

cleworth architectural legacy

presents:

Architectural "Awareness"

Activities Workbook

By Sarah Ponko, James "JR" Ronczy, and Tim Thomas



Drawings by James "JR" Ronczy

The Denver Square Home, circa 1890 - present.

Presented by:



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Denver Architectural Foundation (DAF) Mission Statement

"To increase public awareness and appreciation for the impact of architecture on our quality of life through education, participation, and advocacy for excellence."

This initial publication is undertaken in an effort to further the mission of The Denver Architectural Foundation by providing a resource for use by the general public. In particular, we approach this endeavor with educators in mind, wishing to give them comprehensible examples and engaging activities that aid students in understanding fundamental design concepts and vocabulary pertaining to architecture.

Activities included in this workbook encourage students to approach complex situations and problems with skills beyond the simple recollection of facts and information. Skill sets commonly utilized within the Architectural occupation consistently include the application of acquired knowledge, complex problem resolution, and creative expression.

Architectural "Awareness" Workbook Statement

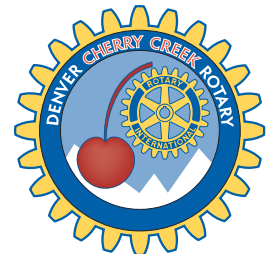
The intent of the exercises and activities within this workbook are to establish the following fundamental principles pertaining to Architectural Awareness

- Intent 1: To introduce the 3 most common Architectural drawing types:
Plan, Section, and Elevation
- Intent 2: To enhance spatial reasoning skills by creating an awareness that
structures of all types are composed of basic geometric shapes and
volumes.
- Intent 3: To introduce common residential architectural elements and their
associated terms and vocabulary
- Intent 4: To acknowledge Regional Architecture as a product of local
influences by introducing the "Denver Square" home typology
- Intent 5: To continuously encourage students to develop their artistic and
imaginative skill sets

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Learning to Draw a Plan, a Section, and an Elevation: Slicing into Your Favorite Fruit or Vegetable

This activity introduces the 3 most common architectural drawing types: Plan, Section, and Elevation.

Architects depict buildings through drawings that act as an “instruction book” for the contractor. There are 3 types of drawings contractors commonly rely upon for construction: PLANS, SECTIONS, and ELEVATIONS. The adjacent activity is intended to help your students understand each by having them create drawings of a familiar object. In this case, a piece of fruit or a vegetable can be drawn as it would be seen “in PLAN,” “in SECTION,” and “in ELEVATION.”

PLAN - a drawing showing an object as though it has been horizontally sliced through its mid section and you are looking down at it from above.

SECTION - a drawing showing an object as though it has been sliced along a vertical line from its top to its bottom.

ELEVATION - a drawing of an object seen straight on, as though you were standing in front of it. It is without perspective. The elevation of a building is sometimes called a “facade.”

Sketchbook Exercise: Building Your Own Architect’s Sketchbook

Sketchbooks are essential tools for Architects. Architects use sketchbooks like a writer would use a journal. A sketchbook is a place to keep and record ideas, drawings, and pictures of things Architects liked and want to reference later on.

Have your students create their own sketchbooks in which they will practice and improve their drawing skills. A sketchbook can be any size, shape, or color. It can be bound with a spiral binding, have a hard cover, or simply be a stack of blank pages stapled along one edge. Drawing on grid paper is especially helpful when sketching.

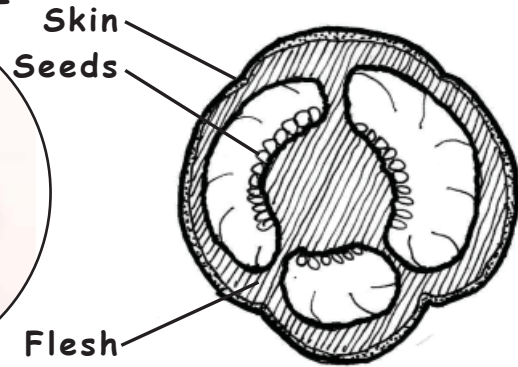
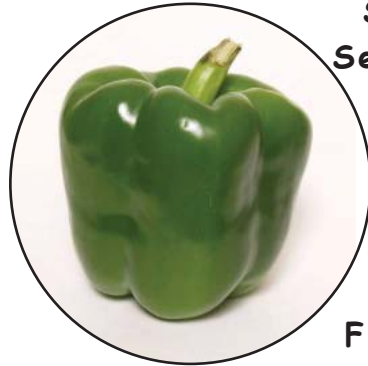
An inexpensive sketchbook can be made by folding 10 pages of copier paper in half and stapled along the fold. Students should write their names, “Architect’s Sketchbook,” and their teacher’s name on the front cover for easy identification. Keep these sketchbooks with the CAL activities workbook, as there will be optional activities suggested in the following pages.

Slicing Into Your Favorite Fruit or Vegetable

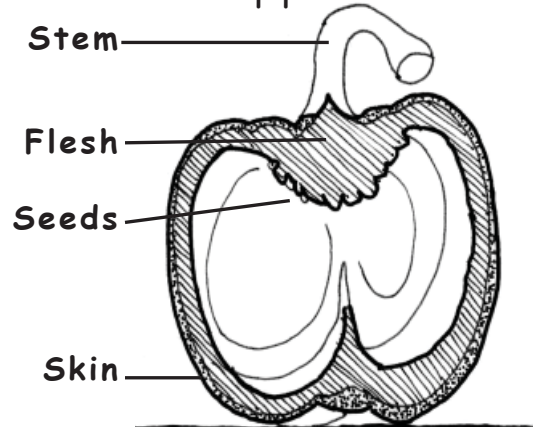
student

Set your fruit or vegetable in front of you. Draw a PLAN, SECTION, and ELEVATION for it in the space below.

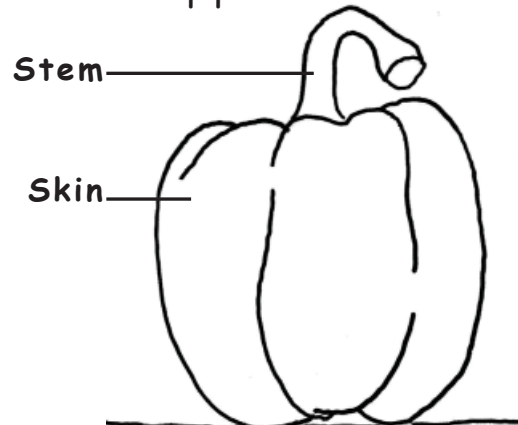
EXAMPLE



Pepper Plan



Pepper Section



Pepper Elevation

_____ Plan

_____ Section

_____ Elevation

Label the parts of your piece of fruit or vegetable: Stem, Peeling or Skin, Seeds or Pit, and Flesh. If different parts of your fruit or vegetable have textures or colors, draw those too.

Imagine this: How small would you have to be if you lived inside your fruit or vegetable? Use a ruler to measure your miniature height.

Adapted from an exercise presented in "Architecture In Education" by Abhay, Copeland & Greenberger. Drawings by James "JR" Ronczy

Learning to Draw a Plan, a Section, and an Elevation: Man's Best Friend Needs a House

This activity continues to focus on the 3 most common architectural drawing types.

In this activity, students are asked to move from drawing the PLAN, SECTION, and ELEVATION of a piece of fruit or vegetable to drawing those for a simple shelter for a dog.

Since the doghouse is a single-room structure, students are asked to pay close attention to other elements of the structure that can be embellished. For instance, the doghouse shown is built like a log cabin. The walls are built from logs. How will this affect what the walls look like in SECTION? Notice there is a log at the peak line of the roof. This will be shown in the SECTION as well. The dog house has a small front porch. Students should include the front porch in the PLAN and ELEVATION drawings.

Remind students to label the various parts of the structure as well as the materials used in their architectural drawings. Could a contractor build another dog house from the drawings the students have completed?

(Refer to the Teacher's Appendix for Plan, Section, and Elevation drawings to Fido's doghouse shown at the right.)

Sketchbook Exercise: James and his Giant Peach House

Many students are familiar with the story of **James and the Giant Peach**. This activity can be done in the students' sketchbooks. The purpose is to have students further develop their comprehension of the 3 most common types of architectural drawings: PLAN, SECTION, and ELEVATION. It is also a chance for students to use their imaginations and to heighten awareness of their own surroundings. Grid paper is very helpful.

Direct students to draw the 3 types of architectural drawings for James' Giant Peach Home: PLAN, SECTION, and ELEVATION. Besides the flesh and pit of the peach, what else would James have in his home? Have students make a list of necessary things (i.e. a bed for sleeping, a fireplace for warmth, a chair for reading in, a kitchen to cook in, etc.). Ask the students to include these items in their PLAN, SECTION, and ELEVATION drawings. James will need a front door, a small front porch, and a window. Remember there are other details such as a chimney for a fireplace that can be drawn. Remind them to identify and label the various parts of the home.

Remember, students should also draw James in his Giant Peach Home. If students are unfamiliar with **James and the Giant Peach** use the nursery rhyme **The Old Woman Who Lived in a Shoe** instead.

Man's Best Friend Needs a House

student

Look at the Doghouse in the picture below. Draw the PLAN, SECTION, and ELEVATION for it in the space below. Answers will vary.



Fido loves his new home. His best friend, Spot, would like to have an identical home for himself. Help Fido make the drawings needed for Spot to recreate this doghouse.

House Plan

House Section

House Elevation

Just as we identified and labeled the parts of a piece of fruit or vegetable in the previous activity, label the parts of the Fido's doghouse above. Remember to show textures and colors for each part of the house.

Imagine this: Besides a warm house, what else does a dog want in a home? Perhaps food dishes, a soft bed, and toys. Anything else?

teacher

An Architectural Walking Tour: Architectural Bingo

This activity continues to focus on identifying architectural elements and vocabulary.

The objective of this visual scavenger hunt is to find and record examples for as many of the vocabulary terms listed & images depicted on the Bingo card as possible. The goal is to encourage students to become visually alert to the variety of architectural elements throughout a community and to develop a familiarity with proper terminology.

Divide students into teams of 4 or less. Provide each team with a Bingo card on a clipboard, a digital camera and a set amount of time (45-60 minutes). With adult supervision, the teams are allowed to search the nearby neighborhood for real examples of the different terms shown on the team Bingo card. When an example of a design element is spotted, a picture should be taken to record and substantiate the identification. Write the photo number in the bingo space provided. If you find elements from the list that are not already shown on the bingo board, ask students to draw these in the spaces provided.

If it isn't possible to leave the school campus, teams can locate many architectural elements within the school grounds, or on buildings adjacent to the school boundaries. Inventory and photograph these without leaving the school's property.

Structural Essentials (E)

Pointed Arch	Rounded Arch
Post and Beam	Cantilever
Brace/Bracket	Colonnade
Dome	Buttress
Truss	Balcony
Arcade	

Materials (M)

Clapboard Siding	Stone Masonry
Brick Masonry	Glass Block
Metal Siding	Concrete Block
Adobe Mud	Stucco
Asphalt Shingle	Clay Shingles

Details (D)

Hipped/Flat/Gambrel/Shed Roofs	
Double-hung/Awning/Casement/Transom/Stained-Glass/Circular Windows	
French/Revolving/Sliding/Double Doors	
Cornice	Column
Carriage House	Dormer
Quoining	Chimney
Steeple	Carport

Types and Settings (T/S)

Commercial Use	Residential Use
Civic Use	Institutional Use
Urban	Suburban
Agricultural	Recreational
School Yard	Playground

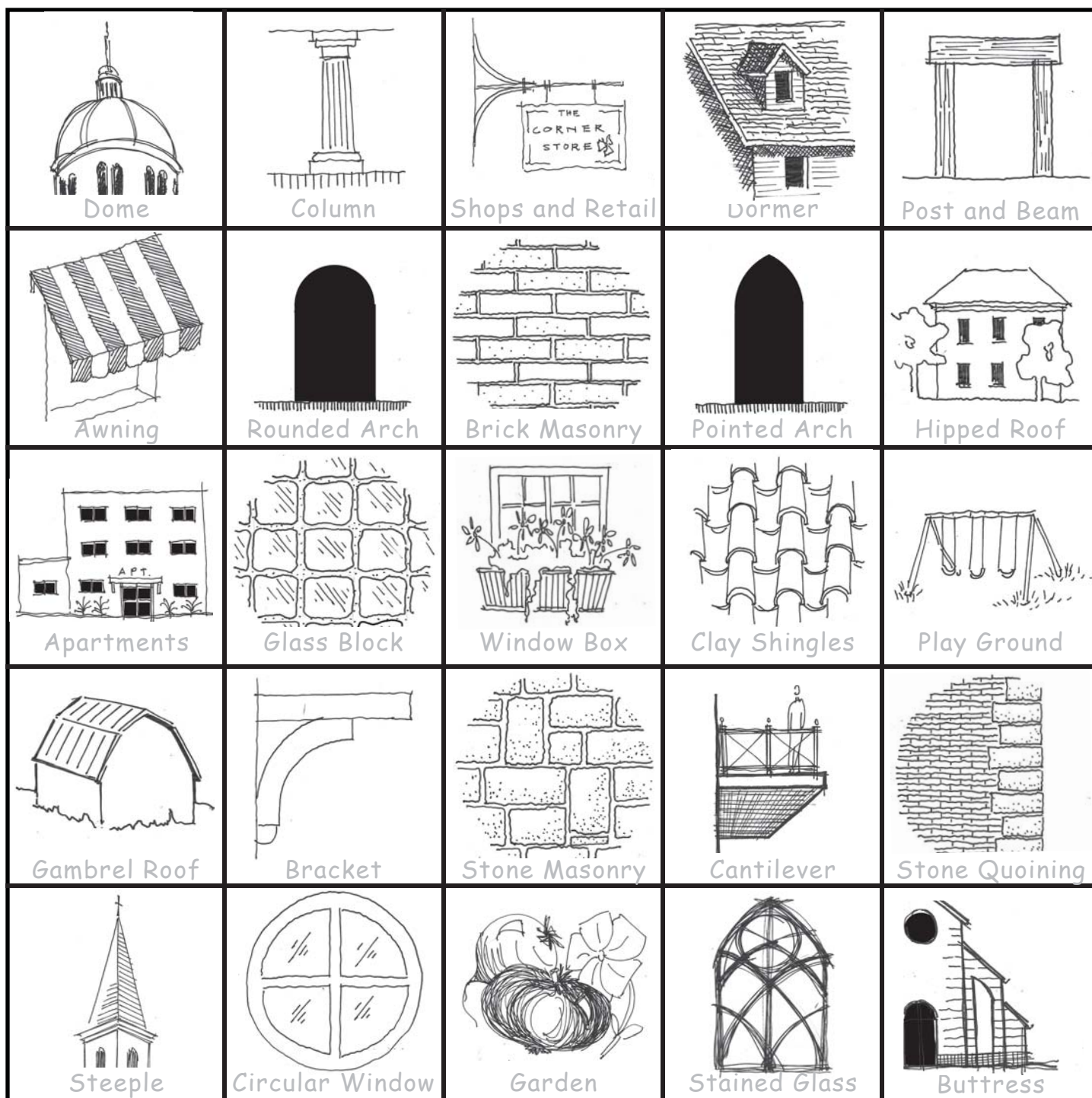
Landscaping (L)

Planting Bed	Contained Beds
Hardscapes	Landscaped
Trellis	Pond/Pool/Fountain
Window Box	Porch/Patio/Terrace
Gravel Path	Brick Path
Fire Pit	BBO

Architectural Bingo

student

Mark out on your Bingo card the architectural features as you spot them. Take pictures of the features you mark.



Draw additional architectural features you find here:

Bingo Card #001

Inspired by an activity created by Ari Irfano Drawings by Sarah Ponko

teacher

Learning to Draw and Read Architectural Drawings: The “Denver Square” House Elevation

This activity continues to focus on the 3 most common architectural drawing types and introduces concepts of regionalism and vocabulary.

- The teacher’s task is threefold:
- 1) Provide students with the brief history of the Denver Square typology (below)
 - 2) Note the identifying elements of this house style, and associated vocabulary
 - 3) Assist students in continued comprehension of the ELEVATION drawing type

“Denver Square” is a regional name for a house style, commonly known as the “American Foursquare” or “Prairie Box”, popular in the U.S. and Canada from 1890 to 1940. It’s variously referred to as the “Corn Belt Cube”, the “Seattle Box”, the “Double Decker”, or the “Two-story Pyramid” in other regions of North America.

Although most often built having a wood-siding exterior, there are numerous examples of brick, stone, and concrete block masonry exteriors, as well as stucco finishes. Since these homes were built from simple but well-made components and were structurally sound when assembled carefully, many continue to be in use today.

The style has specific recognizable exterior features: a cube shape, 2 ½ stories with attic and full basement, a full-width front porch with wide stairs, a low hipped roof

with a wide eave, and a central dormer.

In the activity, students are to demonstrate recognition of design features in the Section by unscrambling the terms in the Word Jumble and using those to correctly identify elements in the blank spaces provided

(Refer to the Teacher’s Appendix for answers to the fill-in-the-blank Elevation drawing shown at the right.)

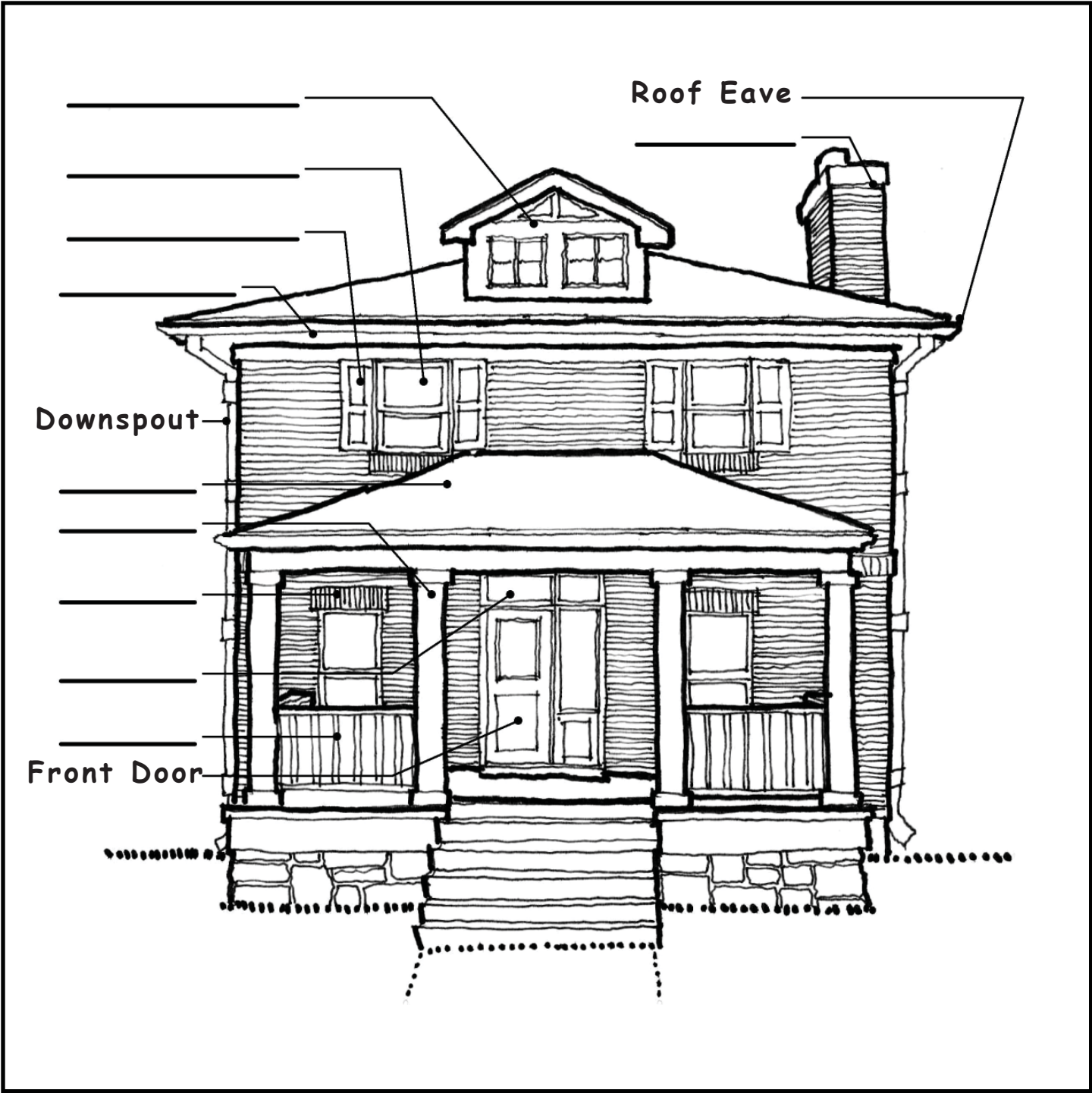
Sketchbook Exercise: “Objects in Elevation” Image Collections

ARCHITECTS use their sketchbooks to collect images of objects they like. In this first images collection, students focus on objects shown “in ELEVATION,” seen from a straight-on angle. Students should cut and paste images of furniture, appliances, windows, doors, architectural elements, people, plants, etc. into their sketchbooks. Ask students to find 5-10 examples for this activity. They may be referencing their image library in another activity. Remind them that all the images must be “in ELEVATION.”

The "Denver Square" House Elevation

student

Un-jumble the words below the home's elevation. Use these to label the unidentified architectural elements.



Drawings by James "JR" Renczy

M R E D R O
L M N U C O
T R S H U T E
L N T E I L
L I G N A I R

_ O R _ _ R
C _ L _ _ _
_ _ _ _ _ _
_ _ _ _ _ _
_ _ _ _ _ _

I M N H C Y E
R T T U E G
E P D I H P
O M S R T N A
W O I D W N

_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _

teacher

Learning to Draw and Read Architectural Drawings: The “Denver Square” House Section

This activity continues to focus on the 3 most common architectural drawing types, concepts of regionalism and vocabulary.

The Teacher’s task is threefold:

- 1) Provide students with the brief history of the Denver Square typology (below)
- 2) Note the identifying elements of this house style, and associated vocabulary
- 3) Assist students in continued comprehension of the SECTION drawing type

The Denver Square typology was standardized and affordable. It could be erected anywhere in North America from a kit of parts, like a LEGO set. Various pieces of a house were partially built in a factory on one side of the country, then loaded onto trains and shipped across North America. The disassembled homes arrived in crates of pre-cut and numbered lumber, windows, doors, staircases, roofing shingles, plumbing and assembly instructions. A 2 1/2 story home, including basement and attic, was quickly built by contractors, on site, using these instructions. Department stores, such as Sears Roebuck and Montgomery Ward, sold and shipped over 500,000 home kits, ordered from catalogs, all over the USA in the early 1900’s.

In contrast to un-ornamented exteriors, rich detailing highlights the home’s interior: fireplaces with custom mantles, hardwood floors, high ceilings with

crown molding, leaded glass windows, ornate doors and trim, built-in cabinets, and colorful tile works.

In the activity, students are to demonstrate recognition of design features in the SECTION by unscrambling the terms in the Word Jumble and using those to correctly identify elements on the SECTION in the blank spaces provided.

(Refer to the Teacher’s Appendix for answers to the fill-in-the-blank Section drawing shown at the right.)

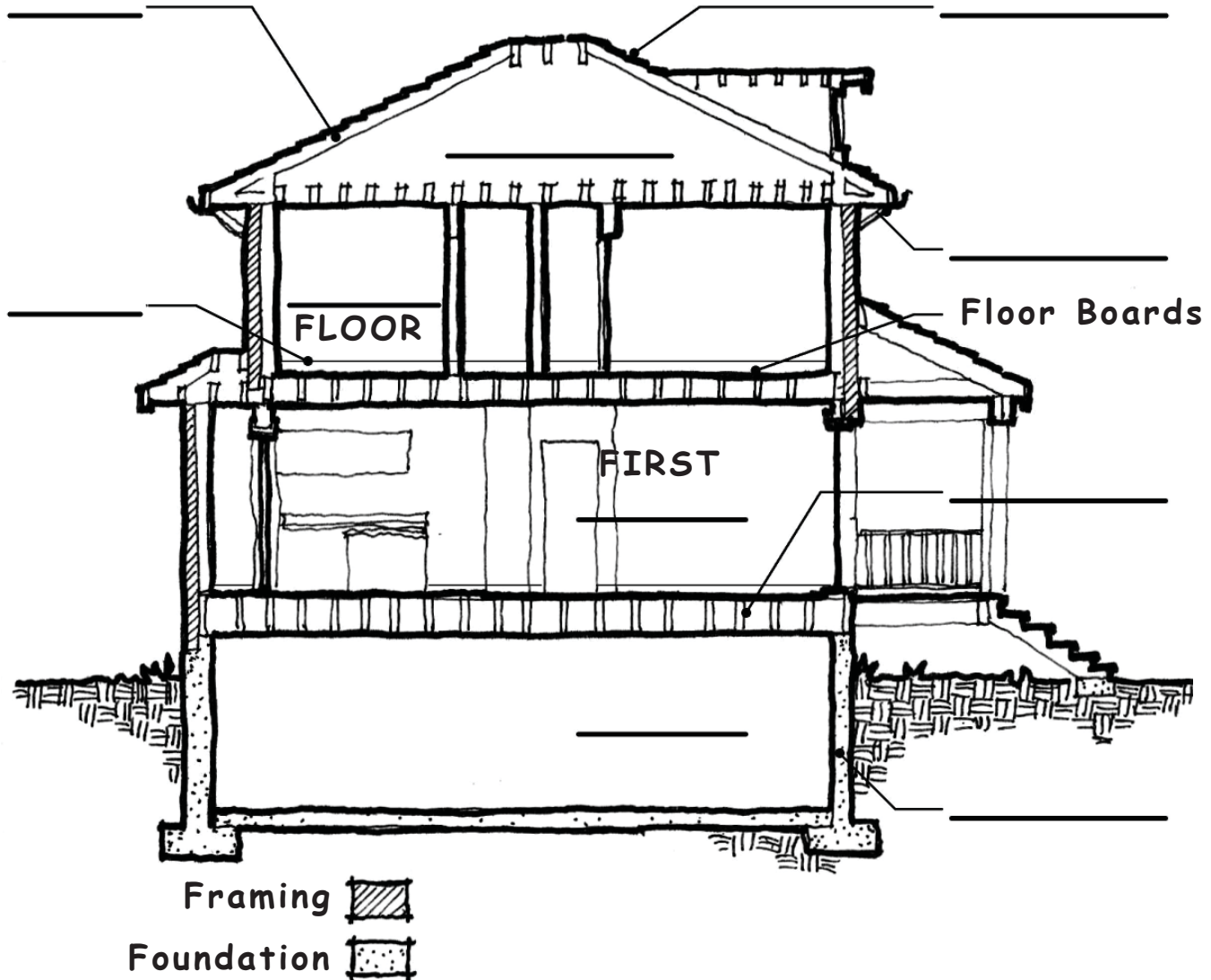
Sketchbook Exercise: “Objects in Section” Image Collections

ARCHITECTS use their sketchbooks to collect images of objects they see. Sectional views tell a lot about the composition of an object by showing what is on the inside - things that you may not see at first glance looking at the outside. In this exercise, students focus on objects shown “in SECTION,” or that are seen as though they have been sliced in half. Students should cut and paste images of furniture, appliances, windows, doors, architectural elements, people, plants, foods, etc. into their sketchbooks. Finding objects that are cut “in SECTION” may be difficult. Ask students to find at least 5 examples for this activity. Remind them that all the images must also be shown “in SECTION.”

The "Denver Square" House Section

student

Un-jumble the words below the home's section. Use these to label the unidentified architectural elements.



NCCOREET
SMENBTEA
NSDOEC
EBSBAADOR
FORO SURTS

CO _ _ _ _ E
_ _ S _ M _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _

RLOFO
TCIAT
IOSTJ
EEVA
OORF

_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _

Drawings by James "JR" Ronczy

Cleworth architectural legacy

Learning to Draw and Read Architectural Drawings: The “Denver Square” House Plan

This activity continues to focus on the 3 most common architectural drawing types, concepts of regionalism and vocabulary.

The Teacher’s task is threefold:

- 1) Provide students with the brief history of the Denver Square typology (below)
- 2) Note the identifying elements of this house style and associated vocabulary
- 3) Assist students in continued comprehension of the PLAN drawing type

The floor PLAN for the Denver Square house is relatively simple and boxy. Its shape was particularly well-suited for small city lots. Each floor is divided into quadrants, comprising a 4-room layout with one room occupying each corner of the house. This allowed each room to have sufficient natural light from the windows. When these homes were built, floors were typically hardwood or ceramic tile. Kitchens tended to be simple and there was only one bathroom upstairs for the whole family to use.

The first floor PLAN shows that the entry foyer, the living room, the dining room and the kitchen each occupy respective corners. The second floor PLAN would be similar to the first floor except there would be 3 or 4 bedrooms and one bathroom. Before modern plumbing, the upstairs would have a fourth bedroom in place of the bathroom.

In this activity students are to demonstrate recognition of design features in the PLAN by unscrambling the terms in the Word Jumble and using those to correctly identify elements in the blank spaces provided.

(Refer to the Teacher’s Appendix for answers to the fill-in-the-blank Plan drawing shown at the right.)

Sketchbook Exercise: “Objects in Plan” Image Collections

PLANS are the most observed type of architectural drawings. When reading architectural drawings, objects “in PLAN” often tell a lot about the function of a room. A room with a bed and dresser is easily recognized as a bedroom. In this exercise, the students focus on objects shown “in PLAN,” or that are seen as if from above. Students should cut and paste images of furniture, appliances, windows, doors, architectural elements, people, plants, etc. into their sketchbooks. Ask students to find 5-10 examples for this activity. Remind them that all the images must be viewed “in PLAN.”

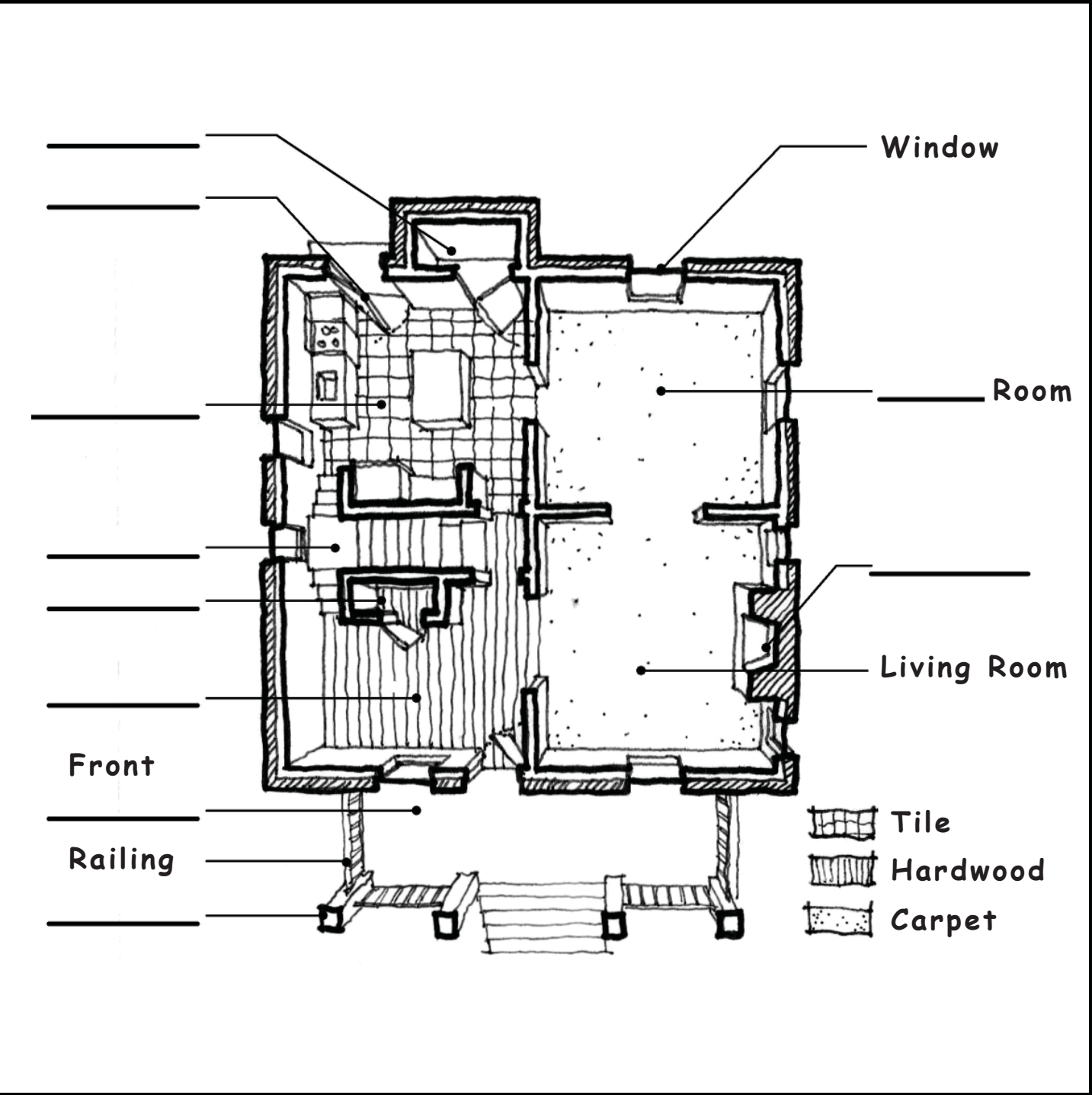
Sketchbook Exercise: Denver Square Second Floor Plan

In their sketchbooks, students are challenged to draw a floor PLAN for the second floor of the Denver Square House based on the description provided. Student may use the first floor PLAN to the right as a trace underlay to establish the locations for the exterior walls and windows.

The "Denver Square" House Plan

student

Un-jumble the words below the home's plan. Use these to label the unidentified architectural elements.



E C T H I K N	K _ T _ _ N	Y F O R E	_____
S T E C O L	_ L O _ _ T	R C H O P	_____
I N D I G N	_____	R T I A S S	_____
R I E F C E A L P	_____	A Y R T N P	_____
O L U C N M	_____	O D R O	_____

The Shape of Architecture: Colorado State Capitol Building

This activity introduces the concept that all structures are composed of basic geometric shapes and volumes.

Colorado's State Capitol Building is an example of Neo-Classical architecture, common to American Civic architecture, and modeled after the architecture of ancient Greece. The building is symmetrical in both PLAN and ELEVATION. Each facade has an entrance portico. Using locally harvested materials, the gray exterior granite came from Gunnison and the entire supply of Colorado Rose Onyx Marble was exhausted in finishing the interiors. The dome rises to 272 feet and the original gold leaf which covers it was provided by the Colorado Mining Association to honor the state's mining heritage.

E.E. Myers (1832-1909), a noted ARCHITECT in Detroit, was the lead designer of the State Capitol Building. He also collaborated on the designs for the Capitol buildings in Utah, Idaho, Texas, and Michigan. During his long career he designed using a variety of architectural styles, but became most recognized for his work within the Victorian Gothic and Neo-Classical styles.

Frank Edbrooke (1840-1921) came to Denver in 1879 and quickly established himself with prominent architectural projects in Denver including the Tabor Grand Opera House. Initially, he was the supervising ARCHITECT for the de-

sign of the Capitol, but took over as lead designer when Myers was fired from the project. Edbrooke and his brother established a successful architectural firm which quickly became the city's foremost design firm. Some of their existing buildings include The Denver Dry Goods Bldg., Gas & Electric Bldg., First Baptist Church, Temple Emanuel, and Boulder's Whittier School.

(Refer to Teacher's Appendix for answers to the matching activity shown at the right.)

Sketchbook Exercise: Locate These Shapes in the Architecture on Your Street

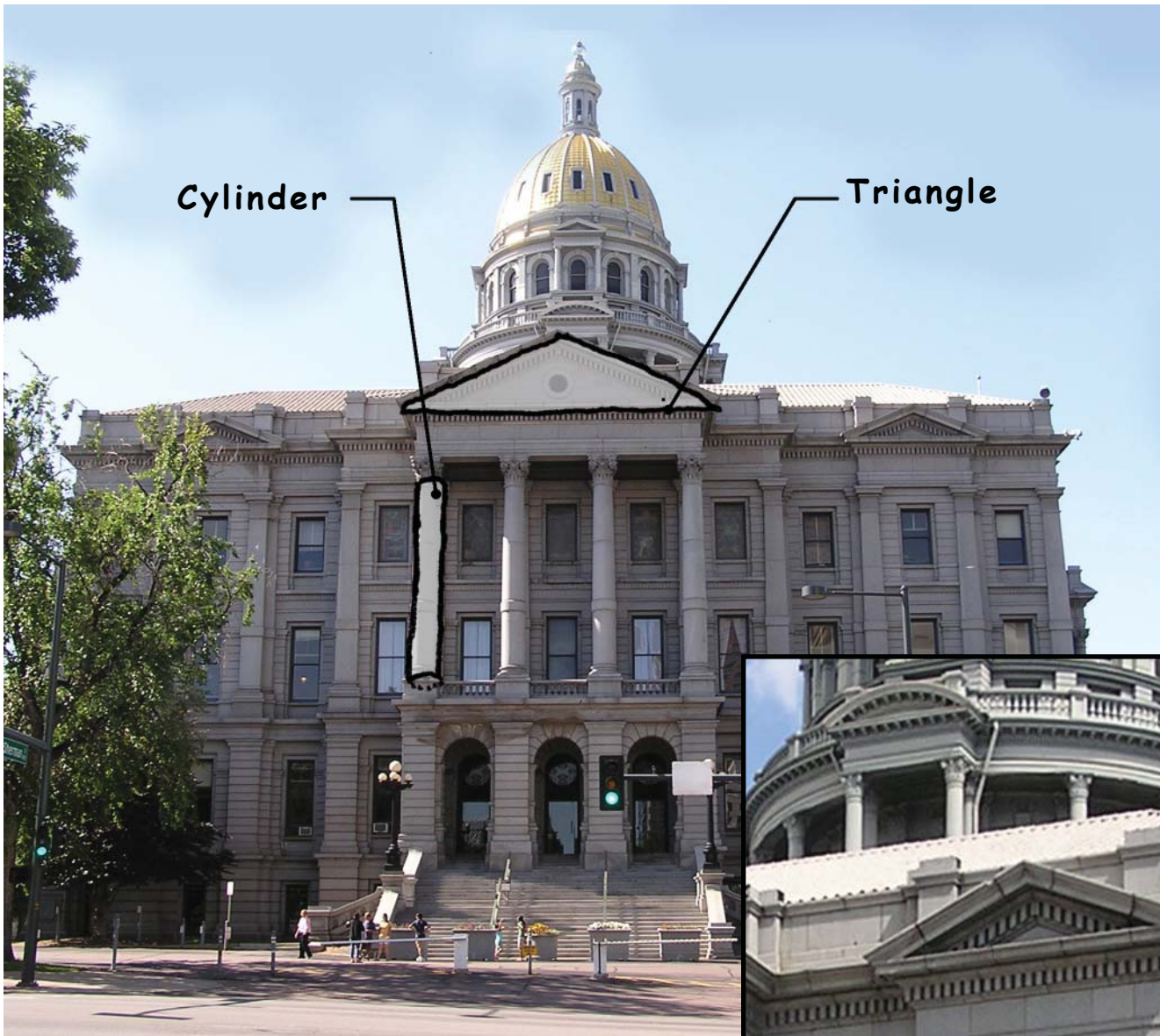
Students should become familiar with drawing squares, rectangles, circles, ovals, triangles, and polygons. Extrude these into their 3 dimensional volumes; cubes, rectangular prisms, spheres, domes, cylinders, cones, pyramids, and polyhedrons.

Buildings are primarily composed of basic geometries and volumes. In this sketchbook exercise, students should find multiple examples of each in the built world, their neighborhoods. Students can draw these and/or capture them with a camera. Remember to include the building name and address for these examples.

Colorado State Capitol Building

student

Locate and trace over an example of each shape listed that can be seen in the images below. Answers will vary.



Photos by James "JR" Ronczy



Find these Two-Dimensional Geometries:

Circle	Rectangle
Triangle	Semi - Circle
Arc	

Find these Three-Dimensional Geometries:

Sphere	Cylinder
Cube	Hemi - Sphere
Rectangular Prism	

The Shape of Architecture: The Denver Public Library

This activity introduces the concept that all structures are composed of basic geometric shapes and volumes.

Completed in 1955, the central branch was designed by Burnham Hoyt who worked for a prominent local firm, Fisher & Fisher. The original structure was designed using the International Style. The limestone exterior emphasized balance and contemporary aesthetics. The steel and glass structure was also contemporary. Lacking decorative details and ornamentation, clean and graceful curves and large windows allowing natural sunlight were preferred. ARCHITECT Michael Graves designed an addition to the branch library in 1990 which provided dramatic contrast to Hoyt's. He used bold, traditional colors, a variety of materials, and an array of volumetric shapes reminiscent of Italian hill towns. The rotunda volume, original to Hoyt's design, was vertically extended by Graves.

Burnham Hoyt (1887-1960) began his career in Denver, but later moved to New York City to further his architectural studies. After WWI, he returned to Colorado and founded the firm Hoyt & Hoyt with his brother. He continued his design career in both Colorado and New York. Initially recognized for his talents in Historical Revivalist Styles, Hoyt eventually emerged as a foremost practitioner in the Modernist style.

Michael Graves (1934-present) is one of

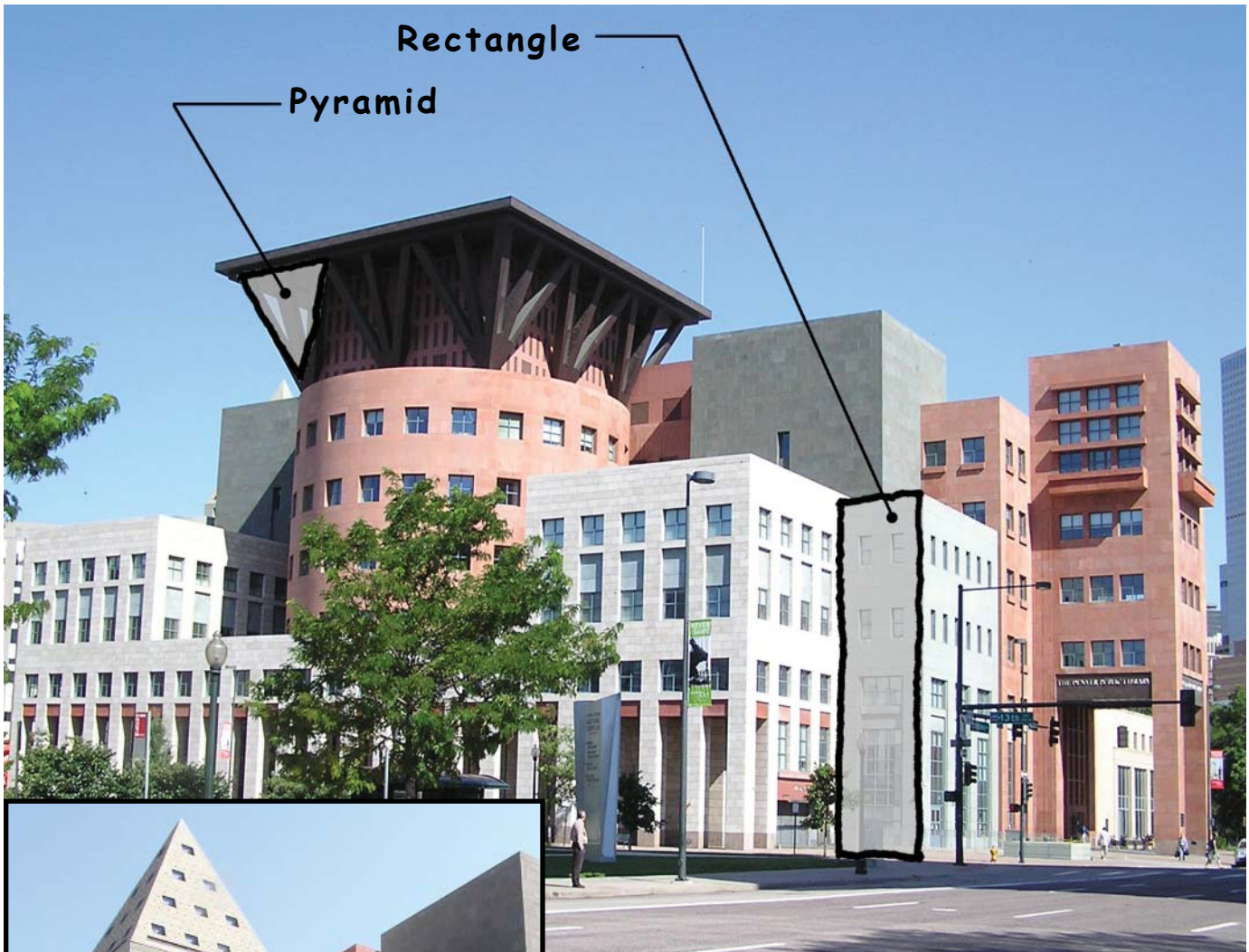
the most prominent of current American ARCHITECTS. He is recognized as a co-founder of the Post-Modern movement in architecture. He teaches at Princeton University in New Jersey and maintains a practice there and in New York City. He has designed a large number of household items being sold at Target, thus bringing his design and functional sensibilities in creating everyday objects. Items include wall clocks, small appliances, and cooking gadgets.

(Refer to Teacher's Appendix for answers to the matching activity shown at the right.)

Additional Exercise: The Denver Square House

This is further practice for geometric shapes. Using the booklet's cover image of the Denver Square, instruct students to locate and identify an example for as many 2D and 3D figures by outlining directly on the drawing. Additionally, have the students identify various design elements using vocabulary learned on pages 6 and 7.

Locate and trace over an example of each shape listed that can be seen in the images below. Answers will vary.



Photos by James "JR" Ronezy

Find these Two-Dimensional Geometries:

Triangle

Rectangle

Square

Find these Three-Dimensional Geometries:

Cylinder

Pyramid

Rectangular Prism

Cube

Indigenous Architecture: The Architecture of Ordinary People

This activity continues to focus on the concepts of regionalism as well as spatial reasoning skills.

Regional architecture refers to the unique styles that developed over time in particular areas. As technology and transportation systems advance, it allows humans to create a wider variety of buildings that can be constructed almost anywhere in the world and even into outer space. In order to gain a broader understanding of architecture, it is helpful to consider the traditional designs that once characterized particular places.

The Denver Square has been repeatedly used in this booklet as an example to explain different aspects of architecture. Similarly, PLAN, SECTION and ELEVATION drawings are part of the process architects use in designing structures. However, much can also be learned by studying the traditional dwellings that native peoples of different regions developed to fit their needs. These shelters resulted from a combination of factors including climatic conditions, available building materials, lifestyles and cultural beliefs.

Based upon the information provided, determine which shelter would match a particular area and group of people.

(Refer to Teacher's Appendix for answers to the matching activity shown at the right.)

Sketchbook Exercise: Identifying Regionalism in Our Community

Ask students to collect or draw pictures of homes around Denver in different seasons. Discuss the question: What is the weather like in the summer and how would you build for it? In the winter? What are the most common building materials that were found 150 years ago? What resources could people living here rely on to build with?

Gather pictures from newspapers or magazines, or copy pictures from books. Using that information, what type of roof would work best in the summer? What roof would work best in the winter? What types of overhangs would be best? Would you want large windows or small windows? What would walls be made of? If they picked the best features, what would the house look like?

Today, houses come in all shapes and sizes. For many generations before Americans and Europeans came to this part of the world, Native Americans built shelters. What was good or bad about those shelters? How did their shelters reflect their lifestyle? How do our shelters reflect our lifestyle?

Additional Exercise: Imagine This...

What building characteristics would be poorly suited for Denver's climate and people? List them in your sketchbook and give reasons why.

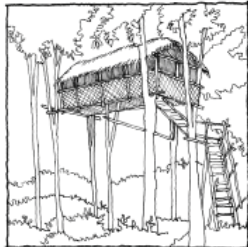
The Architecture of Ordinary People

student

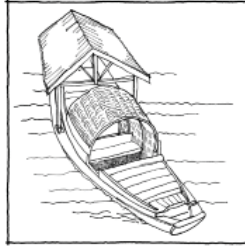
Place the proper letter and number in the spaces provided that match the indigenous architecture of the noted continents with the architectural and cultural descriptions below.



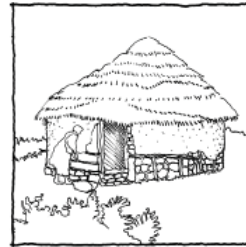
Asia



Oceania/
Australia



Asia



Africa



North
America

Drawings by James "JR" Ronczy

1. Sampans

These flat bottomed wood boats served as the home, work place, and a mode of transportation for inland and coastal fishing people

2. Cliff Dwellings

These sandstone houses were plastered with adobe and built into shallow caves and alcoves of canyon walls by Southwestern Native American farmer tribes

3. Yurt

These portable, wool felt-covered, round dwellings were used by nomadic peoples in the Steppes region

4. Stone & Mud Huts

These round, grass-roofed houses are common to the farmer-herder peoples living in the southern hemisphere grassland regions

5. Tree Houses

Using the wood from the dense surrounding forest, these raised shelters elevate the clans of hunter-gatherers high above the ground, away from insects, and predators of the Papua in the Pacific Ocean regions

A. Korowai & Kombai

These "tree dwellers" live in the tropical forests in the southwestern portion of New Guinea

B. Anasazi

Agrarian ancestors to the Pueblo Indians living in or near the New Mexico region, USA

C. Han

A Chinese population that includes many who depend upon fishing as their main food source and livelihood. These people live entirely on the water

D. Swazi

One of many pastoral farming tribes located in a landlocked region surrounded by South Africa and Mozambique

E. Mongols

Tribe of migrant herdsman living on the grassy plains of Mongolia and bordering regions of China and Russia

Be Your Own Architect: Plan and Build a Box City

This activity focuses on further development of familiarity with architectural drawing types, increases awareness that structures are composed of basic geometries and volumes, supports the identification of architectural elements and vocabulary, and continues to encourage students to develop their artistic and imaginative skill sets.

As a culminating activity, students create and design a “Box City” using cardboard boxes and craft paper and supplies you have collected in advance. Help your student to create a list of the building types that make up a city. Then determine a specific building responsibility for each student. Your students will be the master ARCHITECTS for a city of their very own.

Just as an ARCHITECT would, students create a PLAN or a SECTION or an ELEVATION of their assigned building on the adjacent page.

Once the drawings are complete, students build their structures from these. Each student is to receive a box and a variety of craft materials. They may cut and paste architectural elements such as doors, windows, railings, etc. from magazines and papers or they can draw them by hand, using their sketchbook image collection as a reference.

Once students complete their houses, assemble them to create a city of “Box buildings.” Using a variety of box sizes and shapes which result in a unique city.

Reflection: Ask students to evaluate their city. Is it a city they would like to live in? What are their favorite parts of the city? What is missing? What could be improved? Do they like the variety of building types and homes they have created as a class? Have an open discussion about the Box City your class has created. And finally, don’t forget to give your city a name!

Sketchbook Exercise: How Many Can You Find of...?

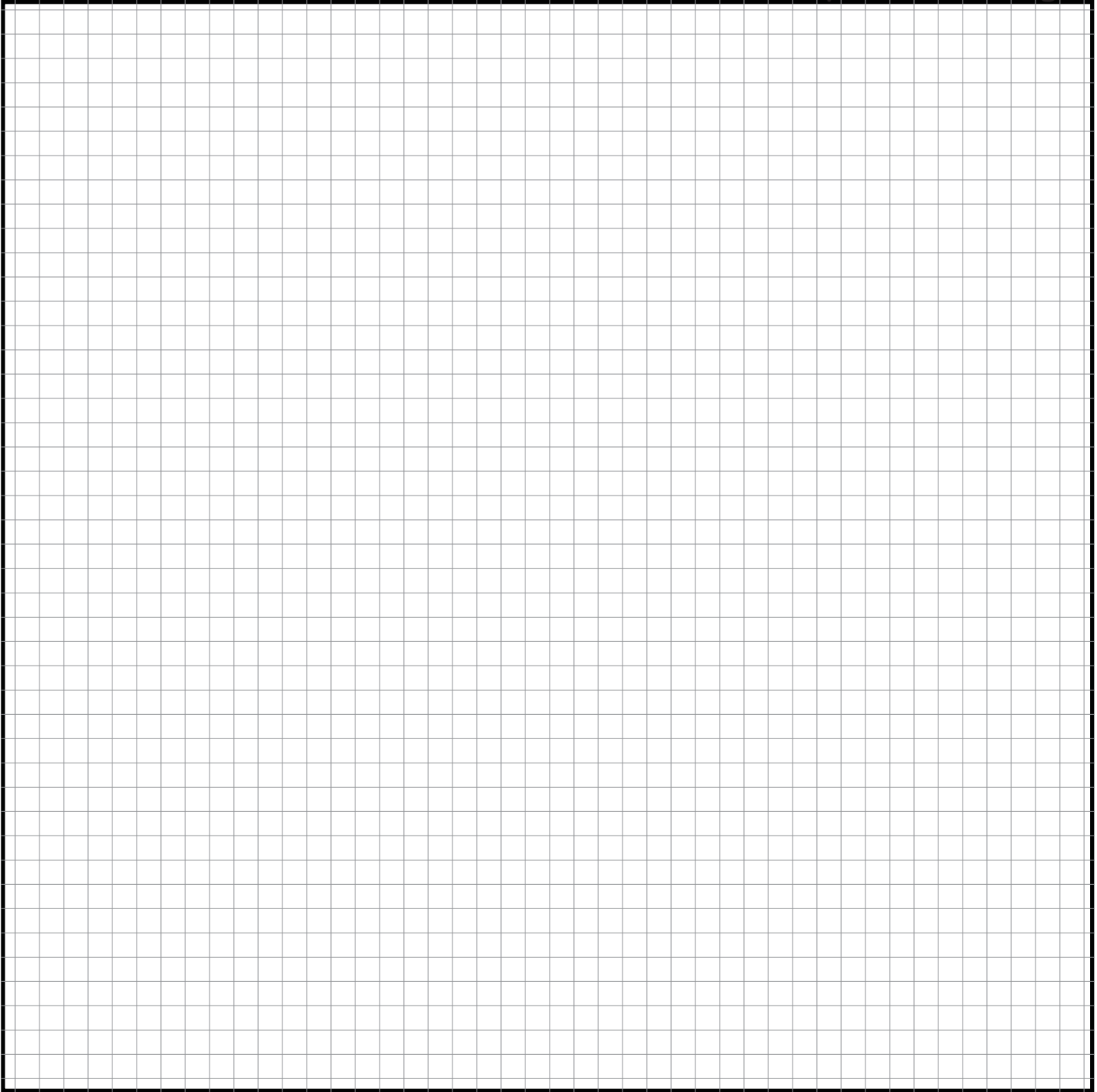
Architectural elements such as DOORS, WINDOWS, DORMERS, ROOFS, etc. vary from house to house, making each unique and special. ARCHITECTS like to design unique buildings and incorporate elements that vary in size, geometric shape, and configuration: rectangular, oval, circular, single, double, triple, etc.

In this exercise, students are asked to go on a visual scavenger hunt using their sketchbooks as their means of recording. Walking through their own neighborhoods, students ought to look for as many varying examples of the common architectural elements as they can and then to draw those in their sketchbooks. Be sure to have the student note why this element is different from the others.

Plan and Build a Box City

student

Your teacher has assigned you a building type to design and build. In the space below create an architectural drawing for it. You may draw a PLAN or a SECTION or an ELEVATION. Remember to label and color your drawing.

A large rectangular area filled with a fine grid, intended for students to draw their architectural plans, sections, or elevations.

Architect's Name:

Building Type:

Cleworth architectural legacy

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the CAL project architectural **Awareness** Activities Workbook

Made Possible by the Collaborative Efforts of:

Sarah Ponko graduated, magna cum laude, in 2004 from the School of Architecture at the University of Notre Dame. She holds a Bachelor of Architecture as well as a Concentration in Furniture Design/Build. Following graduation, Sarah moved to Denver to pursue her professional career and is now a licensed architect in the State of Colorado.

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