

**POWER STANDARDS  
MORRISON HIGH SCHOOL  
2004-05**

## **HIGH SCHOOL AGRICULTURE**

### **AGRICULTURAL INDUSTRY**

The student will be able to:

- Determine the nature of current agriculture industry by discussing the role and trend of agriculture and identify the relationship between agriculture and the environment
- Use sources of agricultural information via governmental agencies and the world wide web
- Recognize the impact of technology in agriculture by exploring the role of research and development biotechnology, electronics, and precision technology in agriculture

### **AGRICULTURAL SCIENCE**

The student will be able to:

- Understand soil formation, color, texture, and structure
- Explain a soil profile, moisture holding capacity of soils and soil degradation
- Identify and explain soil erosion and agricultural management practices that minimize erosion
- Examine plant structures and functions to identify plant types and uses
- Recognize the importance of plant life processes including photosynthesis and respiration
- Determine plant nutrients and fertility
- Explain control of plant pests

### **INTRODUCTION TO WELDING**

The student will be able to:

- Understand the importance and use of safety procedures and equipment in welding
- Recognize welding symbols and use print reading
- Understand basic welding processes including welding, soldering, and brazing
- Use an oxyfuel cutting unit and recognize a quality welding bead

## **HIGH SCHOOL - ART**

### **ART I**

#### **ART SOCIETY**

The student will be able to:

- Know when, where and by whom the artwork was done
- Understand the unique features of the artwork
- Understand how the artist was influenced by the world around him/her and what impact the artist had on the world

#### **ART PROCESS**

The student will be able to:

- Mark preliminary sketches to clarify the composition, select, and finish a detailed drawing
- Translate a 2-D sketch into a 3-D sculpture
- Use basic tools / media and practice safety
- Create emotion and mood through the use of color
- Develop space on a 2-D surface

- Control value to illusion of light

#### ART CONCEPTS

The student will be able to:

- Demonstrate color theory (hue, intensity, value and color relationships)
- Apply various types of line in a painting or drawing
- Focus on value, balance and proportion to create a realistic drawing

#### SCULPTURE

##### ART & SOCIETY

The student will be able to:

- Identify cultures thru projects based on objects made about these cultures, ex. Masks, effigy vessel, ceremonial bowls
- Understand how artists establish careers in art and how their work is exhibited

##### ART PROCESS

The student will be able to:

- Use basic tools/media (chisel, wire, clay, wood, rasps) and practice safely
- Demonstrate basic carving techniques as applied to wood, stone or plaster
- Create wire constructions
- Make clay coil vessels and slab constructions
- Design a series of sketches, make a plan, use appropriate tools and media, and finally make the sculpture

#### ART CONCEPTS

The student will be able to:

- Identify and integrate proportion, texture, shape and form into the sculpture they create
- Combine emotion and mood in created artwork
- Formulate artwork that conveys an idea
- Incorporate negative space in building coil vessels

#### DRAWING

##### ART SOCIETY

The student will be able to:

- Identify types of drawings: thumbnails, sketches, contour drawings, concept drawing, perspective drawing, and paraline drawing
- Study the artist's vision through looking at final drawings and preliminary sketches
- Understand artistic style in terms of mark making, choice of media, and use of line in a work of art

##### ART PROCESS

The student will be able to:

- Compose a portrait
- Combine realism and exaggeration to design a caricature
- Compose a landscape drawing
- Combine layers of color to develop a pastel still life drawing
- Build a composition which has a center of interest, balance and harmony
- Use 2-D materials (pencil, pen & ink) to create the illusion of space: forms and textures

## ART CONCEPTS

The student will be able to:

- Create a drawing that forms on line, shape, gradation, balance and movement to show harmony
- Show emotion, mood in art
- Create a drawing that developed compositions which convey a single focused idea

## PAINTING

### ART SOCIETY

The student will be able to:

- Demonstrate their understanding and appreciation of art through visual description, analyzing and assessment
- Study the careers of artists and become more aware of opportunities in art related fields

## ART PROCESS

The student will be able to:

- Design a painting based on a famous artist's work (ex. Van Gogh's Potato Eaters)
- Landscape a painting in the style of the Impressionist
- Design and paint a mural based on a school theme (Sports, Clubs or classes)
- Create watercolor painting with gradations of intensity to emphasize space
- Create a hard edge painting producing an optical effect
- Develop a batik painting based on a patterned after a ethnic tradition (China or Indonesia)

## ART CONCEPTS

The student will be able to:

- Create a painting that shows movement and rhythm
- Explain and describe hue, intensity and value when discussing a painting
- Develop space within a painting
- Show texture and gradation in finished paintings
- Create a painting that shows balance and exhibits harmony

## COMPUTER GRAPHICS

### ART SOCIETY

The student will be able to:

- Understand how the arts change in response to technology, specifically computers
- Analyze how arts and technology are used to inform or persuade the public through mass media
- Understand how careers in arts are expanding and evolving based on new technologies

## ART PROCESS

The student will be able to:

- Understand the difference between bitmap and vector graphics
- Learn the fundamentals of 2-D animation
- Manipulate text and images within the same viewing area
- Learn the fundamentals of scanning and photo retouching
- Paint digitally using Photoshop
- Understand CMYK vs. RGB color work flow

## ART CONCEPTS

The student will be able to:

- Translate the use of line into a landscape painting
- Understand hue, intensity, value and color relationships to create a harmonious collage
- Integrate value, balance and proportion into their images
- Focus on negative space to evaluate designed logos and advertisements

## INDEPENDENT STUDIO

### ART SOCIETY

The student will be able to:

- Distinguish characteristics in individual artworks in art history by style and iconography
- Understand how the arts and society has influenced one another in content and visual style
- Understand how the arts reflect the ideas or issues of a particular culture or historical period

## ART PROCESS

The student will be able to:

- Develop a strong portfolio consisting of at least 10-15 observational drawings
- Understand how tools and technology influence the artistic process
- Create independent artworks using a variety of materials and techniques
- Create personal, meaningful, theme driven art in a variety of materials and techniques

## ART CONCEPTS

The student will be able to:

- Demonstrate artwork that shows balance
- Establish movement and rhythm within the paintings
- Establish a deep sense of depth and space with drawings
- Incorporate texture and gradation into hand build clay sculptures

## HIGH SCHOOL-BUSINESS EDUCATION

### HS - COMPUTER CONCEPTS

By the end of a semester a computer concepts student will be able to:

- Run Microsoft Windows software effectively
- Choose and use keyboard commands
- Use keyboard short cuts
- Open, save, print and reopen files
- Key reports, letters, tables and envelopes
- Use communication and grammar skills correctly
- Design and present a power point program

### HS - COMPUTER APPLICATIONS

By the end of Computer Applications class, the student will be able to:

- Edit and format documents using Microsoft Window
- Work with tables, envelopes, letters, reports
- Create web pages
- Design, refine and present power point

- Create a worksheet using Excel while formatting cells and using formulas
- Work with database on Access to create and modify tables with records, change layouts, sort and find data, create reports

#### HS - DESK TOP PUBLISHING

After a semester, a desktop publishing student will be able to:

- Plan and create a publication from scratch using a template
- Replace text and apply new formats and fonts
- Save and print a publication
- Create a logo, stationery, coupons, flyers, menus, advertisements, business cards, certificates, posters, application forms, newsletters, cards and mailings

#### HS - GENERAL BUSINESS

After a year in General Business class, the student will be able to:

- Be a wise consumer by focusing on real life problems of money and management
- Make wise decisions in spending, earning, education and life skills
- Interact with other consumers in the economy as workers, employers, consumers and citizens
- Realize wants, needs, goals, ethics, and values in relations to resources
- Balance and use checkbooks correctly
- Use interest and credit wisely

#### HS - ACCOUNTING:

By the end of a year in Accounting, the student will be able to:

- Use accounting as the language of business
- Keep personal and business records
- Use accounting concepts, principles, and information in real life
- Complete the accounting process correctly, which includes using source documents, journalizing, posting, doing income statements and balance sheets, doing end of cycle entries, adjustments and closing entries

#### HS - CONSUMER EDUCATION

By the end of the semester course, the Consumer Education student will be able to:

- Make wise consumer decisions including education, career, automobiles, real estate, appliances and other major purchases
- Manage money wisely by exploring methods to enhancing purchasing power and financial position with savings, investments, and retirement plans
- Know and apply consumer rights and responsibilities
- Manage a check book and bank accounts
- Use credit wisely

## HIGH SCHOOL-VOCATIONAL

#### HS – FOODS I

By the end of the semester, the student will be able to:

- Read, understand, and prepare basic recipes
- Know necessary cooking terminology
- Use fundamental kitchen tools in the intended manner

- Understand and use critical sanitation and safety standards while in the kitchen setting
- Have knowledge of essential nutritional needs based on the Food Guide Pyramid

#### HS – FOODS II

By the end of the semester, the student will be able to:

- Prepare recipes with higher skill level and more equipment that is advanced
- Comprehend more in-depth nutritional, safety, and sanitation standards
- Become efficient and fluent within the kitchen group setting when organizing, executing, and evaluating a recipe/meal
- Understand the concept of meal planning

#### HS – CLOTHING I

By the end of the semester, the student will be able to:

- Identify basic fibers, both natural and man-made
- Understand the difference in construction and care between knitted and woven fabric
- Be familiar with essential sewing equipment
- Experience hand sewing techniques for sewing hems, buttons, and making simple repairs
- Operate a sewing machine using basic functions such as straight, zigzag and reverse stitching
- Experience a Serger sewing machine
- Construct two beginning level sewing projects using skills such as measuring, pinning, cutting, and assembling

#### HS – CLOTHING II

By the end of the semester, the student will be able to:

- Master machine sewing and hand stitching
- Complete three sewing projects using basic skills from Clothing I plus higher level skills such as installing zippers, making buttonholes, working with set-in sleeves, gathering, and working with several different seam finishes

#### HS – PARENTING (11 – 12)

By the end of the semester, the student will be able to:

- Identify personal values, set obtainable goals, and recognize resources available to them
- Be aware of the different types of communication skills and how essential those are to master for parent/child relationships
- Be familiar with the different physical, emotional, intellectual, and social levels of development for newborns through adolescents
- Observe developmental stages of pregnancy and newborn children through preschool age

#### HS-CHILD DEVELOPMENT (11-12)

By then end of the semester, the student will be able to:

- Identify the different stages of prenatal development
- Distinguish the physical, emotional, intellectual, and social levels of development for newborns through adolescents
- Observe and experience the developmental stages of preschool aged children through a 5 week simulated preschools setting within the classroom

#### HS – ADULT LIVING (11-12)

By the end of the semester, the student will be able to:

- Familiarize him/herself with their leadership skills
- Put together a simple resume, fill out a basic job application, and be prepared for an interview meant for an entry-level job

- Learn basic sewing skills to repair a torn hem and replace a button
- Capably operate a sewing machine using basic functions such as straight and reverse stitching
- Complete a very basic sewing project using a kit such as a stuffed animal, boxers, gym bag, or pillow
- Read, understand, and prepare basic recipes
- Know fundamental cooking terminology
- Use primary kitchen tools in the intended manner
- Understand and use critical sanitation and safety standards while in the kitchen setting

#### HS – LIVING ENVIRONMENT

By the end of the semester, the student will be able to:

- Identify components of a basic floor plan
- Comprehend fundamental decorating concepts such as the use of color, lines, and texture
- Complete a semester long Dream House project using the concepts learned about floor plans, elements of design, and principles of design

## HIGH SCHOOL-LANGUAGE ARTS

#### HS LANGUAGE ARTS – READING (9)

By the end of ninth grade, the student will use a variety of strategies to:

- Demonstrate a basic understanding of a text
- Use questions and predictions to guide reading
- Examine the development of theme, character, plot and setting
- Analyze how characters in literature deal with conflict, solve problems, and relate to real-life situations

#### HS - LANGUAGE ARTS – READING (10)

By the end of tenth grade, the student will use a variety of strategies to:

- Explain, justify and provide an interpretation of a text
- Use a variety of sources for research projects and cite sources according to standard format
- Make predictions and use inferences to guide reading and discussions of a text
- Evaluate the relationship between literature and historical periods

#### HS – LANGUAGE ARTS – READING (11)

By the end of eleventh grade, the student will use a variety of strategies to:

- Evaluate how a text reflects American Culture, society, or historical period
- Critically evaluate information from multiple sources in the development of a research paper
- Analyze and compare ideas and impressions using different genres

#### HS – LANGUAGE ARTS – READING (12)

By the end of twelfth grade, the student will use a variety of strategies to:

- Examine how a text reflects British culture, society, and historical periods
- Analyze and defend an interpretations of a text
- Identify the author’s style and form
- Construct connections to relevant aspects of contemporary and historical human experience

#### HS LANGUAGE ARTS – WRITING (9)

By the end of ninth grade, the student will use a variety of strategies to:

- Write compositions that contain effective paragraphs and complete sentences

- Use the writing process to produce a coherent essay
- Compose, revise, and edit to create a finished product

#### HS – LANGUAGE ARTS – WRITING (10)

By the end of tenth grade, the student will use a variety of strategies to:

- Write a coherent multi-paragraphed essay
- Write for a specific purpose and audience
- Analyze a variety of sources for the purpose of a research project

#### HS – LANGUAGE ARTS – WRITING (11)

By the end of eleventh grade, the student will use a variety of strategies to:

- Use appropriate Modern Language Association (MLA) style guides to produce a formal document
- Produce grammatically correct documents
- Communicate and introduce ideas in narrative, persuasive, and expository form

#### HS – LANGUAGE ARTS – WRITING (12)

By the end of twelfth grade, the student will use a variety of strategies to:

- Adjust voice, tone, vocabulary, and grammatical conventions according to purpose and audience
- Use figurative language
- Use a variety of sources in research projects

## HIGH SCHOOL-FOREIGN LANGUAGE

#### HS – FOREIGN LANGUAGE – (9-12)

After completion of a foreign language class, the student will be able to:

- Demonstrate comprehension of oral/written multi-step instructions
- Ask and respond orally and in writing to questions using level appropriate vocabulary and pronunciation
- Read with understanding written passages and written classroom instructions
- Write level appropriate compositions using learned vocabulary and sentence structure
- Demonstrate an understanding of the customs, arts, literature, history and geography of the target language culture

## HIGH SCHOOL HEALTH

#### HS – HEALTH

By the end of Health, the student will be able to:

- Identify what Health actions impact physical, social, and mental health for the positive or the negative
- Describe common illnesses – those that are communicable, chronic, and degenerative and their prevention, cures, and treatment
- Understand the impact of good diet, rest, and exercise on their health
- Understand the choices which can be made through sex education
- Acquire the knowledge to make healthy choices and set goals to maintain health
- Acquire coping skills to communicate, cooperate, prevent and resolve conflict and live a happier life

## INDUSTRIAL TECHNOLOGY

### HIGH SCHOOL WOODS I

By the end of the semester, the student will be able to:

- Demonstrate a knowledge of the safe and proper usage of woodworking machines through safety tests
- Read and comprehend woodworking project plans
- Accurately measure and layout project parts
- Safely operate woodworking hand tools and machines by cutting out parts needed when building their pedestal table
- Demonstrate the proper usage of the wood lathe by turning a pedestal
- Apply sand and finishing techniques necessary when completing their pedestal table
- Show a basic knowledge and understanding of woodworking through worksheets and tests

### DRAFTING I

By the end of the semester, the student will be able to:

- Accurately read and use a ruler to complete mechanical drawings
- Demonstrate proper usage of drafting tools
- Understand and draw multiview drawings
- Understand and draw Oblique drawings
- Understand and draw isometric drawings
- Understand and draw perspective drawings
- Place dimensions onto mechanical drawings

### METALS

By the end of the semester, the student will be able to:

- Demonstrate proper usage of a metal lathe when making an aluminum gavel
- Demonstrate proper usage of metal benders when making a candle holder
- Apply foundry techniques when making an anvil paper weight
- Use proper spot welding techniques necessary during sheet metal fabrication when making a tool box
- Show a basic knowledge and understanding of general metals through worksheets and tests

### ARCHITECTURAL DRAFTING

By the end of the semester, the student will be able to:

- Accurately read and use a ruler to complete mechanical drawings
- Demonstrate proper usage of drafting tools
- Understand how to draw floor plans
- Understand how to draw elevation plans

## HIGH SCHOOL-MATH

### HS PRE-ALGEBRA (9)

By the end of Pre-Algebra, the student will translate verbal problems to algebraic problems involving whole numbers, solve and graph whole number linear equations, and solve systems of linear equations involving whole numbers.

### HS ALGEBRA I – (10)

By the end of Algebra I, the student will solve, write, and graph linear equations, translate verbal problems to algebraic problems, solve quadratic and rational equations, solve systems of linear equations and word problems based on real-world issues. They will also simplify exponential and square root problems.

### HS GEOMETRY (10)

By the end of Geometry, the student will use geometric concepts to classify shapes by characteristics, demonstrate the ability to find dimensional measurements of geometric shapes using acceptable geometric reasoning process and be proficient in writing geometric proofs.

### HS – ALGEBRA II (11)

By the end of Algebra II, the student will be able to translate word problems to algebraic problems, solve graph and write quadratic equations using complex numbers, simplify exponential, radical, and rational expressions, understand the concept of functions, simplify and use matrices, solve and graph conic equations, understand basic trigonometric ratios using degree and radian measurement.

### HS – PRE CALC

By the end of the pre-calculus, the student will be able to solve and graph trigonometric functions, factor polynomials higher than degree 2, use the graphing calculator to find minimums, maximums, and zeros of functions, translate graphs, use exponential and logarithmic functions to solve financial problems, and write equations of and solve conic sections.

### HS – CALC

By the end of Calculus, the student will be able to evaluate limits, find discontinuity, take derivatives of simple functions, use the chain and power rules, find the area between two curves and evaluate definite and indefinite integrals.

## HS – MUSIC

The student will be able to:

- Read pitch and rhythm in two clefs; various time signatures and all key signatures
- Identify the Vocabulary, i.e. dynamics, tempo, symbols, etc. of music and apply it in music
- Demonstrate correct articulation (staccato, legato, marcato, etc.)
- Identify historical style periods
- Demonstrate appropriate performance preparation and concert etiquette (quiet; applaud at appropriate time; remain in seat until appropriate time)

## HIGH SCHOOL-SCIENCE

### HS INTEGRATED SCIENCE (9)

By the end of Integrate Science, student will be able to:

- Conduct a controlled experiment
- Explain Newton's three laws of motion
- Describe atomic structure including how it relates to organization of the periodic table
- Relate scientific knowledge to career opportunities in science
- Analyze the properties of matter in relationships to chemical and physical properties

## HS ENVIRONMENTAL SCIENCE (9)

The student will be able to:

- Discuss environmental problems and policies of the US and explore how science is used to solve problems
- Describe kinds of ecosystems, how they function and understand the importance of biodiversity
- Explore water and air pollutions and solutions and proper land management practices
- Discuss energy production and alternatives in a given situation
- Understand population growth, overpopulation problems, and the goal of a sustainable world

## HS – BIOLOGY (10)

By the end of Biology, the student will be able to:

- Conduct controlled experiment
- Describe and explain the structure and function of the cell and its organelles
- Understand the function and uses of Punnett Squares and how related to inheritance
- Compare and contrast the structure and developmental differences between the five kingdoms of animals
- Explain how inheritance contributes to the change of traits over time

## HS – ANATOMY/PHYSIOLOGY

After completion of Anatomy, the student will be able to:

- Conduct controlled experiments
- Explain the structures and function of the 7 body systems
- Trace the pathway of circulation and how it relates to the other systems
- Understand how the structures are inter related trying to obtain homeostasis

## HS – CHEMISTRY I (10)

By the end of Chemistry I, the student will be able to:

- Conduct controlled experiments of simulations to test hypotheses
- Using kinetic theory explain energy transformations
- Examine historic atomic theories and how they relate to current theories
- Relate compound formation to bond type
- Apply stoichiometry to balanced chemical equations
- Conduct laboratory activities in a safe manner

## HS – PHYSICS (12)

After completion of Physics, the student will be able to:

- Conduct controlled experiments by using available technology
- Understand and explain motion and the scientific laws related
- Describe waves and wave action throughout the universe
- Create a unique activity that shows Newton's Laws
- Show the flow of electrical currents

## HS – NATURAL RESOURCES (12)

After completion of NATURAL RESOURCES, the student will be able to:

- Conduct controlled experiments
- Compare physical, ecological and behavioral factors of 7 difference biomes
- Explain how biodiversity issues effect extinction
- Explain how energy flows through a biome
- Design an activity to show an environmental impact study

## HS – CHEMISTRY II (12)

After completion of Chemistry II, the student will be able to:

- Collect, organize and analyze data accurately and precisely
- Relate the laws of thermodynamics to chemical and physical changes
- Describe the gas laws and how they relate to ideal gases
- Examine factors that effect reaction rates
- Describe the relationships between acids and bases
- Conduct laboratory activities in a safe manner

## HIGH SCHOOL-SOCIAL STUDIES

### HS – SOCIAL STUDIES WORLD GEOGRAPHY (9)

By the end of ninth grade, the student will have a basic understanding of world geography and the effects of geography on society including economic systems, events, trends, individuals, and movements shaping history.

### HS – SOCIAL STUDIES – WORLD HISTORY (10)

By the end of the tenth grade, the student will demonstrate significant understanding of world history and effects of history on society including economic systems, events, trends, individuals, movements, and social systems shaping world history.

### HS – SOCIAL STUDIES – UNITED STATES HISTORY (11)

By the end of the eleventh grade, the student will demonstrate insight and reflection on complex issues of U. S. History and the effects of history on society including economic systems, events, trends, individuals, movements, and social systems shaping U. S. History.

### HS – SOCIAL STUDIES – U. S. HISTORY (12)

By the end of twelfth grade, the student will read text to reflect, criticize, and demonstrate research on complex issues of U. S. history and the effects of history on society including economic systems, events, trends, individuals, movements, and social systems shaping U. S. History.

## HIGH SCHOOL-PSYCHOLOGY

### HS – PSYCHOLOGY (10)

After completing Psychology, the student will be able to:

- Demonstrate an understanding of the development of psychology as an empirical science by describing the scientific method, explaining the various research methodologies commonly employed, and identifying ethical issues
- Collect and interpret data, forming valid conclusions after analyzing results, sample set, sample size, similar previous experimentation and research, possible misinterpretation of data and possible sources of error, presenting them in a clear, concise, written format
- Explain the process of how humans grow, learn, and adapt to their environment
- Demonstrate an understanding of how organisms adapt to their environment through learning, information processing and memory
- Recognize that personality is a stable pattern of behaviors, thoughts, motives, and emotions that characterize the individual