Curriculum Guide

Second Grade

Second Grade ◆ Lesson One

SECOND GRADE
LESSON NO. 1 **ANIMAL HOUSES**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Understand how buildings reflect life style and social structure using animal "houses" as a learning tool
   Social Studies
   - Geographical perspective

   Science
   - Develop new scientific and personal knowledge
   - Use scientific knowledge from physical sciences in real-world contexts

B. Understand geometry using shapes and sizes of structures
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions

   Visual Arts
   - Arts in context

C. Improve communication skills by listening and discussing
   English/Language Arts
   - Meaning and communication

ARCHITECTURAL PRINCIPLES:

Form follows function is a design approach where the form of the building is determined by the function of its spaces and its parts.

Nature is a model for architectural forms and shapes.

Social structure, culture and the built environment have a direct influence on one another.

Climate and the natural environment influence design decisions.

Second Grade ◆ Lesson One

MATERIALS

1. Animal homes - actual examples or photographs on 8-1/2 X 11-inch paper (some sample photographs are included)
2. Crayons, colored pencils, paint, etc. (teacher's choice)
3. Scissors
4. Glue

VOCABULARY (See glossary for definitions)

1. Safety
2. Shelter

ACTIVITY

A. Begin by having students suggest a list of animals and the type of homes they build or occupy. Write the list of student suggestions on the board. Where possible, staff and students can bring in actual examples: a bird's nest, a hornet's nest, a honeycomb, sea coral or a spider web. A sample of various animal homes is included for teacher's use.

B. Discuss each animal and its home. Specifically discuss how each home addresses such issues as safety, protection from elements and food gathering, and how each home is constructed. Emphasize how each animal uses only natural materials found nearby. When an animal abandons his home it may be used by another creature, or it returns to nature. Examples may include animal-constructed homes, caves, trees, holes in the ground and man-made animal homes, such as a doghouse or a birdhouse.

C. Discuss with students how each type of home relates to the animal's specific social structure. Does the animal live alone, in a family, or in a community? If in a community, are there different roles each animal plays within that community? Examples include the division of labor in an anthill, the role of "food gatherer," or "lookout" in a prairie dog colony, etc.

D. Ask students how they would describe the social structure of a family. How would they describe the social structure of a community? Do people live alone or with families? Do people have different roles within their family?

E. Have students choose an animal and draw or paint the animal and its home. These are to be included in the mural project in Lesson No. 10.

> Note: Decide on the size of the mural before students create their artwork. Their animals/homes need to be in proper proportion to the size of the final mural. Lesson No. 9 suggests the mural be 4 feet in height by 8 feet in length.

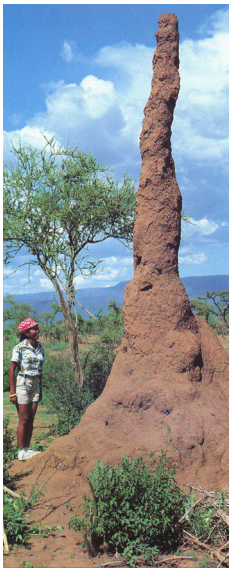
TEACHER'S EVALUATION

A. Analyze student artwork for:
   1. Accuracy according to the discussion and examples
   2. Careful execution and neatness

Beaver Dam

Beehive

Bird's Nest



Termite Tower

Second Grade ◆ Lesson Two

SECOND GRADE
LESSON NO. 2 **MAN-MADE STRUCTURES**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Understand how buildings reflect life style, climate and social structure by studying houses from different cultures.
   Social Studies
   - Historical perspective
   - Geographical perspective

   Science
   - Construct new scientific and personal knowledge
   - Use scientific knowledge from physical sciences in real-world contexts

B. Develop an awareness of different types of buildings in the community.
   Social Studies
   - Geographic perspective

ARCHITECTURAL PRINCIPLES:

Form Follows Function is a design approach where the form of the building is determined by the function of its spaces and its parts.

Nature is a model for architectural forms and shapes.

Climate and the natural environment influence design decisions.

An understanding of the natural environment can help to save energy and water

Social structure, culture and the built environment have a direct influence on one another.

Architecture satisfies emotional and spiritual needs in addition to physical needs.

Past, current, and future technologies influence design decisions.

Second Grade ◆ Lesson Two

MATERIALS

1. Visual aids: "Homes Are Different" and "Roles People Play" charts (included); make a copy for each student or use transparency with overhead projector
2. 8-1/2 X 11-inch paper
3. Crayons, colored pencils, paint, etc. (teacher's choice)
4. Scissors
5. Graph paper ($\frac{1}{2}$-inch grid); students will draw buildings on the back side of the graph paper (the grid should be dark enough to see through the paper)

VOCABULARY (See glossary for definitions)

1. Community
2. Home
3. Natural Environment

ACTIVITY

A. Display the "Homes Are Different" chart handout (provided). Teacher may choose to create an overlay of the chart and use an overhead projector for display. Continue discussion of animal homes; talk about the similarities to how people build homes. Also, discuss the various types of "homes" people live in, such as houses, apartments, mobile homes, houseboats and tents.

B. While referencing the "Homes Are Different" handout, discuss how people's homes have changed historically. Refer to prehistoric man and caves, knights and castles, Native Americans and teepees, and Southwest Native Americans and cliff dwellings. How did each group respond to the time and place in which it lived? Talk about such things as protection from the elements, safety, building materials available, and social structure.

C. Discuss with students how people's houses differ geographically in response to different environments and building materials available. Examples could include Eskimos and igloos, African tribes and grass huts, desert dwellers and tents, etc. Discuss how these groups of people utilized the natural environment. Discuss how the direction of the sun or wind might affect the way the house should face. Discuss how the amount of rain, snow or sun might affect how the house is built.

D. Display the "Roles People Play" chart. Remind students of the discussion about animals that live in communities and the social structure, or division of labor, inherent in each community. Have students discuss the roles people have in families and communities. Develop a list of roles people play in a community and the buildings needed to house each of these functions:
Fire fighter..... Fire station
Police..... Police station
Teacher..... School
Librarian..... Library
Mayor..... City Hall
Doctor/nurse..... Hospital and medical offices
Other examples: clerk and store, baker and bakery, mechanic and garage, etc.

E. Ask students to draw a building from the "Roles People Play" chart created in Step E. A one-story building should be 4-inches (or 8 squares); a two story building 8-inches (or 16 squares). These will be included in the mural project in Lesson No. 10. Ask students to consider how the natural environment may be considered in their design.

TEACHER'S EVALUATION

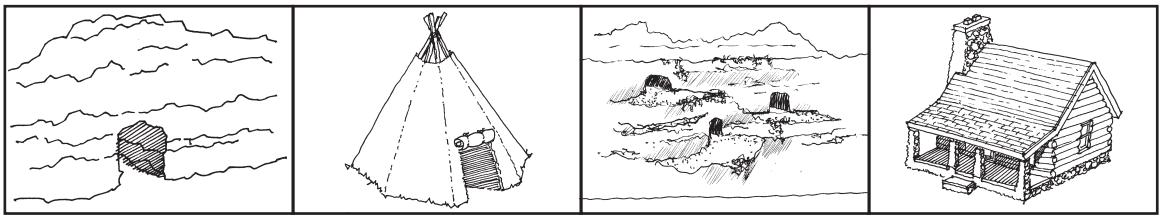
A. Analyze student art work for:
1. Accuracy according to the discussion and examples;
2. Careful execution and neatness.
3. Use of natural materials and consideration of the natural environment.

IN A COMMUNITY . . . ROLES PEOPLE PLAY	
ROLE	BUILDING
FIRE FIGHTER	
POLICE	
TEACHER	
LIBRARIAN	
MAYOR	
DOCTOR/NURSE	
CLERK	
BAKER	

Roles People Play

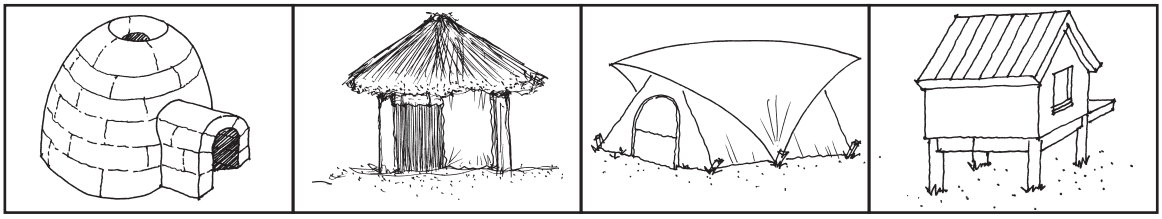
Homes Are Different

...In History



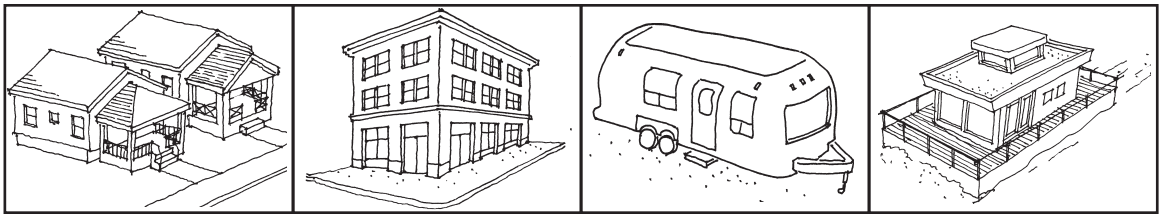
Caves | Teepees | Cliff Dwellers | Log Cabin

...In Other Places



Igloo for Eskimos | African Tribes | Desert Dwellers | Stilt Houses

...Today



Houses | Apartment | Mobile Home | Houseboat

Second Grade ◆ Lesson Three

SECOND GRADE
LESSON NO. 3 **STRUCTURAL CONCEPTS**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Understand how geometric shapes are used in creating man-made structures
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions

   Science
   - Use scientific knowledge from physical sciences in real-world contexts

B. Understand fundamental concepts of building structural supports
   Science
   - Construct new scientific and personal knowledge

C. See how different cultures have used different structural shapes for their buildings
   Social Studies
   - Geographical perspective

   Visual Arts
   - Arts in context

ARCHITECTURAL PRINCIPLES:

Nature is a model for architectural forms and shapes.

Sustainable design of the built environment protects the natural environment.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Form follows function is a design approach where the form of the building is determined by the function of its spaces and its parts.

Past, current and future technologies influence design decisions.

Second Grade ◆ Lesson Three

MATERIALS

1. Sketches of structures – arches (aqueducts), Greek columns, beam, suspension bridge, dome and cross-section of a dome
2. Copies for each student of photographs of different structural types (included) from Kindergarten Lesson No. 5 – "Acting Out Structures"
3. Wood blocks and books
4. String
5. Bowl
6. Pencils or crayons

VOCABULARY (See glossary for definitions)

1. Aqueduct
2. Arch
3. Beam
4. Column
5. Compression
6. Dome
7. Gravity
8. Structure
9. Tension

ACTIVITY

A. Review the concept of "structure." The teacher rests his/her elbow on the desktop with forearm up and hand out flat, palm up, to hold up a book. Ask why the book doesn't fall to the ground. Discuss the pull of gravity. Explain that the teacher's forearm is an example of a column, and the book is a beam. What holds these things in place? Show how the weight of the book is transferred to the ground (desktop) through the column (forearm).

B. Review elements of Kindergarten Lesson No. 5: "Acting Out Structures." Using models, wood blocks or books, demonstrate a column and beam structure. Explain how the weight is transferred through the columns. Explain how the columns are in "compression." Show pictures of Greek temples and ask students to identify the column and beam structures, and what elements of the building are in compression.

C. Using a block and string, demonstrate "tension." Tie a string on both ends of the beam (block of wood). Hold the end of each piece of string and suspend the block of wood down from the string on each end. Have students identify what is holding up the beam and how the weight is transferred. Explain the string is in "tension." Show the students a picture of a suspension bridge and ask students to identify which parts are in tension.

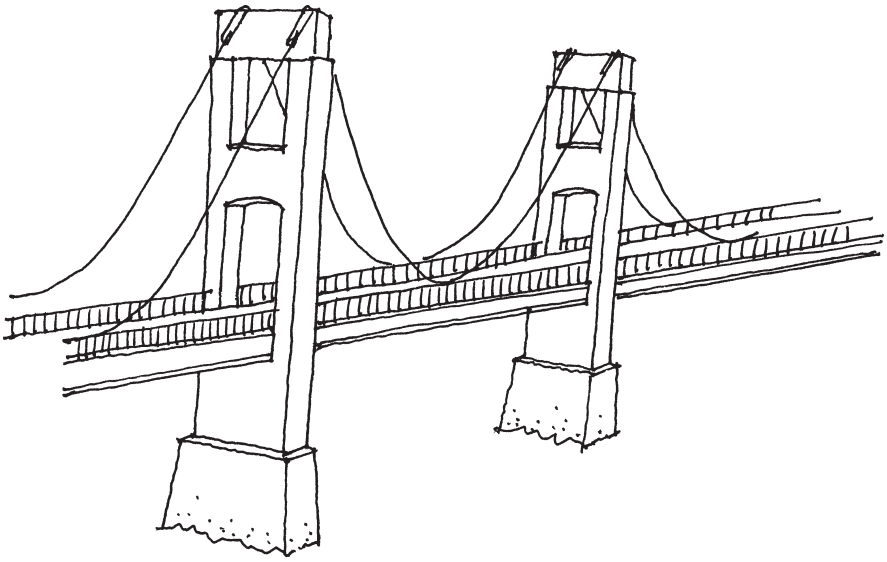
D. Put a book on an overturned bowl. Explain how it is an example of a "dome" structure. Show the students pictures of domed buildings and ask them to identify the dome elements.

E. Display the cross-section of the dome. Identify the resulting configuration as an arch. Discuss how weight is transferred in this type of structure. If possible, have a model of an arch and put weight on it. Show a picture of a building with arched openings and have students identify the arches.

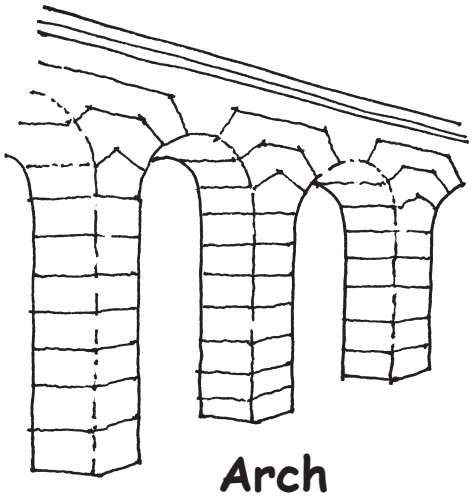
F. Using the photographs of different structural types from Kindergarten Lesson No. 5, have students draw a picture of a building that has a column, a beam, a dome and an arched opening.

TEACHER'S EVALUATION

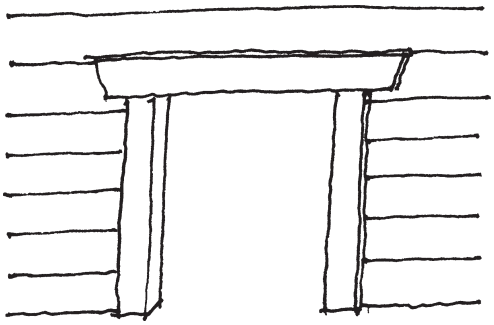
A. Analyze student art work for:
   1. Accuracy according to the discussion and examples. Student drawings should include a column, a beam, a dome and an arch;
   2. Careful execution and neatness;
   3. Understanding the concepts identified by the vocabulary words.



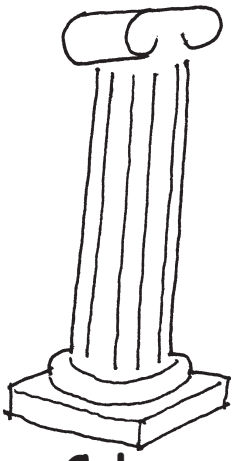
Suspension Bridge



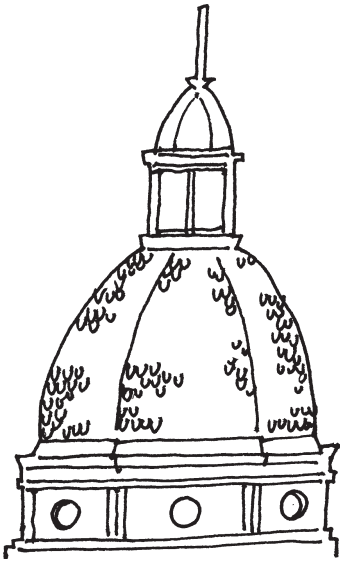
Arch



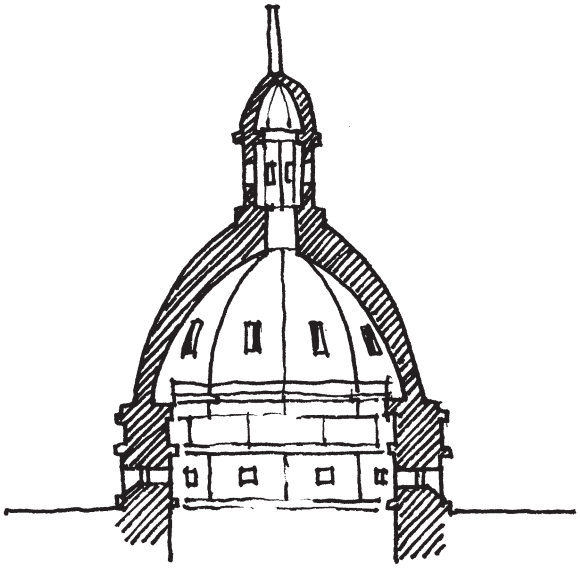
Post & Beam



Column

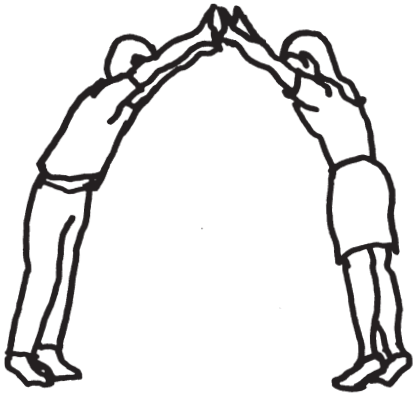


Dome



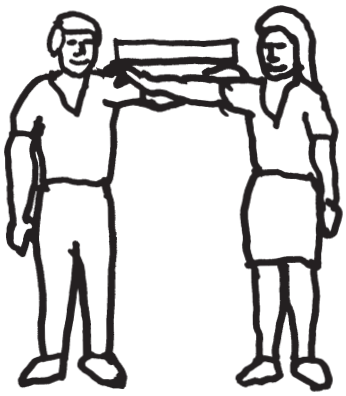
Dome Section

Second Grade ◆ Lesson Three



Arch

Second Grade ◆ Lesson Three



Column & Beam

Column

Second Grade ◆ Lesson Three

Dome

Second Grade ◆ Lesson Four

SECOND GRADE
LESSON NO. 4 **MEASURING**

LENGTH OF LESSON: **30 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Understand the function of a unit of measurement
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions
   - Data analysis and statistics
   - Number sense and numeration

   Visual Arts
   - Arts in context

B. Be able to accurately measure items
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions
   - Data analysis and statistics
   - Number sense and numeration

   Visual Arts
   - Arts in context

C. Learn to work with numbers
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions
   - Data analysis and statistics
   - Number sense and numeration

   Visual Arts
   - Arts in context

Second Grade ◆ Lesson Four

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Visual thinking is a key to awareness of the built environment.

Design is experienced through human sensory perception.

MATERIALS

1. "Foot" ruler (included), copied on durable paper
2. "Measurement Chart" (included); make copies of chart for student groups
3. Pencils and erasers
4. Masking tape

VOCABULARY (See glossary for definitions)

1. Measure

ACTIVITY

A. Teacher preparation:
   1. Make copies of the "Foot" ruler that is marked with inches. This could be copied on heavy paper and laminated or traced on tag board, then cut out. Use the half-size model and photocopy at twice the size, or re-draw at twice the size.
   2. Select six items in the room that can easily be measured. While selecting items, think in terms of measuring in inches as well as feet.
   3. Write your selections on the "Measurement Chart" that is provided. Make copies of this chart for small-group use in Step D below.

B. Discuss with the students their unit of measurement, the "cut-out foot." Compare the foot to the ruler and its similar uses. Explain the use of inches. Show how to write the measurements using numerals. Example: 12 feet and 1 inch is 12' - 1". This concept will be further explained in Lesson No. 5.

C. At this time, have the students individually use the foot ruler to measure a few items they select. Ask them to measure items smaller than 1 foot to determine if they grasp the concept of measuring in inches.

D. Divide the students into small work groups. They will work together to measure the pre-selected items and write the measurement on their chart.

E. Now divide the students into work groups of two. Have the students mark the height of their partner on the wall with a piece of masking tape. Then have each student use the "foot" ruler to measure his/her partner's height and record the findings on the piece of tape. Example: Sara 4' - 2".

F. Assemble the class and compare the measurements from each group.

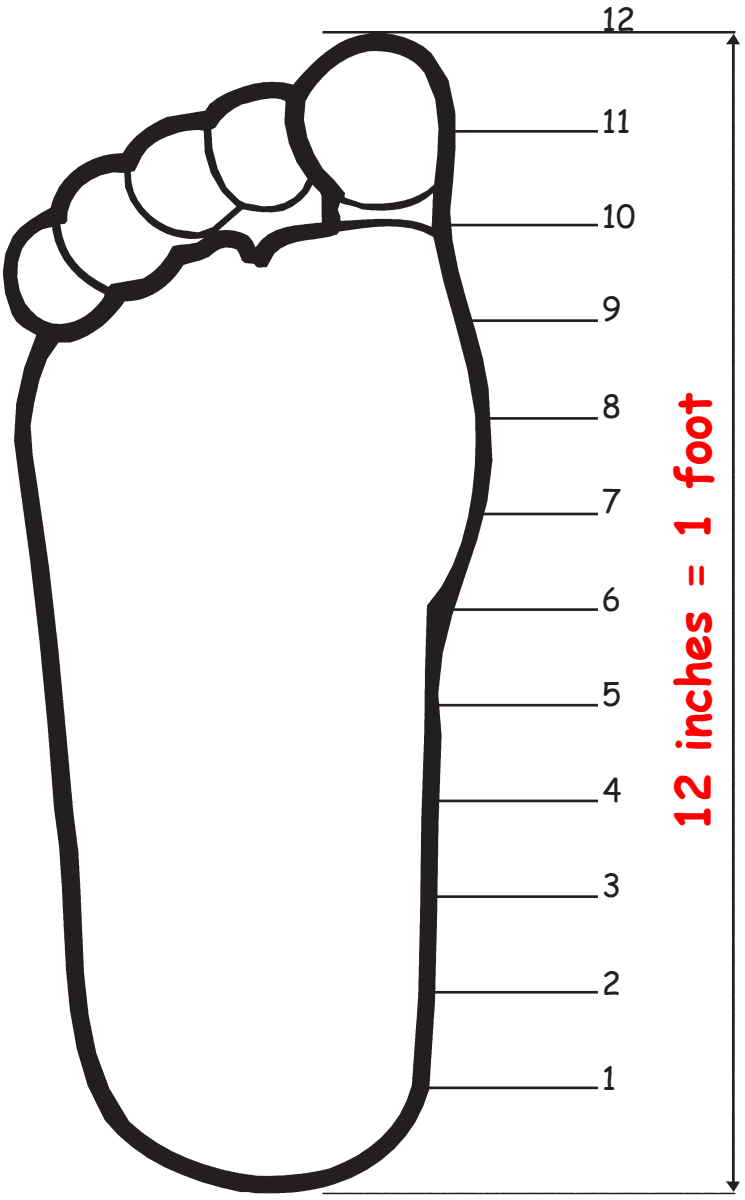
TEACHER'S EVALUATION

A. Analyze the charts for accuracy. The teacher has measured the pre-selected items and knows the answers. This will indicate if the students understand feet and inches measurement.

Second Grade ◆ Lesson Four

OBJECT NAME	SIZE	
	FEET	INCHES

Measurement Chart



"Foot" Ruler

(This image is half size - enlarge 100 percent)

Second Grade ◆ Lesson Five

SECOND GRADE
LESSON NO. 5

MEASURING AND DRAWING YOUR CLASSROOM

LENGTH OF LESSON: 30 - 60 MINUTES

EDUCATIONAL OBJECTIVES:

A. Be able to accurately measure items
   Mathematics
   - Geometry and measurement
   - Patterns, relationships and functions
   - Number sense and numeration

B. Develop visualization and visual thinking skills
   Mathematics
   - Numerical and algebraic operations and analytic thinking

   Visual Arts
   - Arts in context

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Visual relationships are determined by light, shadow, edges and contrast.

Design is experienced through human sensory perception.

Visual thinking is a key to awareness of the built environment.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Second Grade ◆ Lesson Five

MATERIALS

1. Rulers
2. Graph paper (4 squares per inch)
3. Pencils or crayons
4. "Classroom Measurement Chart" (included)
5. Poster board for measurement chart

VOCABULARY (See glossary for definitions)

1. Estimate

ACTIVITY

A. Using the "Classroom Measurement Chart" as a guide, prepare a three-column chart on poster board. Column 1 is for the group name, Column 2 is for estimating the classroom size, and Column 3 is for actual measurements taken by the students.

B. As each student looks at his/her ruler, explain a ruler is usually 12 inches long, which also is called a "foot" when measuring (refer to Lesson No. 4). Then ask students to guess the size of their classroom (length and width, in feet).

C. Discuss the need for a universal system of measurement. Introduce the history of measurement based on early kings' arms and feet (e.g., the king's foot = 1 foot).

D. Demonstrate how to use a ruler to measure. Tell students to line up the edge of the ruler to the edge of the object they are measuring.

E. Separate the children into groups of two students each.

F. Have each group measure the wall lengths of the classroom. More than one group can measure the same wall by starting at opposite ends.

G. All groups record their results on the poster board in the correct columns.

H. Discuss the differences in measurements, and why they differ.

I. Distribute graph paper. Using the actual measurements (not the estimate), have each child draw the classroom floor plan. One block on the graph paper equals 1 foot. The students should include furniture and indicate where doors and windows are located.

TEACHER'S EVALUATION

A. Analyze student work for:
   1. Understanding and accurately measuring the classroom size;
   2. Accurately generating the classroom floor plan.

GROUP	GUESS (ESTIMATE)	MEASUREMENT

Classroom Measurement Chart

Second Grade ◆ Lesson Six

SECOND GRADE
LESSON NO. 6 — **SENSORY ASPECTS OF YOUR CLASSROOM**

LENGTH OF LESSON: **60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Introduce the senses as a part of the physical environment
   Science
   - Use scientific knowledge from the physical sciences in real-world contexts

   Visual Arts
   - Arts in context

B. Learn about how the senses affect people
   English/Language Arts
   - Meaning and communication

   Science
   - Use scientific knowledge from the physical sciences in real-world contexts

   Visual Arts
   - Arts in context

C. Create a picture of the classroom using "color" and "texture"
   Visual Arts
   - Arts in context
   - Performing
   - Creating

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Balance is the creation of visual harmony through the use of color and the manipulation of form.

Second Grade ◆ Lesson Six

Design is experienced through human sensory perception.

Aesthetics is the artistic component of architecture.

Architecture satisfies emotional and spiritual needs in addition to physical needs.

MATERIALS

1. Make a copy of classroom drawing for each student (included); drawing can be enlarged to help facilitate the placement of materials.
2. Sample texture sheet
3. Colored pencils
4. Texture plates for rubbings (samples of bricks, tiles, carpet, etc.)
5. Construction paper of various colors (red, orange, yellow, blue, green, purple, gray, black, white)

VOCABULARY (See definitions in glossary)

1. Color
2. Echo
3. Senses
4. Texture

ACTIVITY

A. Begin with a discussion of the senses in general (sight, hearing, smell, taste and touch). Then talk with students about memories of a scent, e.g., hot dogs cooking at a ballpark, popcorn at the movies, etc.

B. Explain that color serves many purposes. Color helps us communicate, such as traffic lights with red, yellow and green signals. Color is important in nature. Many colorful flowers and fruits attract fruit-eating insects and animals. Color adds pleasure to our lives. We enjoy the beauty of colorful flowers. We choose clothing colors carefully, and we decorate our buildings with color. We paint walls and install carpet with color. Building materials like brick and wood have natural colors.

C. Next, show the students examples of construction paper in various colors. Use the examples as a visual aid for discussion.

D. Discuss warm and cool colors:
   1. Warm colors: Red, yellow and orange;
   2. Cool colors: Blue, green and gray.

E. Have students talk about how these colors make them feel. For example, blue is associated with sadness; red is associated with energy or anger, etc.

F. Discuss how we hear echoes in large rooms or in a wide-open canyon surrounded by mountains. Echoes make us feel that we are in an open area, even if the area is not open. Echoes are used in recording music to create this feeling.

G. Discuss how smell and taste are closely related. When we go into a home where dinner has been cooking, we smell the aromas of the food and can almost taste it before it is eaten.

H. Discuss how the sense of touch is all around us in the various textures of materials. Brick and block are rough and hard surface textures. Clothing fabrics are usually smooth and soft surface textures. Point out the various textures in the classroom, utilizing the sample texture sheet (included).

I. Have the students place texture plates under the classroom drawing. Have them make rubbings using colored pencils. Instruct students to use different textures (and colors) to represent different surfaces.

J. Have each student explain his/her classroom drawing to the class.

TEACHER'S EVALUATION

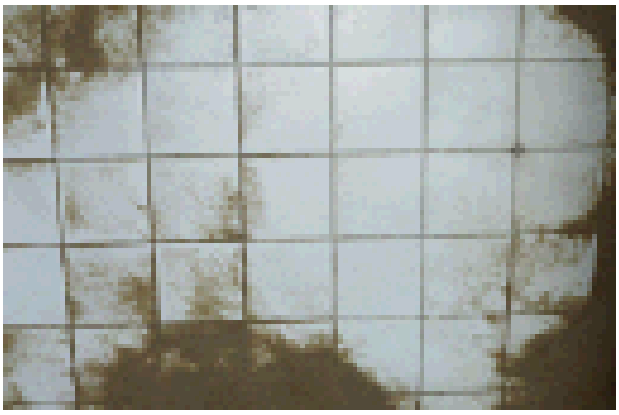
A. Display the rubbings.

B. Evaluate each student's understanding of the concepts discussed through his/her drawing and discussion.

Second Grade ◆ Lesson Six

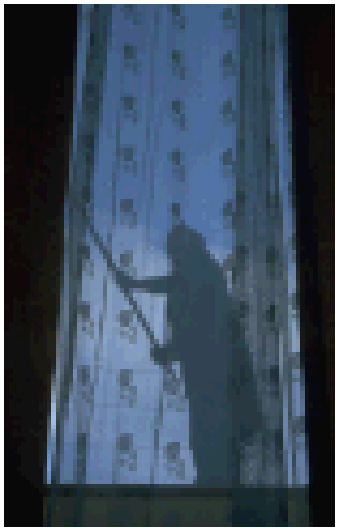
Brick Wall

Block Wall

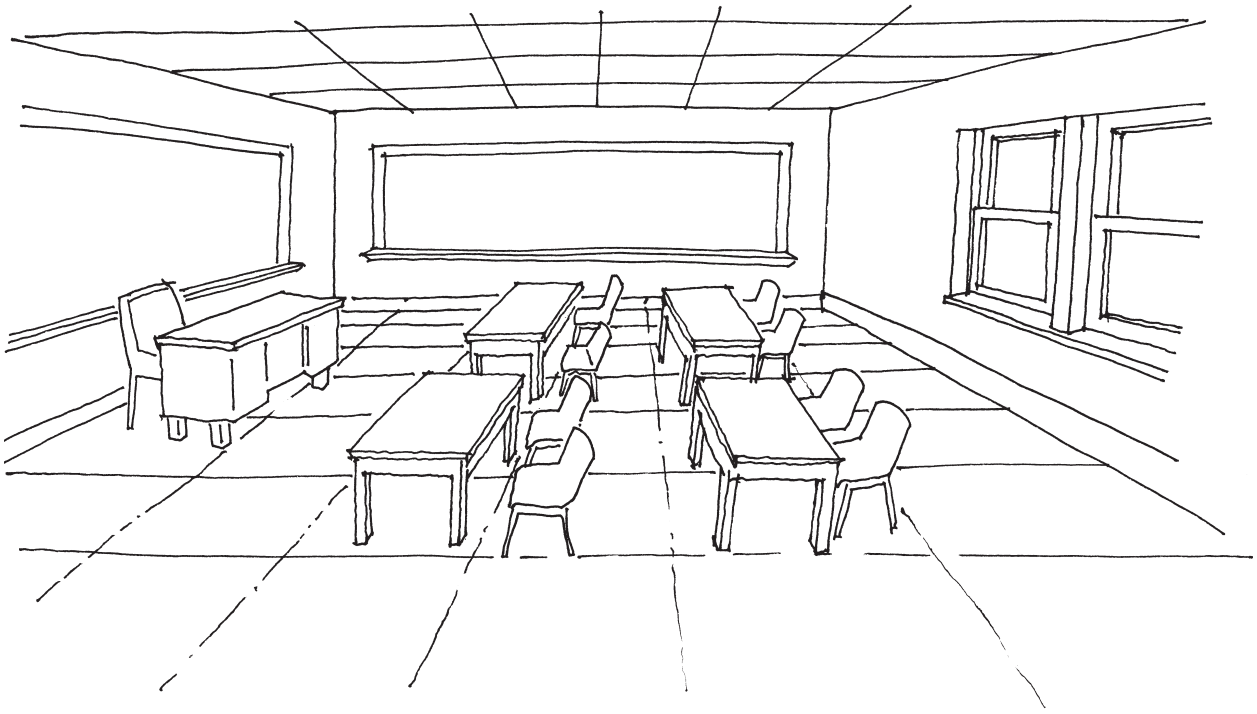


Tile

Carpet



Drapes



Drawing of Classroom

Second Grade ◆ Lesson Seven

SECOND GRADE
LESSON NO. 7 **BUILDING TYPES**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Understand architecture and its relationship to everyday activities
   Social Studies
   - Historical perspective
   - Geographic perspective
   - Civic perspective

B. Help students become more aware and observant of their environment
   Social Studies
   - Geographic perspective

   English/Language Arts
   - Meaning and communication

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Visual thinking is a key to awareness of the built environment.

The creative process is basic to design.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Form follows function is a design approach where the form of the building is determined by the function of its spaces and its parts.

Architecture satisfies emotional and spiritual needs in addition to physical needs.

Past, current and future technologies influence design decisions.

Second Grade ◆ Lesson Seven

MATERIALS

1. Graph paper with 1/2-inch square grid
2. Rulers
3. Pencils and crayons
4. Example of Building Type/Activitiy Chart

VOCABULARY (See glossary for definitions)

1. Activity
2. Building

ACTIVITY

A. Begin by having the students recall what buildings they recently have visited. Create a list of those buildings during discussion.

B. Next to each building, list the rooms students recall being in. Next to each room, list some of the activities that occurred when the students were there. Discuss why some activities occur in some buildings and not in others.

C. Have the students create a list of buildings not already on the list – buildings they may not have been in but have seen. Total the number of different building types the students can identify. Encourage students to add to the list by prompting them with activities that occur in the buildings and identifying the building that would house the activity.

D. Discuss the activities below and help the students identify the very unique buildings that house these activities:
   1. Repairing airplanes - airplane hangar
   2. Practicing golf - driving range
   3. Using a telescope - planetarium

E. Have students select an activity from the list below and describe what would make a particular building good for that activity:
   1. Skateboarding
   2. Playing laser tag
   3. Other unique activities that may be of interest to the students

F. Have students draw a picture depicting the building or area for an activity that interests them. Use graph paper. A one-story building should be 4 inches high (or 8 squares) and a two-story building should be 8 inches high (or 16 squares). When completed, have students cut out these buildings to add to the final mural in Lesson No. 10.

TEACHER'S EVALUATION

A. Evaluate discussion to determine student knowledge.

B. Evaluate student drawings for awareness and accuracy of activities within the built environment.

Second Grade ◆ Lesson Seven

BUILDING TYPE	ACTIVITY
House	Living
Apartments	Multi-family living
Stores/Mall	Buying and selling
Offices	Working
Car wash	Cleaning cars
Hospital	Heal and cure
Bank	Finance
Theater	Entertainment/culture
Parking garage	Park cars
Prison	House criminals
Library	House books
Pool	Swim

BUILDING TYPE	ACTIVITY
School	Learning
Hotel	Sleeping
Restaurant	Eating
Gas Station	Buy fuel
Doctor's office	Health check
Factory	Make things
Museum artifacts	Display
Airport	Travel
Warehouse	Store objects
Temple, church, etc. religion	Practice
Stadium	Sports

Example of a Building Type/Activity Chart

Second Grade ◆ Lesson Eight

SECOND GRADE
LESSON NO. 8 **RECIPE FOR A CITY - PART 1**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Learn the roles different types of buildings and places have in a city
   Social Studies
   - Geographic perspective
   - Civic perspective

B. Participate in a discussion of the community using critical and analytic thinking skills
   English/Language Arts
   - Meaning and communication

   Social Studies
   - Historical perspective
   - Geographic perspective
   - Civic perspective

C. Learn basic map reading
   Social Studies
   - Historical perspective
   - Geographic perspective

ARCHITECTURAL PRINCIPLES:

Order is the arrangement and organization of elements to help solve visual and functional problems.

Symbolism is an important means of visual communication for architecture.

Visual thinking is a key to awareness of the built environment.

Second Grade ◆ Lesson Eight

Climate and the natural environment influence design decisions.

Social structure, culture and the built environment have a direct influence on one another.

Architecture satisfies emotional and spiritual needs in addition to physical needs.

MATERIALS

1. Map of city
2. Aerial photograph (available from county planning agency)

VOCABULARY (See glossary for definitions)

1. Aerial photograph
2. Elevation
3. Map

ACTIVITY

A. Discuss the parts of their city with the students. Show a map of their city and an aerial photograph, if available. Have the students make a list of examples of each of the following eight categories as a class. List the categories and examples on the chalkboard:

1. Places to live
2. Transportation
3. Government buildings
4. Food/growing and production
5. Places to work
6. Places to buy things
7. Places to play
8. Natural areas

B. Sample questions for discussion:
   1. What do you think is important in your city/town to keep it operating well for the people who live and work there?
   2. What parts of your city/town remain from the past?
   3. What kind of places or buildings does your city/town need that it does not have now?
   4. Are there features that make certain buildings recognizable from the outside?

C. Divide the class into approximately equal numbers of students for each category. Allow the students some freedom to select the category they like.

D. Each student should select one place (building type or area) to draw (in Lesson No. 10) that falls within his/her category. This drawing should be a front view (elevation) of the building.

TEACHER'S EVALUATION

A. Most of the evaluation for this project will occur after Recipe for a City: Part 3 (Lesson No. 10). However, after the discussions in this lesson, students should have a basic understanding of the types of buildings and places found in a city.

Second Grade ◆ Lesson Nine

SECOND GRADE
LESSON NO. 9 **RECIPE FOR A CITY - PART 2**

LENGTH OF LESSON: **30 - 60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Learn the roles different types of buildings and places have in a city
   Social Studies
   - Historical perspective
   - Geographic perspective
   - Civic perspective

B. Participate in a discussion of the community using critical and analytic thinking skills
   English/Language Arts
   - Meaning and communication

   Social Studies
   - Geographic perspective
   - Civic perspective

C. Learn basic map reading
   Social Studies
   - Historical perspective
   - Geographic perspective

D. To develop graphic skills
   Visual Arts
   - Creating
   - Arts in context

Second Grade ◆ Lesson Nine

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Visual relationships are determined by light, shadows, edges and contrast.

Balance is the creation of visual harmony through the use of color and the manipulation of form.

Form follows function is a design approach where the form of the building is determined by the function of its spaces and its parts.

Nature is a model for architectural forms and shapes.

Mass creates form, which occupies space and brings into being a spatial articulation.

Symbolism is an important means of visual communication for architecture.

Visual thinking is a key to awareness of the built environment.

Sustainable design of the built environment protects the natural environment.

Social structure, culture and the built environment have a direct influence on one another.

Design is experienced through human sensory perception.

The creative process is basic to design.

Aesthetics is the artistic component of architecture.

Climate and the natural environment influence design decisions.

Architecture satisfies emotional and spiritual needs in addition to physical needs.

Second Grade ◆ Lesson Nine

MATERIALS

1. Bulletin board paper 4 feet in height by 8 feet in length (longer is OK)
2. 8 1/2 x 11-inch graph paper with 1/2-inch square grid
3. Rulers
4. Pencils
5. Erasers
6. Oil pastels, chalk pastels, tempera paint, etc. (teacher's choice)
7. Example of a streetscape mural (picture below)

VOCABULARY (See glossary for definitions)

1. Elevation

ACTIVITY

A. The teacher makes a background for a student mural, approximately 4 feet in height by 8 feet in length. The background material can be bulletin board paper or any other type of large paper. The teacher starts by adding a sidewalk and a road to the mural. See the example of the streetscape mural below for reference.

B. The student has selected a building type during Lesson No. 8. The teacher assigns a dimension (in grids) to each student's building for both the building height and width. The building dimensions (in grids) should vary according to the building type (e.g., a house will be smaller than a school; an apartment building will be taller than a house).

C. The students draw a front view (elevation) of their building, with the teacher circulating among the students to offer assistance. Students color their buildings.

D. Students also make trees, flowers, animals, etc., for the mural. These are planned to complement the animals and animals' homes from Lesson No. 1 - Activity Step E.

E. All buildings should be carefully cut out and ready to be attached to the mural. (These items will be attached during Lesson No. 10.)

TEACHER'S EVALUATION

A. Analyze groups' art work to determine students' understanding of the variety of functions of a city/town.

B. Students should create appropriate buildings according to their groups' category.

Second Grade ◆ Lesson Ten

SECOND GRADE
LESSON NO. 10 **RECIPE FOR A CITY - PART 3**

LENGTH OF LESSON: **60 MINUTES**

EDUCATIONAL OBJECTIVES:

A. Be able to logically locate buildings and other community elements in a city/town
   Social Studies
   - Geographic perspective
   - Civic perspective

   Mathematics
   - Patterns, relationships and functions

B. Build teamwork skills necessary for future careers
   English/Language Arts
   - Meaning and communication

C. Use art tools, such as scissors and glue, in an appropriate manner
   Visual Arts
   - Creating
   - Performing

D. Be able to critique their own final product
   English/Language Arts
   - Meaning and communication

   Visual Arts
   - Arts for context

Second Grade ◆ Lesson Ten

ARCHITECTURAL PRINCIPLES:

Design is accomplished by composing the physical characteristics of size, shape, texture, proportion, scale, mass and color.

Order is the arrangement and organization of elements to help solve visual and functional problems.

Visual relationships are determined by light, shadows, edges and contrast.

Balance is the creation of visual harmony through the use of color and the manipulation of form.

Form follows function is a design approach whereby the form of the building is determined by the function of its spaces and its parts.

Nature is a model for architectural forms and shapes.

Mass creates form, which occupies space and brings into being a spatial articulation.

Symbolism is an important means of visual communication for architecture.

Visual thinking is a key to awareness of the built environment.

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Social structure, culture and the built environment have a direct influence on one another.

Design is experienced through human sensory perception.

The creative process is basic to design.

Aesthetics is the artistic component of architecture.

Climate and the natural environment influence design decisions.

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Second Grade ◆ Lesson Ten

MATERIALS

1. Art work begun in previous lessons
2. Scissors
3. Glue
4. Masking tape
5. Bulletin board paper

VOCABULARY (See glossary for definitions)

1. Mural

ACTIVITY

A. Retrieve buildings, flowers, etc, from Lesson No. 9. Note: Animals, animal houses and buildings from Lesson No. 1 - Activity Step E, Lesson No. 2 - Activity Step F and Lesson No. 7 - Activity Step F may be added to or substituted for material produced in Lesson No. 9.

B. As a class, students should place the buildings, flowers, etc., on the paper background that is mounted on the wall. Ask students to focus on the city/town as a totality of many types of buildings and spaces, all of which are related to each other. Students should plan locations before attaching items, considering, for example, that places to live may need to be concentrated in one area. Attach items with small pieces of masking tape rolled up on the back of these items until their final location is determined.

C. Add glue to the back of the items to permanently attach them to the mural.

D. Evaluate the mural as a class. This is a good time for students to stand back and look at the mural and review what they have put together – how the city/town will work; whether the buildings are in logical locations; if there is anything they could add in the future; and what they judge to be the best parts of their final mural.

E. The class can present the mural to parents on family night as a team project. Students should have the opportunity to explain their work but without pressure to do so.

TEACHER'S EVALUATION

A. Gauge student understanding of the types of buildings and places and their logical proximity to each other.

B. Evaluate how students worked in teams and as a total class to incorporate their buildings into the mural in a logical manner.

C. From classroom discussion, determine whether the students understand the kinds of buildings their classmates created in categories different from their own.