

## Virtual Architecture Activity Guide

### Objectives

*In this unit, students will:*

1. Identify and appropriately select tools commonly used by architects, designers, and homeowners for designing structures.
2. Determine suitable replacements for a conventional residential exterior, and use a computer program to apply a chosen modification.
3. Rate and use systems of graphic communication and identify how CAD software fosters a common graphic language.
4. Create an original 3-D living room, bedroom or bathroom using the database of objects.
5. Apply a variety of components of architectural 3-D modeling, visualization, and navigational tools in a problem solving experience.
6. Incorporate doors and windows into a house design that are appropriate for that house and climate.
7. Create a one level basic floor plan similar to student's own home using the database of objects.

Day #	Activity #	Activity Description	Type of Activity
1	1	<b>Reading Blueprints</b> Explain how to read blueprints and use an architectural scale.	Video
1	2	<b>Blueprints</b> Learn how to measure the plans on a blueprint using a scale ruler. Journal questions.	Project
2	1	<b>Architectural Design Tools</b> Introduction to hand tools used by architects. Draw home floor plan.	Project
2	2	<b>Using a CAD Program</b> Use a CAD program to draw a simple floor plan – furniture, lights, labels	Computer Program
3	1	<b>Interior Design</b> Learn how to design an interior layout using a 3D program.	Computer Program
3	2	<b>Exterior Design</b> Learn how to change the elevation view of a house. Learn ground fill and property line.	Computer Program
4	1	<b>Exterior and Interior Designs</b> Continue working on the interior (furniture, lights, etc.) and exterior design (pond, playground equipment, edging, etc.)	Computer Program
4	2	<b>Designing Furniture</b> Introduction to the principles of interior design	Project
5	1	<b>Virtual Walk Through</b> Intro to Virtus, an architectural program that allows you to visualize a design in 3 dimensions. Add bedroom and living room.	Computer Program
5	2	<b>Narrative Writing activity/on-screen multiple-choice test</b> Determine 10 frequently asked questions from potential homebuyers. Utilize a CAD program that would allow the buyer to experience a virtual walkthrough.	Test
6	1	<b>Virtual Architecture</b> Create doors and windows for the house that was started on Day 5.	Computer Program
7	1	<b>Walkthrough</b> Complete a virtual walkthrough of the Day 6 house.	Computer Program
8	1	<b>Punch Pro</b> Create a floor plan of your own home	Project
9	1	<b>Great Buildings</b> Explore the internet site and write in journal.	Internet
10	1	<b>Design Brief</b>	Project
10	2	<b>Persuasive Writing activity/on-screen multiple-choice test</b> Describe what your virtual CAD program has to offer to a potential homebuyer.	Test