

Practice Identifying Strategies 4 and 5 in Student Work

After exploring hair length in three generations of dachshunds, students are provided with card sets to compare trait patterns in three generations of other kinds of plants and animals.

Decide whether each of the following student statements is making an observation, collecting data, analyzing/ interpreting observations or data, or constructing an explanation or argument. Use the STeLLA strategies booklet and the Quick Reference Tools for Strategies 4 and 5 to formulate a rationale for your decisions.

Student Statements	Observations/ Data	Analysis/ Interpretation (Patterns)	Constructing an Explanation	Constructing an Argument
1. “One cow had horns, and the other cow didn’t have horns. Those were the parents, and the offspring didn’t have horns.”				
2. “When I looked at the offspring on all the cards, I saw that the children always had the trait similar to one of the parents and not the other parent.”				
3. “I think a trait can disappear for a generation because one of the dachshund parents has long fur, but none of the kids do, but then two of the grandkids have short hair.”				
4. “I disagree with Juan because he thinks the puppies got a mix of both parents’ traits and should have medium-length hair. But even though the puppies got both parents’ traits, only one trait showed up, not a mix of both. The long-hair trait didn’t show up, so it must be hidden.”				
5. “Short hair must be a dominant trait because all the offspring have short hair, and none have long hair.”				
6. “It seems like we never get half-and-half traits—like one brown eye and one blue eye.”				
7. “I think if two red-haired parents have a blond-haired child, it’s evidence that genes can hide. They are there in a person, but they can hide or not show up as a trait. Because the instructions are there, they can get passed on, and in the right situation, they can show up again.”				