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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Architecture & Construction |
| **Course Name** | Practicum in Interior Design |
| **Lesson/Unit Title** | Tiny Houses: Living Large in a Small Space |
| **TEKS Student Expectations** | **130.67. (c) Knowledge and skills.** (2) The student determines the use of elements and principles of design in residential and nonresidential environments and their furnishings. The student is expected to:(A) differentiate between the elements and principles of design C) apply elements and principles of design for coordinating furnishings (4) The student determines treatments and accessories suitable for residential and nonresidential applications. The student is expected to:(A) analyze products to determine the appropriate style of design(B) determine appropriate use of accessories, lighting, materials, and space in various environments, including environments designed to meet special needs (9) The student identifies types of business promotion practices and their benefit to the housing and furnishings retailer. The student is expected to: (B) analyze techniques using sales promotion, advertising, and displays  |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | **Performance Objective**Upon completion of this lesson, each student will create a design plan for a tiny house.**Specific Objectives**Students will:* identify what tiny houses are and why they are a trend in society today.
* develop a design plan through planning construction and décor for a tiny house.
* create a floor plan using appropriate dimensions and square footage.
* plan a budget to keep up with the cost of materials used for construction and décor for the tiny house.
* list eco-friendly materials used in the tiny house.
* identify and exhibit how to use elements and principles of design in a small space.
* determine types of treatments and accessories suitable for use in the design plan.
* select furniture suitable for the tiny house and create a space plan for arranging the furnishings
* decide how to promote and advertise their designed tiny house for individuals to purchase
* create a three-dimensional model of the design plan for the tiny house.
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| **Rationale** | Successful Interior Designers must be able to do the following:* Confer with client to determine factors affecting planning interior environments, such as budget, architectural preferences, and purpose and function.
* Advise a client on interior design factors such as space planning, layout and utilization of furnishings or equipment, and color coordination. See more occupations related to this task.
* Coordinate with other professionals, such as contractors, architects, engineers, and plumbers, to ensure job success. See more occupations related to this task.
* Review and detail shop drawings for construction plans. See more occupations related to this task.
* Estimate material requirements and costs, and present design to client for approval.
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| **Duration of Lesson** | This lesson should take 13 class periods (45 minutes each) to complete. |
| **Word Wall/Key Vocabulary***(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | **Terms*** **Tiny House** – a home of 400 square feet or less, either on wheels or a foundation.
* **Mortgage** – a legal agreement in which a person borrows money to buy property (such as a house) and pays back the money over a period of years.
* **Multifunctional Furniture** – furniture designed to serve many purposes and to be of use in almost any room in the house.
* **Eco-Friendly** – not harmful to the environment.
* **Square footage** – a unit of area measurement equal to a square measuring one foot on each side.
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| **Materials/Specialized Equipment Needed** | **Materials Needed*** Graph paper
* Poster board for design presentation
* Markers, construction paper, glue, and scissors
* Samples such as wall coverings, floor coverings, and fabric
* Magazines
* Items for model (cardboard, glue guns, cutting blades, etc.)

**Equipment Needed*** Computers (for students to complete project)
* Projector

**Instructional Aids*** Student handouts
* Grading rubric
* Internet
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | **Learner Preparation*** Ask students how big their houses are. Ask: “Would you like to live in a larger or smaller home and why?”
* Ask students if they have heard of tiny houses.
* Ask students why they think people choose to live in tiny houses.
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| **Direct Instruction \*** |  |
| **Guided Practice \*** | Using the Project Components Handout**,** the teacher will go over the requirements of this project. The students will follow along and make notes on their hard copies.* Ask students to think about how they would design and decorate a tiny house. They need complete research and planning sheets before they start.
* Show samples and give some ideas to students during the brainstorming session before they start the project. Students will complete notes, Tiny Houses Project, and planning handouts.
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| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | **Independent Practice*** Students will work at their own paces to complete this activity.
* All work is to be done in class, so the teacher can check for understanding.
* Students are strongly encouraged to take ownership of this activity and to establish a workable pace to complete it on time.
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| **Lesson Closure** | **Review*** What are some benefits of living in a Tiny House?
* What are some things that designers must do before designing a home?
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| **Summative/End of Lesson Assessment \***  | **Informal Assessment*** Instructor will observe students during Independent Practice.
* Instructor will assist students as needed.

**Formal Assessment*** Use the Tiny Houses: Living Large in Small Places rubric to evaluate.
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| **References/Resources/****Teacher Preparation** | **Preparation*** Secure the computer lab if you do not have immediate access to one in your classroom.
* Copy the handout sheets and rubric for the students.
* Have materials ready prior to the start of the lesson.
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| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** | **English Language Arts and Reading****110.31 (c) Knowledge and skills.**(21) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. The student is expected to:(B)Organize information gathered from multiple sources to create a variety of graphics and forms.(22) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:(B)Evaluate the relevance of information to the topic and determine the reliability, validity, and accuracy of sources (including Internet sources) by examining their authority and objectivity.(23) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:(C)Use graphics and illustrations to help explain concepts where appropriate; and(D)Use a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research.**Public Speaking I, II, III****110.57 (b) Knowledge and skills.**(4) Organization. The student organizes speeches. The student is expected to:(B)Organize speeches effectively for specific topics, purposes, audiences, and occasions.(5) Proofs and appeals. The student uses valid proofs and appeals in speeches. The student is expected to:(A)Analyze the implications of the audience, occasion, topic, and purpose as a basis for choosing proofs and appeals for speeches.(6) Style. The student develops skills in using oral language in public speeches. The student is expected to:(D)Use informal, standard, and technical language appropriately.(7) Delivery. The student uses appropriate strategies for rehearsing and presenting speeches. The student is expected to:(E)Interact with audiences appropriately.IV. Component 1: Tiny House Design PlanV. Component 2: Graph Paper for Floor PlanVI. Component 3: Materials Budget SheetVII. Component 4: Interior Décor Planning SheetVIII. Component 5: Marketing Planning SheetIX. Component 6: 3D Model Plan**INSTRUCTOR NOTES**Copy the handouts and grading rubric.Secure a computer lab or research.How much space do you need to be comfortable?Hand out Student Notes. Have students fill out the chart.Discuss tiny houses construction materials, interior décor, and how they can be eco-friendly.Go over all the criteria in the assignment. “Tiny Houses” Living Large in a Small Space” and check for understanding.Explain the guidelines. Have students research materials to use in constructing and designing a tiny house.Complete handouts to help plan and design the tiny house. Have students complete tiny house design assignment.**Mathematical Models with Applications****111.43 (c) Knowledge and skills.**(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:(A) Apply mathematics to problems arising in everyday life, society, and the workplace;(B) Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution; and(C) Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.(6) Mathematical modeling in science and engineering. The student applies mathematical processes with algebra and geometry to study patterns and analyze data as it applies to architecture and engineering. The student is expected to:(A)Use similarity, geometric transformations, symmetry, and perspective drawings to describe mathematical patterns and structure in architecture;(B)Use scale factors with two-dimensional and three-dimensional objects to demonstrate proportional and non-proportional changes in surface area and volume as applied to fields;1. Use the Pythagorean theorem and special right-triangle relationships to calculate distances; and
2. Use trigonometric ratios to calculate distances and angle measures as applied to fields.

**Reading I, II, III****110.47(b) Knowledge and skills.**(2) The student acquires an extensive vocabulary through reading and systematic word study. The student is expected to:(A) Expand vocabulary by reading, viewing, listening, and discussing; and(B) Determine word meanings through the study of their relationships to other words and concepts such as content, synonyms, antonyms, and analogies.(4) The student comprehends texts using effective strategies. The student is expected to:(A) Summarize main texts by identifyingmain ideas and relevant details. (7) The student reads with fluency and understanding in increasingly demanding and varied texts. The student is expected to: Read silently or orally such as paired reading or literature circles for sustained periods of time.**Technology Applications****126.49 (c) Knowledge and skills.**(1) Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:(H) Identify and solve problems, individually and with input from peers and professionals, using research methods and advanced creativity and innovation skills used in a selected profession or discipline;(I) Develop products that meet standards identified by the selected profession or discipline; and(J) Produce original work to solve an identified problem and publish a product in electronic media and print.(2) Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:(C) Determine and implement the best method of presenting or publishing findings;(C) Synthesize and publish information in a variety of print or digital formats; and(D) Use evolving network and Internet resources and appropriate technology skills to create, exchange, and publish information.(3) Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:(A) Use evolving network and Internet resources for research and resource sharing of technology applications;(B) Apply appropriate search strategies in the acquisition of information from the Internet, including keyword and Boolean search strategies;(D) Acquire information using appropriate research strategies with source citations through electronic formats, including interactive components, text, audio, video, graphics, and simulations; and(E) Identify, create, and use available file formats, including text, image, video, and audio files.(4) Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:(A) Evaluate the design, functionality, and accuracy of the accessed information;(B) Conduct systematic research;(C) Demonstrate creative-thinking and problem-solving skills;(D) Integrate appropriate productivity tools, including network, mobile access, and multimedia tools, in the creation of solutions to problems;(E) Use enriched curricular content in the creation of products; and(F) Synthesize and generate new information from data gathered from electronic resources. |
| **College and Career Readiness Connection[[1]](#footnote-1)** | * Active Listening
* Speaking
* Reading Comprehension
* Service Orientation
* Social Perceptiveness
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| **Recommended Strategies** |
| **Reading Strategies** | Expand vocabulary by reading, viewing, listening, and discussing; and determine word meanings; summarize main texts by identifyingmain ideas and relevant details; read silently or orally. |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** | Guided Notes |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) |  |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | FCCLA, SkillsUSA |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)