Nov. Gr. 1&2 G&T Unit: Trout

Content Area: **Gifted and Talented**
Course(s):
Time Period: **November**
Length: **6-8 Weeks**
Status: **Published**

Unit Overview

Students will utilize critical thinking skills in the study of "Trout."

Enduring Understandings

- All living things have a life cycle.
- Almost all living things need water, food, and air.
- Living things are interdependent with their living and nonliving surroundings.

Essential Questions

- What is the life cycle of trout?
- What is the ecosystem of trout?
- What is the anatomy of trout?
- What do trout need to survive?

Instructional Strategies & Learning Activities

1. Pass out field journals to each students.
2. Complete KWL chart in field journal as a class.
3. Habitat- watch habitat song https://www.youtube.com/watch?v=H_CSlLIuVZs Talk about what a habitat is. Ask them what they think the habitat of the trout is. Show first few seconds of this video to show where trout live https://www.youtube.com/watch?v=MIiqx0KfplY
4. Do habitat page in field journal. Talk about what the trout needs to survive. Life cycle – Show this video https://www.youtube.com/watch?v=DJ9qxmErHK8&index=2&list=PLnwR77390ULWtz4IHG8uY3HxmWuLwomrf
5. Look at pictures online of each stage of life cycle. Students should look at their field journal life cycle pages. While students are drawing each stage of the life cycle, read more detailed descriptions from the TIC (Trout in the Classroom) GUIDE. https://www.nj.gov/dep/fgw/pdf/tic_guide.pdf
6. Food web- Read Trout are Made of Trees by April Sayre aloud. Print pictures of each of the food web species and ask students to choose the ones they want to create a food web. Students cut out images, color them and then glue in a web. Students should label their web.
7. Play macroinvertebrate memory game-http://www.troutintheclassroom.org/teachers/library/catch-

critter-game

8. Make weekly visits to the 6th grade science room aquarium to write/draw their observations in their field journals. Students keep a yearly log of their visits. Students record the date, water temperature, # of eggs, alevin, fry, fingerlings in the tank. They also draw a picture of what they saw and write a sentence or two about their observations. Students list questions they may have or predictions for their next visit to the trout tank.
9. Label external anatomy- http://www.streamexplorers.org/fish-facts/external-anatomy Use this website to explore the different external anatomy. Then fill in the labeling sheet in their field journal.
10. Crayon resist drawings- students draw outline of rainbow trout with black crayon. Then paint with water color. Label the parts once it's dry.
11. Explore internal anatomy http://www.streamexplorers.org/fish-facts/internal-anatomy- students play the game to discover the internal anatomy of the trout.
12. Trout senses http://www.streamexplorers.org/fish-facts/trout-senses Read together

Additional activities if time allows:

- Gyotaku- Japanese fish prints- use paint and rubber fish mold to make a fish print
- Trout poetry- write in shape of fish
- Play Oh Deer (fish version) outside to demonstrate trout needs and what happens when their habitat is disrupted. (see Project Wild lessons)
- Read Riperian Retreat (Project Wild Aquatic) activity. visualization/art activity- draw the riparian area that surrounds the stream where trout live. Have students draw what they hear.

Guided reading groups:

Interweave the guided reading into the science lessons above.

- Big Al- multiple copies (level L) in book room- read in guided reading group and complete comprehension/open ended questions afterwards.
- There was an old lady who swallowed a trout- (level J)- read in pairs- students will use a worksheet where they pull the animals through the old lady's mouth as they read. Color worksheet when finished.
- Life Cycles- book room (level L). Read in guided reading group. Discuss how life cycles vary among different animals. Make a venn diagram comparing a trout life cycle to another animal in the book.
- Newsela article "A Sick Fish Gets a New Eye"- students will read together and answer comprehension questions when finished.

Math stations

- Trout fishing with fishing poles - addition/subtraction facts are printed on index cards with magnets attached. Students "fish" for the correct answer. (Math facts can be differentiated to student's level)
- File folder fish game- addition and subtraction facts (can be differentiated)

- Goldfish math problems (2 pages)- students use goldfish crackers as manipulatives to solve word problems. Differentiated worksheets depending on student's math level.
- Fish dice game- students roll dice and solve addition/subtraction problems and move their fish counters along a game board path. Differentiation options using dice 1-6 or 10-sided dice.

Integration of Career Readiness, Life Literacies and Key Skills

WRK.9.1.2.CAP	Career Awareness and Planning
WRK.9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
WRK.9.1.2.CAP.2	Explain why employers are willing to pay individuals to work.
TECH.9.4.2.CI	Creativity and Innovation
TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT	Critical Thinking and Problem-solving
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
	Different types of jobs require different knowledge and skills.
	Brainstorming can create new, innovative ideas.
	Income is received from work in different ways including regular payments, tips, commissions, and benefits.
	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.
	Individuals should practice safe behaviors when using the Internet.

Technology and Design Integration

Students will use various websites (listed above) to explore more about trout.

CS.K-2.8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
	Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally.

Interdisciplinary Connections

Math, science language arts are all incorporated into the unit.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.
- **Definitions of Differentiation Components**:
    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

Gifted and talented curriculum is structured to offer students additional challenges based on individual needs and interests.

Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.
Modifications and Accommodations used in this unit:

IEP and 504 modifications if necessary

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.
Schoolwide Benchmark assessments:
Aimsweb benchmarks 3X a year
Linkit Benchmarks 3X a year
Additional Benchmarks used in this unit:

Teacher observation and data records of growth over time and grade levels.

Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).
Formative Assessments used in this unit:

Teacher observation

Discussion

Assignments

Journal Work

Summative Assessments

Summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.
Summative assessments for this unit:

Assignments

Projects

Completed journal

Instructional Materials

See materials listed in “Instructional Strategies”, as well as the following:

Tobias Catches a Trout- Hertz

Trout, Trout, Trout- A Fish Chant – Sayre

Animals Called Fish- Lundblad and Kalman

Jangles- Shannon

The Brook Book- Arnosky

Who-Paddled-Backward-With-Trout- Norman

Trout the Magnificent- Turnage

Trout-Winner

Riparia’s River- Caduto

Life in a Stream- Lindeen

http://www.troutintheclassroom.org/teachers/lesson-plans

http://www.streamexplorers.org/

https://www.youtube.com/watch?v=pgN0Cf3bVIk

http://www.troutintheclassroom.org/teachers/library/trout-tag

http://www.annesphotoshop.com/2016/08/rainbow-trout-coloring-page/

https://www.youtube.com/watch?v=DJ9qxmErHK8&index=2&list=PLnwR77390ULWtz4IHG8uY3HxmWuLwomrf

https://www.youtube.com/watch?v=MIiqx0KfplY

https://americanexpedition.us/learn-about-wildlife/rainbow-trout-information-facts-photos-and-artwork/

http://www.biokids.umich.edu/critters/Oncorhynchus_mykiss/

Standards

In addition to cross curricular standards listed above, National Association for Gifted Children Standards

endorsed by NJDOE are applied.