

		Score and Description- >	0 (includes blank)	1	2	3
<p><b>GRADE 7 Q4 ASSESSMENT KEY 0809</b></p> <p>1 C c15 2 D c21 3 A c21 4 A c16 5 B c21 6 D c21 7 D c16 8 A c21 9 B C1NQ8 10 B C1NQ5</p> <p><b>GRADE 7 Q4 OPEN ENDED QUESTIONS SCORING RUBRIC</b></p>	<b>Question</b>	<b>CT State Standard</b>	<p>The response, although may be on topic, is an unsatisfactory answer to the question. It may fail to address the question, or it may address the question in a very limited way. There may be no evidence of elaboration, extension, higher-order thinking, or relevant prior knowledge. There may be evidence of serious misconceptions</p>	<p>This response is a marginal answer to the question. While it may contain some elements of a proficient response, it is inaccurate, incomplete, and/or inappropriate. There is little if any evidence of elaboration, extension, higher-order thinking or relevant prior knowledge. There may be evidence of significant misconceptions.</p>	<p>This response is a proficient answer to the question. It is generally correct, complete, and appropriate although minor inaccuracies may appear. There may be limited evidence of elaboration, extension, higher-order thinking, and relevant prior knowledge, or there may be significant evidence of these traits but other flaws (e.g., inaccuracies, omissions, and inappropriateness) may be more than minor.</p>	<p>This response is an excellent answer to the question. It is correct, complete, and appropriate and contains elaboration, extension, and/or evidence of higher-order thinking and relevant prior knowledge. There is no evidence of misconceptions. Minor errors will not necessarily lower the score.</p>
61	<p>A group of students took potato salad made with mayonnaise to a picnic on a very hot day. Explain how eating the potato salad could cause food poisoning., and what could be done to prevent it. Explain your answer.</p>	<p>C1NQ 10 Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.</p>	<p><i>Student response neither correctly explains the cause of food poisoning nor describes a method of preventing it. Misconceptions may be present.</i></p>	<p><i>The response partially describes a cause for food poisoning and may not include a method of prevention. It contains limited or no elaboration. Misconceptions may be present.</i></p>	<p><i>Student response generally explains the cause of food poisoning, and describes a general method of preservation (keeping it cold) without explanation. It is somewhat elaborated and contains no misconceptions.</i></p>	<p><i>Student demonstrates understanding of how food poisoning can be caused by eating potato salad and what could be done to the potato salad to prevent it from causing food poisoning. It is correct, complete and well elaborated. "Bacteria/Salmonella growing in the salad release a poison/toxin that causes food poisoning (inflammation of the gastrointestinal tract). Slowing the growth of bacteria by refrigeration would help. Irradiation would destroy the bacteria. Bacteria will grow is accepted as a cause. "Germs" are accepted as a cause. Keep food cold, cooler, or in insulated container if already cold is acceptable for preventative measure, but not keeping hot air out.</i></p>
62.	<p>Using the axes below, construct a graph showing the number of each strain of <i>E.coli</i> the student found each day. Be sure to label the axes</p>	<p>C1NQ 7 Identify and present relationships between variables in appropriate graphs.</p>	<p><i>Student fails to plot data for either O157 or O121 correctly or produces an illogical graph.</i></p>	<p><i>Student scales and plots either O157 or O121 correctly or scales and plots O157 and O121 combined (for example, adds data for each into one data point). No labels on graph.</i></p>	<p><i>Student scales and plots O157 and O121 correctly; one or both axis labels or plot labels are missing (or incorrect).</i></p>	<p><i>Student scales, plots, and labels the graph correctly (days on x, populations on y, 2 sets of data)</i></p>

63	<p>What are the variables that should have been controlled or kept constant in the experiment? Explain why it is important to control variables in an experiment.</p>	<p>CINQ4. Identify independent and dependent variables, including those that are kept constant.</p>	<p><i>States no constants needed, or all variables incorrect.</i></p>	<p><i>Misidentifies one of the variables. Only some constant properties correctly identified, or no explanation as to the reason for controlling variables.</i></p>	<p><i>Identifies both variables: Independent variable: strain, but should have kept Lists some important properties to keep constant., amount of food/nutrient, light, temperature, some explanation of need for constants</i></p>	<p><i>Lists most properties to keep constant:... Discusses reason for controlling variables as knowing the cause for the effect, referring to making a valid conclusion</i></p>
64	<p>The student then decided to test to see whether different temperature environment would affect Strain O157 of <i>E.coli</i>.</p> <p>Write a step-by-step procedure you could use to collect reliable data related to your question. Include enough detail so that someone else could conduct the same experiment and get similar results.</p>	<p>CINQ3 Design and conduct appropriate types of scientific investigations to answer different questions.</p>	<p><i>Describes an experiment without mentioning different setups at different temperature.</i></p>	<p><i>Describes an experiment with independent variable of temperature, may not mention conditions, and may generally describe method to measure some effect on populations.</i></p>	<p><i>Describes an experiment with independent variable of different temperature and same strain/type of organisms, and food/nutrients, etc., and describes method to measure population as dependent. May not address any other design concerns.</i></p>	<p><i>Describes an experiment with independent variable of different temperature using same organisms/strain, nutrient/food, light, and other conditions, and describes method to measure population as dependent. Describes some of controlling variables, multiple trials, control group.</i></p>

<b>LEVELS:</b>		
<b>basic</b>		<b>0-12</b>
<b>proficient</b>	<b>13</b>	<b>13-15</b>
<b>goal</b>	<b>16</b>	<b>16-22</b>
<b>advanced</b>	<b>19</b>	