



Senses and Reflexes

Participant Name:	Whitney Verbeck
District:	Heuvelton Central School
Grade Level:	4th Grade
Subject/Course:	Science
Cross-curricular Link:	Science and Technology
Approximate Time (IN MINUTES):	1 hour

CONTENT AND SKILLS	
Learning Objectives:	- Analyze how reflexes and sensory organs collaborate to process environmental stimuli. - Explore technology tools to simulate reflex and sensory responses. - Design an interactive presentation demonstrating sensory and reflex processes.
Essential Questions (optional):	- How do our senses and reflexes work together? - How does technology help us understand the nervous system?
Students' I can statements . . .	- I can explain how sensory organs and reflexes work as a system. - I can use technology to simulate and demonstrate scientific concepts. - I can collaborate to create a digital presentation.
How will you meet the needs of SWD and ELL/MLL students?	- Provide instructions and visuals on my website. - Offer peer collaboration opportunities for support - Use translation tools and sensory-friendly accommodations.
NYS COMPUTER SCIENCE AND DIGITAL FLUENCY STANDARDS List all standards that authentically align (e.g., K-1.CT.4)	
4-6.DL.4 Use a variety of digital tools and resources to create and revise digital artifacts. 4-6.CT.2 Collect digital data related to a real-life question or need. 4-6.CT.3 Visualize a simple set in order to highlight relationships and persuade an audience.	
OTHER SPECIFIC STANDARDS (e.g., Content, SEL Benchmarks) List all standards that authentically align https://www.p12.nysed.gov/ssd/documents/SELBenchmarks2022.pdf	
- NYSSLS 4-LS1-2: Use a model to describe how sensory inputs are processed. - SEL 3C: Demonstrate collaboration and teamwork in group settings.	

INSTRUCTIONAL PLAN

List the steps of the lesson, including instructions for the students.
Add and highlight Standard Indicator next to activity that aligns

Introduction:

Review Lessons 1 and 2: Use Ms. Verbeck's website's "Reflexes" and "Sensory Organs" pages to recap key concepts.

Standard Indicator: NYSSLS 4-LS1-2

Engage with a Digital Quiz: Direct students to a pre-made quiz on the site that combines reflex and sensory organ scenarios (e.g., "What reflex might protect you if you see a bright flash?").

Standard Indicator: 4.DL.1

Reflexes: [Biodigital Human - Reflex Model](#)

Sensory Organs: [Neuroscience for Kids](#)

Guided Instruction:

1. Interactive Digital Simulation: Students log into a virtual platform (such as Scratch or Tynker) where they adjust variables like reaction speed, sensory input intensity, and nerve signal delay to see how responses change.

Pair students for collaborative exploration, encouraging them to document observations in a shared Google Doc.

Standard Indicators: NYSSLS 4-LS1-2, 4.DL.1, SEL 3C

2. Mini-Demo Creation:

Assign groups to design a 2-minute animated demo using Google Slides or Canva. Each group illustrates how one sensory organ triggers a reflexive action (e.g., touching a hot surface → pulling away). [Sensory Organs: Neuroscience for Kids](#)

Standard Indicators: 4.DL.3, 4.IC.1

Collaborative Activity:

1. Student Presentations: Groups present their digital demo to the class. Peers provide feedback through a shared Canva Whiteboard, adding virtual sticky notes like "Great explanation!" or "What happens if..." (Glow and Grow)

Standard Indicators: 4.DL.1, SEL 3C

2. Class Discussion: "What new ideas did you learn about reflexes?", "How can technology help us understand the nervous system better?"

Closure: 1. Reflection Using Google Forms:

Students complete an exit ticket: "Name one new connection you made between senses and reflexes today." [How to Create a Google Form](#)

Provide space for suggestions about future tech-based activities.

Standard Indicators: NYSSLS 4-LS1-2, SEL 1A

SPECIFIC NEEDS: MATERIALS / RESOURCES / TECHNOLOGY

Add additional resources needed for this lesson such as instructional technology templates, images, videos, etc.

- <https://sites.google.com/potsdam.edu/4th-grade-science/home>
- Computers for interactive activities and demo creation.
- Reflexes: [Biodigital Human - Reflex Model](#)

- Sensory Organs: [Sensory Organs: Neuroscience for Kids](#)
- How to Create a [Google Form](#)
- Scratch, Canva, or Google Slides for creating animations.
- Google Forms for feedback and reflection.