mixed with the male trout's sperm to fertilize the eggs. It does offer a lot of great information about how fish farming works and shows everything from fertilization of eggs to hatching to harvesting.

***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 "Idaho Rainbow Trout at the Farm" assignment (1st page only, the 2nd page is the answer key) and "Idaho Trout" take home handout for each student in your class.
2. 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** –The visual aid of having the Idaho Trout PowerPoint presentation and "Incredible Edible Idaho: Trout" poster will help students who need visual supports. Also, the optional video segment may help some students make sense of how trout are raised and harvested.
- **Engagement** – Students will actively engage with others in their class during the presentation. They should provide discussion by asking and answering questions, as well as providing pertinent information.
- **Representation** – Students may be allowed to work in pairs or a small group for the first part of their "Idaho Rainbow Trout at the Farm" assignment.

ELL, SIOP: (Modifications to Instruction) Focus on difficult vocabulary to help students who are ELL. Make sure ELL students work with a strong English speaking partner for the "Idaho Rainbow Trout at the Farm" assignment.

***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 trout. You could give them a topic (for example, trout life cycle, fish farming, trout nutrition, or history of aquaculture) 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:** For younger students or those who need support, you may choose to partner them for the first part of the "Idaho Rainbow Trout at the Farm" assignment. They can work within pairs or small groups to put the statements in the correct order and then separate to each write their own paragraph. Depending on the time for this activity, you could also have the partners split up the paragraph so they each write only part of it (ex. one student writes down #1-5, partner writes down #6-9).

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 trout during the Idaho Trout PowerPoint presentation. Students can correctly explain why trout are good and/or healthy for us. They can answer questions about the life cycle of a farm raised trout.
***Summative/End Of Lesson Assessment:** The "Idaho Rainbow Trout at the Farm" paragraph will be turned in and can be scored. You could also create a quick rubric to use when evaluating students on their paragraph writing and organization.

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**

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