



## Case Study: Seth, Grade 10

**Student Background:**

Seth is a 16-year-old boy in the 10<sup>th</sup> grade. He has cerebral palsy, no use of his right arm and leg, and a mild intellectual disability. According to his most recent evaluations, he reads at a third-grade level and performs at a fourth-grade level in mathematics. Seth has difficulties with reading comprehension and fluency, though he has strong verbal skills and communicates on level for his age group. Seth enjoys science and gravitates especially toward anything having to do with animals. He serves as the facilitator for weather reporting each day in class where he is charged with looking up the current forecast, changing it on the classroom reporting boards and communicating the information to the rest of the class. Another strength is Seth’s ability to identify patterns. For example, in math when working on skip counting, Seth is able to quickly recognize and replicate patterns.

**High-Quality Planning and Instruction:**

Seth attends a self-contained classroom for 80 percent of his day. His class has eight other students who have a range of mild to moderate disabilities and one classroom teacher, Ms. April, who teaches mathematics and science while another teaches English language arts and social studies. The class has been working on a unit related to habitats and ecosystems and is now finishing up with a focus on the impact of humans on their environment and the effects the changes have for the survival of animals. Ms. April consults the [Louisiana Connectors](#) document to find the corresponding standard.

Grade 10 Life Science HABITATS AND ECOSYSTEMS	
Louisiana Student Standards (LSS)	Louisiana Connectors (LC)
<p><b>HS-LS4-5</b> Evaluate evidence supporting claims that changes in environmental conditions can affect the distribution of traits in a population causing: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>	<p><b>LC-HS-LS4-5a</b> Recognize that species become extinct because they can no longer survive and reproduce given changes in the environment.</p>

Ms. April has attended closely to the related [Science Component Card](#) to ensure that her students have a strong foundation in the requisite Disciplinary Core Ideas that serve as the building blocks of this performance expectation. The students have seen and heard many examples, such as the harmful effects of pollution on bird migration. Today’s objective calls upon students to pull together what they have learned over the past five days to describe the effects deforestation has on birds, particularly the eagle.

The goal of today’s lesson is to have students write a paragraph on the effects deforestation has on eagle extinction. This will require Seth to recall specific information from previous lessons as he connects his understanding of food webs to issues of deforestation. Seth has done well in his understanding of the various components of the unit from day-to-day; however, based on his disabilities, his teacher recognizes that he will struggle to recall and bring together information from across multiple days.

The teacher begins the lesson by activating prior knowledge on deforestation and how it displaces birds. To do this, Ms. April returns to a short text on deforestation the class has previously read. The teacher moves more specifically to eagles. She gives Seth a prepared food web that includes several animals, including eagles and small prey that live in the forests, and a cause and effect template to support Seth’s ability to brainstorm prior to the writing assignment. The class will also be hearing some new vocabulary, so a vocabulary foldable is prepared in advance of the lesson.



After independent work time, the teacher splits the class into two small groups to synthesize information. Seth is placed into a group with three other students with similar reading levels so they can work through the resources together and with appropriate support. Seth immediately identifies deforestation as a potential cause for extinction but struggles to frame the evidence in terms of what he has learned during the prior days' work. Seth's teacher pulls out a cause and effect template to help Seth work through his evidence. The teacher asks Seth what lives in the trees in the forest and he identifies squirrels. She follows up by asking what happens if the squirrels lose their home. Seth can identify that tearing down trees causes squirrels to lose their home but he is having trouble connecting the idea to squirrels being a food source for eagles. He talks through the idea with his partner. His partner suggests they look at the food web. Together they can see the line that connects eagles to squirrels. Seth makes the connection and shines with recognition once he identifies how deforestation affects this part of the food web.

Together, he and his partner move to other, different animals to understand the connections among them all. Once they have done so, the teacher encourages Seth to use his completed cause and effect template to begin outlining his descriptive paragraph on deforestation.