# Pilot Course Proposal

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Proposed Course Titles:
Targeted Science A (Grades 9–10)
Targeted Science B (Grades 9–10)
Targeted Science A (Grades 11–12)
Targeted Science B (Grades 11–12)

Grade Level: 9 – 12  Department: Special Education

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*PLEASE ATTACH THE FOLLOWING:*

Description of course content and how this course will meet current needs not being met by other courses. Description must also include the needs assessment data.

Targeted Science A/B is a standards-aligned, credit-bearing science course designed to provide accessible instruction for students receiving services in self-contained high school programs.

Currently, students in these settings experience inconsistent access to grade-level science instruction due to variability in site-based materials, instructional adaptations, and instructional approaches across buildings. As a result, there is no consistent, district-wide science course that ensures alignment to Washington State Science Learning Standards for students who require a replacement curriculum.

This course addresses that gap by establishing a consistent instructional sequence across all high schools using the Unique Learning System (ULS). It provides a coherent, standards-aligned framework for delivering science instruction in a format accessible to students with significant cognitive and communication needs.

Upon completion of this course, students will be able to:

- Demonstrate understanding of core concepts in life, physical, and earth/space science
- Engage in scientific practices such as observing, predicting, and analyzing data with support
- Apply scientific concepts to real-world and functional contexts
- Communicate scientific understanding using verbal, visual, or AAC-supported methods
- Participate in structured inquiry and problem-solving tasks aligned to instructional units

Needs assessment data from program review and instructional practice indicates:

- Inconsistent alignment to grade-level science standards across self-contained programs
- Variation in instructional materials and rigor across buildings
- Need for consistent credit-bearing courses aligned to graduation requirements
- Need for accessible instruction aligned to students' cognitive and communication profiles
- This course ensures equitable access to rigorous, standards-based instruction for students with significant disabilities through structured supports and differentiation.

Rationale

- Reducing variability in site-based instructional practices and ensuring consistent implementation across high schools
- Establishing a clear, consistent, credit-bearing instructional sequence across grade bands
- Ensuring equitable and meaningful access to standards-aligned science instruction for students with significant disabilities through appropriate scaffolds and supports
- Supporting diverse communication systems, cognitive profiles, and learning needs through inclusive instructional design

*Upon completion of this course students will be able to meet the following Washington State K-12 Learning Standards:*

- Standard 1: Physical Science (matter, forces, energy, waves)
- Standard 2: Life Science (ecosystems, heredity, biological systems, evolution)
- Standard 3: Earth and Space Science (Earth systems, weather, climate, space systems)
- Standard 4: Engineering, Technology, and Applications of Science (design and problem-solving)
- Standard 5: Science and Engineering Practices (asking questions, modeling, analyzing data)
- Standard 6: Crosscutting Concepts (patterns, systems, cause and effect)
- Standard 7: Application of scientific reasoning to real-world phenomena
- Standard 8: Communication of scientific understanding using multiple modalities

Instruction is aligned to Washington State Science Learning Standards with appropriate differentiation for student needs. For students participating in alternate assessment, instruction is aligned to WA-AIM with appropriate scaffolding and reduced complexity while maintaining connection to grade-level concepts.

Instruction aligns to the Washington State Office of Superintendent of Public Instruction Science Learning Standards, based on the Next Generation Science Standards.
Students engage in three-dimensional science learning:

- Disciplinary Core Ideas: Life, Physical, Earth & Space Science
- Science & Engineering Practices: questioning, modeling, analyzing data
- Crosscutting Concepts: patterns, systems, cause and effect

For students participating in alternate assessment:

- Instruction aligns to WA-AIM (Washington Access to Instruction & Measurement)
- Standards are addressed with reduced complexity while maintaining grade-level conceptual connection

Through Unique Learning System:

- Standards are embedded within thematic units
- Instruction is scaffolded across multiple levels of complexity
- Learning is accessible through multiple modalities (visual, verbal, AAC, hands-on)

- What are the assessments that will be used to determine student achievement of the goals of this course? (Attach to this proposal.)
  Student achievement will be measured through:
  - Embedded assessments within the Unique Learning System (ULS) curriculum
  - Teacher-developed performance tasks aligned to unit standards
  - Data collection linked to IEP goals and objectives
  - Observation-based assessments of student engagement and participation
  - Multiple means of demonstrating learning (AAC, verbal response, visual supports, hands-on tasks)
  - Portfolio-based evidence of learning across units

Describe how this course will address:

- **Alignment with Common Core State Standards (CCSS) and/or WA State Essential Academic Learning Requirements (EALRs)**
  - This course aligns to Washington State Science Learning Standards (NGSS-based), ensuring access to grade-level disciplinary core ideas, science practices, and crosscutting concepts with appropriate scaffolding.
- **Integration of technology**
  - AAC and communication devices
  - Digital ULS instructional platform

- Interactive visual supports and multimedia learning tools
- Assistive technology to support engagement and response

- **Infusion of diversity/multicultural perspectives**
  - Representation of diverse scientists and contributors to science fields
  - Real-world applications connected to global and community contexts
  - Instructional examples that reflect culturally responsive science practices
- **Integration with other subject areas**
  - Literacy development through informational texts and vocabulary instruction
  - Math integration through data collection, measurement, and graphing
  - Functional life skills embedded in real-world science applications
- **Provision of appropriate experiences for learners of varying abilities**
  - Instruction is designed for students with significant cognitive and communication disabilities and includes:
    1. Multiple entry points to content
    2. Scaffolded instruction and repeated exposure
    3. Visual, tactile, and verbal supports
    4. AAC and alternative communication systems
- **Development of higher level thinking and processing skills**
  - Students engage in:
    - Cause-and-effect reasoning
    - Scientific prediction and inference
    - Data interpretation with support
    - Problem-solving and application of scientific concepts
- **Articulation of scope and sequences across grades K-12. Will this course replace an existing curriculum? If so, which course?**
  - This course replaces inconsistent, site-based self-contained science instruction currently delivered through varied adapted materials across high schools. It establishes a district-wide, standards-aligned instructional framework (Targeted Science A/B for Grades 9–10 and 11–12) to ensure consistency, coherence, and alignment to Washington State science standards.
  - Enrollment in this course is not universal for all students in self-contained programs. Placement is determined through data-based decision making by the IEP team, and is based on documented student needs outlined in present levels of performance. This course is intended for students who require a replacement curriculum in order to meaningfully access science standards, as opposed to modified access within general education or other core settings.
  - The goal is to ensure that when a replacement course is required, it is delivered through a consistent, standards-aligned, and instructionally coherent system across all high schools, rather than variable site-based programming.

**Current Scope and Sequence**

The instructional scope and sequence for Targeted Science A/B is guided by the Unique Learning System (ULS), a standards-aligned, thematic curriculum designed for students with significant cognitive disabilities.

ULS is organized into yearlong thematic units delivered in a predictable monthly structure, allowing for consistent progression of skills while maintaining flexibility for differentiated instruction and student pacing. Each unit is explicitly aligned to grade-level standards and incorporates multiple levels of complexity so that students can access the same instructional theme at varying entry points.

Across the school year, instruction follows a spiraled and cyclical sequence, meaning key concepts are revisited and reinforced over time to support retention, generalization, and application. This structure ensures that students build understanding gradually while continuing to engage with grade-aligned content in meaningful, repeated contexts.

The ULS scope and sequence is intentionally designed to support:

- Vertical alignment across grade bands (9–10 and 11–12)
- Horizontal consistency across classrooms and buildings
- Repeated exposure to core academic concepts to support mastery over time
- Embedded opportunities for review, generalization, and application of skills

Instruction within each unit integrates:

- Standards-based academic content
- Functional and real-world applications
- Communication and participation goals aligned to student IEPs

The sequence also includes embedded formative assessments and progress monitoring tools that allow educators to adjust instruction based on student response, ensuring that learning remains responsive and data-driven.

Its design is grounded in several established, evidence-based instructional principles in special education:

- ULS aligns instruction to grade-level academic standards with systematic scaffolding, consistent with research supporting access to the general education curriculum for all learners.
- Lessons use structured modeling, repeated exposure, guided practice, and cumulative review, strategies consistently supported in special education research for improving skill acquisition and retention.
- ULS incorporates multiple means of representation, engagement, and expression, aligning with UDL research demonstrating improved access and participation for diverse learners.
- Content is designed across multiple complexity levels, supporting instructional differentiation within heterogeneous classrooms. An evidence-supported approach for students with significant cognitive and communication needs.
- ULS includes ongoing formative assessment tools that support instructional adjustment, consistent with research supporting data-driven decision-making in special education.
- Instruction integrates academic content with real-world, functional applications, aligning with research on improving generalization and meaningful skill use for students with disabilities.

Overall, the ULS scope and sequence provides a consistent instructional framework that replaces fragmented, site-based curricular adaptations with a coherent, standards-aligned progression of learning across all high schools.

- **Statement of impact:**
  This course will:
  - Improve equity and access to standards-based instruction for students with significant disabilities
  - Ensure consistent implementation of science curriculum across all high schools
  - Align instruction to Washington State Science Learning Standards
  - Provide a clear, credit-bearing instructional pathway aligned to graduation requirements
  - Support compliance with IDEA through access to the general education curriculum
  - Reduce variability in instructional quality and expectations across buildings

- **Instructional materials and cost (include titles, names of publishers and copyright).**
  Primary Curriculum

- Unique Learning System (ULS) – Everway
    - Standards-aligned digital curriculum designed for students with significant cognitive disabilities. ULS provides differentiated, standards-based instruction across multiple complexity levels and is currently utilized within district self-contained programming.
    - This curriculum is already provided to Instructional Learning Center (ILC) teachers through existing special education funding allocations. As a result, implementation of this course will not require additional district-level curriculum purchase costs.

Supplemental Materials

- Adapted science texts and visual supports
- Assistive technology and AAC communication systems
- Teacher-created instructional materials aligned to ULS units and student IEP goals

## SIGN-OFF FOR PILOT COURSE RECOMMENDATION

| | **Signature** **Date** |
|---|---|
| **1. Department Head (Secondary)** **Accepts ☐ Rejects ☐** | _____ |
| **2. Principal** **Accepts ☐ Rejects ☐** | _____ |
| **3. District Content Facilitator** **Accepts ☐ Rejects ☐** | _____ |
| **4. Curriculum Director** **Accepts ☐ Rejects ☐** | _____ |

**Return original to the Director of Curriculum and Instruction. Copies to Principal and Course Originator.**

Science Connection
# High School Science Fair

Unit 22

**HIGH SCHOOL**
Scientific Inquiry

## Instructional Targets

***Science Standards for Scientific Inquiry***

- Identify questions to guide scientific investigations.
- Conduct simple scientific investigations.
- Use tools to gather data and information.
- Analyze and interpret data.
- Communicate and support findings.

## Differentiated Tasks

| Level 3 Students will... | Level 2 Students will... | Level 1 Students will... |
|---|---|---|
| • Follow steps of a scientific process related to grades 9-12 science topics. | • With support, follow steps of a scientific process related to grades 9-12 science topics. | • Actively participate in a scientific process related to grades 9-12 science topics. |

## Standards Connection




***Mark Makes His Flashlight Work***

In this unit, students learn about scientific inquiry and the scientific method. The Leveled Book illustrates how a problem can be solved. Mark tests different light bulbs and batteries to get his flashlight to work. Throughout the unit, encourage students to use the scientific method to solve problems by observing, asking questions, making a guess, doing an experiment, collecting data and finding a conclusion.




***What Is Science?***

The Chapter Book introduces and explains the scientific method and how scientists have used it to make discoveries. Chapter 1 introduces students to the five steps of the scientific method. Chapters 2-6 discusses how five famous scientists used the scientific method to invent something or learn something new. The chapter book covers five scientists: Thomas Edison, James West, Mary Jackson, Stephen Hawking and Jane Goodall. Throughout this unit, have students identify how they can be scientists by using the steps in the scientific method to learn more information.



***Life Skills Applications***

The life skills applications focus on different skills students can learn from the scientists discussed in the Chapter Book. Students practice daily living skills when they learn how to change a light bulb and use a toaster safely. Students learn employability skills when they practice keeping a record of classroom jobs and learn how to safely work with animals. Students practice personal life skills when they learn question words and ask questions as well as practice communicating through text message.



***Let's Have a Science Fair***

A science fair is a fun way to have students apply their learning from this unit. In Lesson 28, students choose and complete a science fair project. Throughout the unit, work with students to plan a class science fair. Choose a date, make plans for how and when students will work on their projects and talk with students about ways they might present their projects. When the day of the fair arrives, invite parents or other classes to come and see students' projects.

The **n2y Library** has several books that may extend understanding of science concepts in this unit:

- ***Galileo*** (Level F/G) explains Galileo's contributions to the scientific method.
- ***Simon Goes to a Science Fair*** (Level E) describes a science fair and what to see there.
- ***Simon's Five Senses*** (Level H/I) Follows Simon as he learns about and uses his five senses.
- ***Thomas Edison: Time Traveling Twins*** (Level J/K) looks at the life and inventions of Thomas Edison.

unique learning system

Unit 22

HIGH SCHOOL
Scientific Inquiry

# Unit Overview

**High School Science Fair**
This unit explores scientific inquiry, the scientific method and famous scientists. Students learn a simplified scientific method and use it to participate in a variety of scientific investigations, including a science fair project.


| Lesson | Activities | Description | Page |
|---|---|---|---|
| 1 | **Leveled Book** | ***Mark Makes His Flashlight Work*** | 4 |
| 2 | **Read and Comprehend** | Leveled Book Comprehension | 78 |
| 3 | **Chapter 1 / Read and Answer** | **Science** | 102 |
| 4 | **Life Skills Application 1** | Keeping a Record | 165 |
| 5 | **Chapter 2 / Read and Comprehend** | **Thomas Edison** | 170 |
| 6 | **Life Skills Application 2** | Light It Up! | 234 |
| 7 | **Chapter 3 / Read and Comprehend** | **James West** | 242 |
| 8 | **Life Skills Application 3** | Making Toast | 306 |
| 9 | **Chapter 4 / Read and Comprehend** | **Mary Jackson** | 310 |
| 10 | **Life Skills Application 4** | Asking Questions to Get Answers | 374 |
| 11 | **Chapter 5 / Read and Comprehend** | **Stephen Hawking** | 388 |
| 12 | **Life Skills Application 5** | Texting to Communicate | 452 |
| 13 | **Chapter 6 / Read and Comprehend** | **Jane Goodall** | 469 |
| 14 | **Life Skills Application 6** | Volunteering for the Animal Shelter | 533 |
| 15 | **Word Study** | The Study of Science | 541 |
| 16 | **Edit It** | Excited About Science | 643 |
| 17 | **Real-World Writing** | Science Fair Project | 657 |
| 18 | **Topic Paragraph** | Newsletter and Activity Report | 661 |
| 19a | **Math Story Problems** Addition | Prepping the Lab | 689 |
| 19b | **Math Story Problems** Subtraction | Prepping the Lab | 720 |
| 19c | Multiplication and Division | Prepping the Lab | 762 |
| 20 | **Measure It!** | Apple Dumplings | 808 |
| 21 | **Read This Chart** | In Africa With Jane Goodall | 832 |
| 22 | **Money** | Volunteering at Science Night | 855 |
| 23 | **Schedules and Times** | Time for the Science Fair | 899 |
| 24a | **Geometry** | A Trip to the Science Museum | 989 |
| 24b | **Geometry** | A Trip to the Science Museum | 1063 |
| 25a | **Algebra** | In Science Club | 1168 |
| 25b | **Algebra** | In Science Club | 1241 |
| 26 | **Related Content** | "Types of Scientists" | 1299 |
| 27 | **Related Content** | Oral Report | 1335 |
| 28 | **Science Experiment** | Let's Have a Science Fair | 1357 |
| 29 | **History Timeline** | Scientific Discoveries | 1428 |
| 30 | **Journal Writing** | Unit Topics | 1437 |