



Architecture & Engineering

Drafting II: Architecture



ORGANIZING THEME/TOPIC	FOCUS STANDARDS & SKILLS
<p>THEME/TOPIC: Styles of Architecture</p> <ul style="list-style-type: none"> • Basic house designs. • Advantages and disadvantages of various house designs. • Traffic circulation in a floor plan. <p>Time Frame: 3 Weeks</p>	<p>KS 21103.2 Identify historical styles of architecture and types of structural designs.</p> <ul style="list-style-type: none"> • Identify four basic house designs. • Explain the chief advantages and disadvantages of house designs as they apply to home construction. • Develop an efficient traffic pattern in a house design.
<p>THEME/TOPIC: Site and Plot Planning</p> <ul style="list-style-type: none"> • Site considerations, restrictions, zoning, and codes • Topography symbols • Land elevations <p>Time Frame: 4 Weeks</p>	<p>KS 21103.9 Develop Plot Plan with house, out buildings, trees, utility supply lines and communications supply lines identified.</p> <ul style="list-style-type: none"> • Describe site considerations, restrictions, zoning, and codes and how they impact placement of structures on the site. • Identify the various features shown on a typical plot plan. • Recognize typical topographical symbols and apply them to site considerations. • Draw a plot plan using correct symbols and conventions. • Interpret land elevations from contour lines.
<p>THEME/TOPIC: Floor Plan</p> <ul style="list-style-type: none"> • Floor plan specifications. • Construction materials and the architectural symbols <p>Time Frame: 4 Weeks</p>	<p>KS 21103.4 Design and draw a residential floor plan using accepted symbols and techniques and properly identify walls, doors, windows, and stairs.</p> <ul style="list-style-type: none"> • Dimension a floor plan in a clear and precise manner. • Interpret architectural symbols that represent construction materials.
<p>THEME/TOPIC: Foundation Plan</p> <ul style="list-style-type: none"> • Residential foundations • Footings <p>Time Frame: 5 Weeks</p>	<p>KS 21103.6 Draw a foundation plan for a single family dwelling.</p> <ul style="list-style-type: none"> • Analyze a typical floor plan to determine the appropriate foundation. • Draw and dimension a foundation plan. • Identify all parts of a foundation plan. • Discuss the foundation design considerations for wood, concrete, and masonry walls.
<p>THEME/TOPIC: Wall Section</p> <ul style="list-style-type: none"> • Types of building wall sections • Regulations, guidelines and pre-design • Manual and CAD techniques. <p>Time Frame: 2 Weeks</p>	<p>KS 21103.8 Dimension and draw a wall section with all components identified.</p> <ul style="list-style-type: none"> • Describe the three main types of building wall sections. • List information that must be obtained before a section can be drawn. • Utilize industry standard terms associated with a wall section.

<p>THEME/TOPIC: Doors and Window Schedules</p> <ul style="list-style-type: none"> Residential doors Residential windows <p>Time Frame: 2 Weeks</p>	<p>KS 21103.4 Use accepted symbols and techniques and properly identify doors and windows.</p> <ul style="list-style-type: none"> Compare the types of doors used in a residential dwelling. Draw proper door and window symbols on a typical floor plan in CAD or Manual. Prepare window and door schedules in CAD or Manual drafting. Label and identify different types of doors and windows.
<p>THEME/TOPIC: Electrical and Plumbing</p> <ul style="list-style-type: none"> Residential water supply system. Residential water and waste removal system. Delivery and distribution of electricity through residential structures. Branch circuits used in a residential structure <p>Time Frame: 2 Weeks</p>	<p>KS 21103.5 Draw plumbing and electrical layers.</p> <ul style="list-style-type: none"> Draw a residential plumbing plan using manual drafting techniques and identify required elements of water supply and waste removal system. Draw a residential plumbing plan using CAD techniques. Describe how electricity is delivered to and distributed through residential structures. Identify the three types of branch circuits used in a residential structure. Draw an electrical plan for a residential structure using manual drafting and CAD techniques.
<p>THEME/TOPIC: Roofs</p> <ul style="list-style-type: none"> Roof plan Construction of a typical frame roof. <p>Time Frame: 3 Weeks</p>	<p>KS 21103.11 Draw a roof framing plan for a single family dwelling.</p> <ul style="list-style-type: none"> Draw a roof that has a typical roof slope (pitch) with CAD or Manual drafting. Explain the purpose of a roof plan. Identify and sketch 12 different types of basic roof designs.
<p>THEME/TOPIC: Elevations</p> <ul style="list-style-type: none"> Degree of realism in an elevation plan. Presentation drawing. <p>Time Frame: 3 Weeks</p>	<p>KS 21103.7 Draw elevations and pictorial presentations e.g. exterior, interior, etc.</p> <ul style="list-style-type: none"> List methods commonly used to increase the degree of realism in an elevation plan. Explain the purpose of a presentation drawing. Create elevations using CAD or Manual Drafting techniques.
<p>THEME/TOPIC: Culminating Project</p> <ul style="list-style-type: none"> Functional and suitable Comprehensive plan Architectural models <p>Time Frame: 9 Weeks</p>	<p>Integration of architectural concepts and skills</p> <ul style="list-style-type: none"> KS 21103.2 Design a functional structure suitable for a particular site. KS 21103.7 Draw elevations and pictorial presentations e.g. exterior, interior, etc. KS 21103.3 Calculate/estimate building costs for a particular structure and develop brief specifications for the project. KS 21103.15 Create an exterior two-point perspective view. KS 21103.12 Draw interior elevations with fixtures, built-ins, trims, utilities and openings. KS 21103.13 Construct an interior finish schedule. KS 21103.14 Draw an interior one-point perspective drawing. KS 21103.10 Create a physical or virtual 3D model using appropriate tools and mediums. <p>Career and college readiness</p> <ul style="list-style-type: none"> Present project using digital media. Demonstrate time and project management.