Task Specific Rubric: Keeping Track of Animals

Note: This is an open-ended problem with many different solutions. When evaluating student work, use the general rubric, task specific rubric, benchmark descriptors and benchmark papers to determine the student's performance level.

Level	Understanding	Strategies, Reasoning, & Procedures	Communication
Novice	• There are no solutions or the solutions have no relationship to the task. • The student does not understand that the animals they have represented in the problem have to have a total of 4 heads, 10 legs, and 3 tails. • May view each of the animal attributes separately. (i.e. 4 animals = 4 heads, 3 different animals = 3 tails etc.)	• The student chooses animals that will NOT result in a correct combination of heads, legs & tails. • The student spends most of their time drawing animals with little focus on finding a solution. • The student may address the fact that there are 4 animals with a total of 4 heads, but does not extend the problem and show the animal's legs and tails.	• There is little or no communication, the student did not label the work and their thinking is difficult to follow. • The student has drawn animals, but incorrectly represents the animal's heads, legs & tails. • The student makes no attempt to summarize their results.
Apprentice	• The student understands enough of the problem to address one/two aspects of the problem, but cannot complete the task to a full solution. (i.e. they correctly identified the animals, accounted for the animal's heads, and their corresponding legs or tails, but not both.)	• The student's strategies do not lead to a successful completion of the task (i.e. the student represents 4 animals with 4 heads, but the legs do not add up to 10 and/or there are not 3 tails).	• The student has attempted to communicate their findings by labeling their work, but does not attempt to summarize their results. • The student has accurately drawn the animals, and correctly represents the animal's heads, legs, & tails; but does not use the information to draw conclusions or summarize their results.
Practitioner	• The student understands that the animal's head, legs, & tail must correspond to each of the animals. For example: one cow has 1 head, 4 legs, & 1 tail; one duck has 1 head, 2 legs, & 1 tail; etc.	• The student's strategy led to a successful completion of the task (i.e. the student chooses animals and attributes that will result in a correct combination of heads, legs & tails).	• The student has communicated their findings by labeling and summarizing their results. • The student uses math language, symbols or terminology to explain their thinking. For example: 4 + 2 + 2 + 2 = 10 legs and/or tails = 3
Expert	• The student understands all of the parameters of the problem and can make generalization about these understandings. For example: I must choose one animal that does not have a tail.	• The student's strategy led to a successful completion of the task and realizes that there are multiple solutions to the task. • The student verifies their results by summarizing their answer or by showing multiple solutions. For example: the student uses 2 or more different animal combinations to solve the problem.	• The student may have summarized the animal's attributes (head, tail & legs) in a table/chart or through addition equations. For example: legs = 4 + 4 + 2 + 0 = 10 tails = 1 + 1 + 1 + 0 = 3 heads = 1 + 1 + 1 + 1 = 4 • The student has provided a complete summary of their results and has presented any generalization they may have found. (i.e. There must be 4 animals because the farmer saw 4 heads.)