Specific competencies and skills tested in this assessment:

Agriculture and Natural Resources
Students will demonstrate knowledge of impacts of agriculture on society
Students will demonstrate an understanding of agribusiness principles and skills
Students will demonstrate understanding of applied science in agriculture
Students will demonstrate understanding of the Future Farmers of America (FFA) organization

Agriculture Business
Students will understand basic agricultural business management procedures in agriculture and natural resources
Students will apply basic economic principles in agriculture and natural resource business and management
Students will demonstrate understanding of agricultural finance management procedures
Students will understand marketing, sales, and purchasing
Students will inventory private and public organizations that impact agriculture and natural resources

Animal Science
Students will understand animal anatomy, physiology, and health of domesticated animals
Students will explain animal genetics and reproduction
Student will identify current topics and career opportunities and animal science
Students will demonstrate management practices for specific species of animals
Students will understand animal science and production
Students will demonstrate an understanding of the meat industry

Plant Science
Students will demonstrate an understanding of soil science
Students will demonstrate basic surveying and soil and water management skills
Students will demonstrate an understanding of agronomy
Students will understand plant science careers
Students will demonstrate an understanding of plant structure and function
Students will investigate principles of biotechnology in plant science
Students will demonstrate understanding of weeds, diseases, and insects
Written Assessment:

Administration Time: 2 hours
Number of Questions: 97

Areas covered:

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<thead>
<tr>
<th>Percent</th>
<th>Area</th>
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<tbody>
<tr>
<td>12%</td>
<td>Agriculture and Natural Resources</td>
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<tr>
<td>20%</td>
<td>Agriculture Business</td>
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<td>45%</td>
<td>Animal Science</td>
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<tr>
<td>23%</td>
<td>Plant Science</td>
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Sample Questions:

Everything that has value to your business is considered a/an
A. liability  
B. loan  
C. asset  
D. debit

A budget for beef, as a component of a diversified farming/livestock operation would be a/an
A. enterprise budget  
B. supply budget  
C. partial budget  
D. whole farm budget

Which of the following is term for the act of giving birth?
A. parturition  
B. copulation  
C. gestation  
D. mastication

Which of the following is the equivalent of an acre?
A. 40,000 square meters  
B. 43,560 square feet  
C. 45,560 square miles  
D. 47,280 square feet

What is the equation for photosynthesis?
A. \( \text{CO}_2 + \text{energy} + \text{H}_2\text{O} \rightarrow \text{H}_2\text{O} + \text{O}_2 + \text{C}_6\text{H}_12\text{O}_6 \)  
B. \( \text{CO}_2 + \text{LIGHT} + \text{O}_2 \rightarrow \text{H}_2\text{O} + \text{C}_6\text{H}_12\text{O}_6 \)  
C. \( \text{O}_2 + \text{C}_6\text{H}_12\text{O}_6 + \text{H}_2\text{O} + \text{LIGHT} \rightarrow \text{CO}_2 \)  
D. \( \text{O}_2 + \text{ENERGY} + \text{H}_2\text{O} + \text{CO} + \text{C}_6\text{H}_12\text{O}_6 + \text{H}_2\text{O} \)