

**Eads High School Agriculture Education Standards  
Agriculture Sciences  
Grade 11 - 12**

**AGRICULTURE SCIENCES STANDARD #1**

Students will demonstrate/communicate an understanding of current issues relating to agriscience..

<b>Ref.</b>	<b>Expectation</b>	<b>P</b>	<b>PP</b>	<b>IP</b>	<b>US</b>
11/12.1.a.	Present an extemporaneous and/or prepared public speech on an agricultural topic.				
11/12.1.b.	Write a research paper and/or prepare a display on an agricultural topic.				
11/12.1.c.	Collect and organize information from the Internet, satellite information systems, library databases, scientific journals, magazines, newspapers, and/or other current media.				
11/12.1.d.	Write a position paper on an agriscience issue.				
11/12.1.e.	Write a news article on an agricultural topic.				
11/12.1.f.	Present a Food For American Program.				

**AGRICULTURE SCIENCES STANDARD #2**

Students will gain practical experience in agriscience through laboratory and fieldwork..

<b>Ref.</b>	<b>Expectation</b>	<b>P</b>	<b>PP</b>	<b>IP</b>	<b>US</b>
11/12.2.a.	Analyze soil.				
11/12.2.b.	Analyze water.				
11/12.2.c.	Conduct laboratory experiments utilizing plants and animals.				
11/12.2.d.	Utilize proper research reporting format.				
11/12.2.e.	Determine fertilizer requirements.				
11/12.2.f.	Select an irrigation method.				
11/12.2.g.	Understand the scientific method of problem solving.				
11/12.2.h.	Analyze rations for efficiency.				
11/12.2.i.	Design an animal health plan.				
11/12.2.j.	Understand livestock grades and grading.				
11/12.2.k.	Evaluate livestock grades and grading.				
11/12.2.l.	Evaluate live animals.				
11/12.2.m.	Identify methods of selection.				
11/12.2.n.	Castrate swine, beef, or sheep.				
11/12.2.o.	Control parasites in livestock.				
11/12.2.p.	Recognize and control diseases in livestock.				
11/12.2.q.	Measure land and calculate acreage.				
11/12.2.r.	Write legal land descriptions.				
11/12.2.s.	Groom livestock.				
11/12.2.t.	Identify livestock exhibition techniques.				
11/12.2.u.	Collect soil sample.				

11/12.2.v.	Evaluate a range site.				
11/12.2.x.	Determine stocking rates.				
11/12.2.y.	Complete a proficiency award application.				

**AGRICULTURE SCIENCES STANDARD #3:**

Students will demonstrate an understanding of physiological processes in agriculturally important animals.

<b>Ref.</b>	<b>Expectations</b>	<b>P</b>	<b>PP</b>	<b>NI</b>	<b>US</b>
11/12.3.a.	Understand the functions of the digestive system.				
11/12.3.b.	Understand the digestion and absorption of feeds by livestock.				
11/12.3.c.	Understand the functions of the major body systems (circulatory, respiratory, nervous, lymphatic, etc)				
11/12.3.d.	Determine nutrient requirements for beef, swine, sheep, and dairy.				
11/12.3.e.	Determine the sources and uses of nutrients.				
11/12.3.f.	Identify vitamins, minerals and essential amino acids, their sources and functions.				
11/12.3.g.	Develop a balanced ration.				
11/12.3.h.	Determine rations for different classes of livestock.				
11/12.3.i.	Identify feed additives and their functions.				
11/12.3.j.	Understand the use of growth regulators.				
11/12.3.k.	Evaluate ratios using the net energy method.				
11/12.3.l.	Identify the symptoms of and causes of nutritional diseases.				
11/12.3.m.	Identify the parts of the male and female reproductive tracts and their functions.				
11/12.3.n.	Understand the principles of inheritance.				
11/12.3.o.	Understand gene interactions.				
11/12.3.p.	Understand sex determination.				
11/12.3.q.	Estimate genetic change.				
11/12.3.r.	Determine factors affecting livestock growth and development.				
11/12.3.s.	Understand artificial insemination, embryo transfer, and estrus synchronization.				
11/12.3.t.	Understand production cycles.				
11/12.3.u.	Identify breeding systems.				
11/12.3.v.	Recognize breeds of swine, sheep, and beef.				
11/12.3.w.	Understand selection principles for swine, sheep, and beef.				
11/12.3.x.	Identify equipment for Artificial Insemination (A.I.)				
11/12.3.y.	Understand A.I. procedures.				
11/12.3.z.	Detect heat in livestock.				
11/12.3.aa.	Determine facility requirements for A.I.				
11/12.3.ab.	Maintain breeding records.				
11/12.3.ac.	Identify symptoms, causes, and treatments of common infectious diseases.				
11/12.3.ad.	Identify vital signs in livestock.				
11/12.3.ae.	Identify control methods for internal and external parasites.				

11/12.3.af.	Calculate dosages of medications.				
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**AGRICULTURE SCIENCES STANDARD #4:**

Students will demonstrate an understanding of physiological processes in agriculturally important plants.

Ref.	Expectation	P	PP	NI	US
11/12.4.a.	Select varieties of economically important crops.				
11/12.4.b.	Identify economically important crop and weed plants and their seeds.				
11/12.4.c.	Determine weed control measures.				
11/12.4.d.	Understand nutrient uptake in plants.				
11/12.4.e.	Understand plant propagation and fertilization.				
11/12.4.f.	Understand photosynthesis and respiration.				
11/12.4.g.	Identify plant structures and their functions.				
11/12.4.h.	Identify plant life cycles and their importance.				
11/12.4.i.	Determine harvest methods for major crops.				
11/12.4.j.	Determine primary and secondary tillage methods for major crops.				
11/12.4.k.	Select an appropriate irrigation method.				
11/12.4.l.	Determine planting methods and procedures for major crops.				
11/12.4.m.	Select an appropriate irrigation method.				
11/12.4.n.	Determine planting methods and procedures for major crops.				
11/12.4.o.	Understand the requirements for seed germination.				
11/12.4.p.	Identify sources of plant stress.				

**AGRICULTURE SCIENCES STANDARD #5:**

Students will demonstrate team skills through problem-solving activities in agriscience.

Ref.	Expectation	P	PP	NI	US
11/12.5.a..	Identify situations where compromise is necessary.				
11/12.5.b.	Give and receive constructive criticism.				
11/12.5.c.	Conduct a sales/promotion activity.				
11/12.5.d.	Conduct a group experiment.				
11/12.5.e.	Participate on judging teams.				

**AGRICULTURE SCIENCES STANDARD #6:**

Students will demonstrate the use of current technology.

Ref.	Expectation	P	PP	NI	US
11/12.6.a.	Utilize computerized data entry and analysis.				
11/12.6.b.	Utilize artificial insemination (A.I.) equipment.				

11/12.6.c.	Access information utilizing computerized media.				
11/12.6.d.	Interpret precision farming technology (satellite mappings.)				

Adopted Spring 2003