

**Informational Books in the Preschool Classroom**  
**Topic of Study: Constructing a Building**

*Building a House* by Byron Barton  
*Construction* by Sally Sutton, illustrated by Brian Lovelock  
*\*How a House Is Built* by Gail Gibbons (Reference Book)

**Introduction**

In this guide children are engaged in activities that primarily support three domains in the *Arkansas Child Development and Early Learning Standards: Birth through 60 months: Language Development, Emergent Literacy* and *Science and Technology*. The **Learning Goals** (with **Strands**) that precede each activity relate to specific areas of development and learning that are the focus of the activity.

Through two featured books, *Building a House* and *Construction*, children are introduced to the steps in building two structures, one a house and one a library.

**\*Teacher Note:** *Developers of this guide recommend that a copy of the book, How a House is Built by Gail Gibbons, be purchased and reviewed before beginning this topic of study. This book contains information that may be difficult for most preschool children to understand. However, it is information that will be helpful to teachers as they present the featured books to the children and involve them in some of the activities in this topic of study. Consider placing the book in the Library Center to be shared with children who have had first-hand experiences with building a house and/or are able to understand the more advanced information.*

**Connection to Adventures in Learning and Informational Books  
In the Preschool Classroom**

This curriculum guide can stand alone or be used as a supplement to, or in conjunction with the following topics of study **in Adventures in Learning** and other **Informational Books in the Preschool Classroom**:

**Adventure in Learning:**

- Focus Area: Families – Places Families Call Home
- Focus Area: Communities – People Who Help Build Our Community

**Informational Books in the Preschool Classroom**

- Tools
- Building with Blocks

This curriculum guide can also be used with similar topics of study from any curriculum.

## Materials to Collect and Make

**Teacher Note:** *The developers of this guide recommend that you review the following resource that contains information about construction:*

*Zoning in on Construction, a booklet that was printed and distributed for Arkansas Children's Week, April 12-18, 2015. Arkansas Children's Week – A State University – ACW Resource Books – 2015.*

[http://asuchildhoodservices.org/#!chs\\_publications](http://asuchildhoodservices.org/#!chs_publications)

**Teacher Note:** *Developers of this topic recommend that teacher review the following definitions of tools that are found in the two featured books, locate them in the books and give children explanations of those with which they may not be familiar:*

### **Tools and equipment that are featured in the two books, *Building a House* and *Construction***

- hammer
- mallet – a tool with a large head usually of wood and is used to pound on something
- shovel
- trowel – a small tool that has a flat, metal blade and a handle, used to spread building materials such as cement or mortar between bricks when building a fireplace, for example
- wrench
- hand saw – used to cut pieces of wood into different shapes
- circular saw – a power tool that cuts wood using a round blade that is edged with sharp metal teeth
- power drill – used for making holes or driving fasteners such as screws into a hard surface such as wood
- paint brush
- paint roller
- work gloves
- safety goggles
- hard hat
- scaffolding – a temporary or movable platform for workers such as bricklayers or painters to sit or stand on when working at a height above the floor or ground
  
- Builder's Tools and Equipment - Copy on cardstock, laminate and cut out on lines. **(See Attachment: [Builder's Tools and Equipment Cards](#))**
  
- Hammering Kit (purchased or made)
  - Cover a 2" thick x 12" square piece of Styrofoam with a piece of burlap fabric
  - Provide golf tees and plastic hammers
  
- Photos of buildings such as different types of houses, office buildings, schools, etc. Also include photos of buildings under construction

## Introducing and Concluding the Topic

### Learning Goals:

**CD2.4 Holds and manipulates information in memory** (*short-term and working memory, long-term memory*)

**CD3.2 Engages in symbolic and abstract thinking** (*abstract thinking*)

**EL3.1 Responds to features of books and print** (*print knowledge*)

### Introduction: Finding Out What Children Know about Construction

To introduce the topic of “Constructing a Building” you need to find out what children already know about the topic and what they want to know. This allows you to build on children’s experiences and helps create an interest in the topic. Here’s how to begin:

- Gather the children in a group. Show them pictures of different structures, for example houses, office buildings, and schools. Say, “For the next few days we’re going to be learning about constructing different types of buildings such as the ones you see in these pictures.”
- Write on chart paper, chalk board or marker board the words “Constructing a Building.”
- Invite children to tell you things they know about constructing a building. You may have to ask prompt questions such as “Have you ever seen a house or other structure being built?” If some children say they have, invite them to expand on what they observed. If children have not seen anything being built, again show the pictures and ask questions such as “Who do you think built these buildings?” and “What tools do you think were used to build them?”
- Make a list of all of the things children know about constructing a building.
- Review the list with them and say, “You already know a lot of things about construction and we’ll find out even more.”
- Now ask children what they would like to know about constructing a building such as a house and make a list of what they say.
- Keep the two lists until you have completed the topic of study.

**Teacher Note:** *Be familiar with any family members who are involved in construction work and incorporate this information into discussion about constructing a building. Encourage children to contribute to the discussion by sharing what they know about their family and construction.*

**Teacher Note:** *Have three headings on the chart sheet. The first heading will be “What We Know about Constructing a Building”, the second heading will be “What We Would Like to Know about Constructing a Building” and the third heading will be “Things We Learned about Constructing a Building.”*

What We Know about Constructing a Building	What We Would Like to Know about Constructing a Building	Things We Learned about Constructing a Building

### Conclusion: Finding Out What Children Have Learned about Constructing a Building

- Gather the children in a group at the conclusion of the topic of study about constructing a building.
- Review with the children the information in the first two columns.
- Invite children to tell you some new things they have learned about constructing a building, You may have to ask prompt questions such as, “Can you name some of the construction workers?” “What were some of the tools the construction workers used?”
- Add a list of things children learned about constructing a building in the third column.

**Teacher Note:** *This method of introducing and concluding the topic is known as KWL. What do children know, what do they want to know, and what did they learn.*

## Story Presentations

### Teacher Notes:

- Refer to the Teacher Note in the Introduction that recommends reviewing in advance the book, *How a House Is Built* by Gail Gibbons.
- Refer to the Teacher note in the Materials to Collect and Make that lists the tools found in the two books and gives definitions for some of the tools that may not be familiar to children. When these tools are shown in the books, point them out to children, name them and explain how the tools are used.

### Learning Goals:

**LD1.1 Understands and responds to language (in child's home language) (vocabulary and language comprehension)**

**LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language) (expressive vocabulary)**

**EL1.1 Shows interest in literacy experiences (engagement in literacy experiences, variety of interests)**

**EL1.2 Engages in read-alouds and conversations about books and stories (story comprehension)**

**EL3.1 Responds to features of books and print (book knowledge)**

**ST3.2 Uses tools and engineering practices to explore and solve problems (knowledge and use of tools, engineering practices and thinking)**

**Book:** *Building a House* by Byron Barton

- Prepare to read the book, *Building a House*.
- Show the cover, give title, author and illustrator. (Explain that the author is the person who writes the story and the illustrator is the one who draws the pictures. In this book, Byron Barton is both the author and illustrator.)
- Invite children to look at the cover and describe what they see. Ask, "In this picture, which part of the house do you think is being built?" (roof)
- Read the story so all children can see the pictures in the book.
- Follow up the reading by showing the pages and calling attention to and naming some of the tools being used.

### Second Reading of *Building a House*

- Read this book with small groups of children, if possible. This will allow children to more clearly see the pictures in the book and make comments and ask questions.
- Show the cover and invite children to recall the title of the book.
- Explain to children that as you read the book with them, you are going to give them more information about what is happening on some of the pages.
- Read the words on each two pages as noted and give additional explanations and point to who, what and why:
  - Pages 1 & 2: "This man is a surveyor. He is using an instrument called a transit to measure the foundation of the house."
  - Pages 3 & 4: "The surveyor uses a mallet to pound stakes into the ground where the corners of the house will be. A machine is digging a hole where the foundation of the house will be. The foundation will support the weight of the house, so it has to be really strong."
  - Pages 5 & 6: "Trenches are dug around the edges and the foundation builders line the trenches with boards to make a form."
  - Pages 7 & 8: "A cement mixer pours the cement in the form and the builders smooth the cement. When the cement is dry, the boards will be removed. This is the footing for the house and it will give the house a strong foundation."
  - Pages 9 and 10: "Bricklayers use a trowel to smooth the mortar between the bricks so that when the mortar dries the bricks will stick together."
- Continue reading the remainder of the book, pointing out tools being used and the emphasizing the names of the workers.
- Follow up the reading by inviting children to discuss what they enjoyed most about the story.
- Show children the book, *How a House Is Built* and explain that both books will be in the Library center for them to look at on their own or with a classmate, and that you will also be able to read the books with them.

**Book #2:** *Construction* by Sally Sutton, illustrated by Brian Lovelock

**First Reading** of *Construction*

- Prepare to read the book, *Construction*.
- Show the cover, give the author and illustrator. (Explain that the author is the person who writes the words and the illustrator is the person who draws the pictures.)
- Invite children to share what they think will be constructed. Say, "Let's read and find out what the men will be building."
- Read the book so that the children can see the pictures.
- Emphasize the words that are in large print and are followed by exclamation marks.
- Follow up the reading by asking if anyone was correct about what was being built.
- Show some the first pages of the book, *Building a House*, and invite child to describe what the men are wearing on their heads.
- Show the page in the book, *Construction*, which reads "Cut the planks. Cut the planks" and invite children to describe what the workers are wearing on their head, their face and their hands. (hard hats, work gloves and safety glasses, plus ear muffs to lessen the sound)
- Show the book *Building a House* and ask children to discuss in which book they think the men are being the safest. Involve them in discussing how hard hats, work gloves and safety goggles keep the workers safe. Ask them why they think the two men in *Construction* are wearing ear muffs.

**Additional Learning Goals:**

**PH3.2 Shows awareness of safe behavior** (*understanding of safety rules and practices*)

**ST2.1 Demonstrates knowledge of core science ideas and concepts** (*structure and function*)

**Second Reading:** *Construction*

- Show the cover and invite children to recall the title of the book.
- Read the story and invite children to say the words with large letters and exclamation marks. For example, read "Slip! Slap! THUD!" and run your hand under each word and invite children to read it with you.
- Follow up the reading by inviting children to listen carefully so they can identify the two words that rhyme. For example on the first two pages "mud" and "thud."

**Additional Learning Goal:**

**EL2.1 Notices and manipulates the sounds of language** (*rhyme*)

**EL3.2 Responds to features of books and print** (*print knowledge*)

**Additional Language and Literacy Activities**

**Learning Goals:**

**EL1.1 Shows interest in literacy experiences** (*engagement in literacy experiences*)

**MT1.1 Demonstrates number sense and an understanding of quantity** (*number names and count sequence, connection of number, numeral, and quantity*)

**Activity: Johnny Works With One Hammer** – Invite children to sing/chant with you.

Johnny works with one hammer	(pretend to hammer with one fist)
One hammer, one hammer, one hammer.	
Johnny works with one hammer,	
Now he works with two.	(pretend to hammer with two fists)
Continue with:	
two hammers	(use both fists)
three hammers	(use two fists and one foot)
four hammers	(use two fists and two feet)
five hammers	(use two fists, two feet, nod head)
Then he goes to sleep.	(close eyes, put head on folded hands)

**Learning Goals:****SE1.1 Interacts with peers** (*social skills*)**PH3.2 Shows awareness of safe behavior** (*understanding of safety rules and practices*)**LD1.1 Understands and responds to language (in child's home language)** (*vocabulary and language comprehension, follows directions*)**LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language)** (*expressive vocabulary*)**ST3.2 Uses tools and engineering practices to explore and solve problems** (*knowledge and use of tools*)**Activity: Real Tools that Builders Use (Small Group)**

- Bring a collection of tools that builders use to the classroom; tools that are featured in the two books. Select only those tools that you know you can safely allow children to examine.
- Gather a small group of children, three or four.
- Establish with the children the procedures and rules for this activity. For example:
  - Each child will have a turn to hold and look at the tool
  - Give the tool to another child when the teacher says to do so.
  - Return the tool to the teacher when she says to do so.
  - Explain to children which tools they will be allowed to play with and which ones will be put away in a locked cabinet.
  - Have tools in a container such as a tool box or bag.
  - Bring out one tool at a time and ask children to name it and tell how it is used. If they do not know the name of the tool, tell them what it is and explain its purpose and how to use it.

**Teacher Notes:**

- *Assure all children in the room that they will have a turn to examine the tools and follow through with this. It will be best if all children have a turn on the same day.*
- *Provide as many real tools as possible for children to handle safely.*
- *Determine which tools children can safely play with and place them in different learning centers. Lock the other tools in a cabinet or in your car.*
- *Some classrooms have construction centers with real tools. If your classroom has sufficient staff to supervise this center, this area is much enjoyed by children*

**Activity: What Would You Use? (See Attachment: [Builder's Tools and Equipment Cards](#))**

- Gather a felt or magnet board and the Builder's Tools and Equipment cards
- Give each child one of the Builder's Tools and Equipment cards.
- Explain to children that you will present a situation and they will decide which tool or piece of equipment to use by placing their card on the board. Let children know that more than one child may have the correct tool.
- Say to children "Which tool or piece of equipment would you use to..."
  - Dig a hole (shovel)
  - Cut a piece of wood into a square (hand saw)
  - Spread mortar between two bricks (trowel)
  - Protect your hands (work gloves)
  - Pound a stake into the ground (mallet)
  - Cut a large board in half while you are wearing ear muffs (power saw)
  - Stand on when you are building a chimney (scaffolding)
  - Paint a wall (paint brush or paint roller)
  - Protect your head (hard hat)
  - Pound a nail into a piece of wood (hammer)
  - Protect your ears from loud noises ( earmuffs)
  - Turn a large screw (adjustable wrench)

**Learning Goals:****SE1.2 Interacts with peers** (*social skills*)**CD2.4 Holds and manipulates information in memory** (*short-term and working memory*)**LD1.1 Understands and responds to language (in child's home language)** (*vocabulary and language comprehension*)**ST3.2 Uses tools and engineering practices to explore and solve problems** (*knowledge and use of tools*)**Activity: Builder's Tools and Equipment Concentration (Small Group) (See Attachment [Builder's Tools and Equipment Cards](#))**

- Make pairs of Builder's Tools and Equipment Cards. Laminate or cover with clear adhesive for durability.
- Gather a small group of children to play the game.
- Place the cards face up, show to children, and have them name the tools and equipment.
- Place the cards face down and mix them up.
- Explain to children that each will have a turn turning over a card, naming the tool or piece of equipment, and trying to find the matching card by turning over one other card. Demonstrate if necessary.
- Allow each child a turn.
- Put aside cards when a match is found.
- Continue playing the game as long as the children remain interested.

**Teacher Notes:**

- *Begin with a small number of matching cards and add more as children seem ready to play the game with additional pairs.*
- *Remember that the object of the game is for children to be able to take turns and to develop short-term and working memory and that there are to be no winners or losers.*
- *Allow children to play the game independently.*

**Learning Environment****Library Center**

- Add the following books:
  - *Building a House*
  - *Construction*
  - *How a House Is Built*

**Manipulative Center**

- Add Duplo blocks
- Add Lincoln Logs
- Add Bristle Blocks
- Add construction worker puzzles
- Add pictures of buildings (houses, log cabins, office buildings, schools, churches, libraries)

**Construction Center**

- Add a Hammering Kit (See Materials to Collect and Purchase)
- Add a collection of large nuts and bolts
- Add sections of PVC pipe and connectors

### **Block Center**

- Add cardboard brick blocks
- Add PVC pipe, 4" to 6" in length, and connectors
- Add construction vehicles, some with moving parts
- Post at child's eye level pictures of different types of buildings on the wall in the center: houses, churches, library, hotels/motels, for example. Include pictures of buildings under construction.
- Add construction magazines
- Add plastic safety goggles, work gloves, and hard hats

**Teacher Note:** *Unit blocks should always be available in the block center. Other types of blocks can be added and rotated.*

### **Art Center**

- Build a neighborhood with paper bag houses
  - Provide lunch size paper bags
  - Involve children in stuffing the bags with newspaper and sealing the top down with tape.
  - Provide markers, crayons, pencils, safety scissors, tape, glue, scraps of construction paper, pieces of cardboard, corrugated cardboard.
  - Suggest that children create houses for their neighborhood.
  - Ask questions or wonder "I wonder how we can make windows and doors for our house?" "Which materials could you use to make a roof for your house?"
  - Cover a tabletop with plain paper. Invite children to help you draw streets.
  - Invite children to add their paper bag houses to the neighborhood.
  - Add small vehicles to the neighborhood.
  - Allow children to add other things they suggest; trees or flowers, for example.

### **Dramatic Play Center**

- Add a tool box with tools that are safe for children to use independently: cloth tape measure, adjustable wrench, carpenter's pencils
- Add a tool belt and/or a carpenter's apron
- Add work gloves
- Add hard hats
- Add ear muffs

### **Sand Play Center**

- Add construction vehicles such as dump trucks and pickup trucks
- Add small trowels
- Add smooth pieces of wood or sturdy cardboard

### **Water Play Center**

- Add 6" segments of PVC pipe and a variety of connectors
- Add small plastic pitchers and measuring cups

### **Outdoors**

- Add buckets in which to put water
- Add brushes used by painters
- Add paint rollers with pans

## Transition Activities

### Learning Goal:

**CD2.2 Shows flexibility in adjusting thinking and behavior to different contexts** (*adjusting behavior to match context*)

### Activity: Who Has This Tool or Piece of Equipment

- Provide a felt, Velcro or magnetic board.
- Use the pairs of Builder's Tools and Equipment (**See Attachment [Builder's Tools and Equipment Cards](#)**)
- Keep one of the sets and give each child a card from the other set.
- Show your card and ask the children, "Who has this tool?" or "Who has this piece of equipment?"
- Ask the child to name the item on his or her card, place the card on the board and transition to the next activity.

## Family Connection and Engagement

Send to families information stating that for the next few days, children will be learning about construction a building. Suggest some ways families can be involved in the topic of study:

- Collect and bring to the center pictures of houses and building. They can choose to send a picture of their home.
- Send home the titles and authors of some of the children's books about constructing a building. Suggest that they look for these books in the local library, check them out and read them with their child.
- Invite a family member who is involved in constructing a building to come in and bring some of the tools he or she uses. Discuss with the person in advance what you expect and how to make sure the activity is safe for the children.

## Additional Books

*Building Our House* by Jonathan Bean

*The Construction Alphabet Book* by Jerry Pallotta, illustrated by Rob Bolster

*Goodnight, Goodnight Construction Site* by Sherri Duskey Rinker, illustrated by Tom Lichtenheld

*Houses and Homes* by Ann Morris, photographs by Ken Heyman

*How a House Is Built* by Gail Gibbons

*If I Built a House* by Chris Van Dusen

*The Little House* by Virginia Lee Burton (also available in Spanish)

*Mighty, Mighty Construction Site* by Sherri Duskey Rinker, illustrated by Tom Lichtenheld

*The Three Little Pigs* by Paul Galdone

*Tool Book* by Gail Gibbons

*Toolbox* by Ann Rockwell

*Tools* by Ann Morris, photographs by Ken Heyman