

Developed by
The Southern District Family Living Program


Extension
UNIVERSITY OF WISCONSIN-MADISON RACINE COUNTY


Children are born learners. Every day, they learn new skills they will build upon as they grow. Children need experiences to be stimulating, fun, and interactive.

Adults can guide children's early learning experiences and use blocks as the tools to support their development. Playing with blocks can provide experiences where children learn math and science, new words and pre-reading skills, social skills, and physical skills.

This handbook will help you make the most of block play. Unit blocks, foam blocks, cardboard blocks, unit cubes, KEVA planks, and any kind of blocks offer both fun and learning.


The University of Wisconsin-Extension welcomes you and your child to a Block Party!
Enjoy exploring the world of blocks!

## MATH SKILLS

Blocks are a tool for learning MATH SKILLS! When playing with blocks, children can learn:

- Counting and quantity

How many blue blocks do you have?
$\square$ Shapes
Can you find another square block?

- Sizes

Try this smaller block and see if it fits.
$\square$ Adding and subtracting
Add two more blocks to the tower.
$\square$ Sorting
Let's find all the green blocks and put them away first.

- Patterns

You used a pattern: red, yellow, blue, red, yellow, blue.

- How to put things in order

Line the blocks up, smallest to largest.


To encourage MATH SKILLS in your child, use words such as:

| Long | Pattern | More |
| :--- | :--- | :--- |
| Tall | Sort | Less |
| Short | Measure | Fewer |
| Curve | Estimate | Same as |
| Straight | Square | Larger |
| Narrow | Triangle | Smaller |
| Wide | Circle | Least |
| Count | Rectangle | Most |
| How many | Top |  |
| Add | Bottom |  |
| Take away | First |  |
| Order | Last |  |

MATH SKILLS in action:
ㅁ A child tells a friend that her tower is bigger because she used more blocks.
$\Rightarrow$ What it means: This child is using words to compare quantity (i.e., more, less, greater than, fewer, same).
$\square$ A child makes a "fence" by alternating square- and rectangleshaped blocks.
$\Rightarrow$ What it means: This child recognizes a pattern.
ㅁ A child counts blocks and then asks a friend for four more.
$\Rightarrow$ What it means: This child understand that a number means "how many" or a quantity.

- A child stacks five rows of five blocks each and counts 5, 10, 15, 20, 25.
$\Rightarrow$ What it means: This child is counting by fives and gaining an understanding of the basic facts of multiplication.


## SCIENCE SKILLS

Blocks are a tool for learning SCIENCE SKILLS! When playing with blocks, children can learn:
口 Observation
This block is very smooth.

- Comparison

Which tower is taller?

- Guessing

Do you think one more block
 will make it will fall over?

- Experimenting

Try it and see what happens!
$\square$ Cause and effect
It fell over because the top block was too big.
ㅁ Weight
Which block is lighter?
As children build structures, encourage them to observe their work, ask questions, and plan or predict what will happen next.

- What would happen if you set the big rectangle block on the round column block?
- How do you think your castle would be different if you used the foam blocks instead of the cardboard blocks?"

To encourage SCIENCE SKILLS in your child, use words such as:

| Rough | Smallest | Whole |
| :--- | :--- | :--- |
| Smooth | Bigger | Stable |
| Heavy | Biggest | Motion |
| Light | Cause | Balance |
| Size | Explore | Flat |
| Weight | Discover | Incline |
| Gravity | Compare |  |
| First | What if |  |
| Next | Predict |  |

Last
Smaller

Predict
Solve
Series

SCIENCE SKILLS in action:

- A young child carries blocks around in his/her hands and places them in a bucket.

$\Rightarrow$ What it means: This child is learning about weight and size.
$\square$ A toddler builds a block tower, then laughs as he/she knocks it down.
$\Rightarrow$ What it means: This child is experimenting with cause and effect.
ㅁ A first-grader wants to put the wooden blocks down first when building a tower, so the foam blocks don't get squished.
$\Rightarrow$ What it means: This child understands that there are several factors to keep in mind when building stable structures.


# NEW WORDS AND PRE-READING SKILLS 

Blocks are a tool for learning NEW WORDS and building PREREADING SKILLS! When playing with blocks, children can learn:
$\square$ Pretending
This block can be my cell phone!

- New words

This block is shaped like a rectangle. It's rectangular.

- Letters and printing

Let's make a sign for the store you built.

- Storytelling

Tell me a story about what you are building.

## 口 Listening

Let's ask your sister to tell us a story about her building, too.


Children need to see writing and words everyday, so add signs to the block play or have paper and crayons ready for children to add their own!

To encourage NEW WORDS and PRE-READING SKILLS in your child, keep your child thinking and talking. For example, encourage your child to draw a picture of his/her block structures and explain what he/she is building and drawing. Use phrases such as:

- Tell me about . . .
- What would happen . . .?

ㅁ How will you know . . .?

- What do you think . . .?

ㅁ What is the same about . . .?
$\square$ What would make it . . .?

- What is the difference between . . .?

NEW WORDS and PRE-READING SKILLS in action:

- A young child puts a rectangular block to his/her ear and "talks on the phone."
$\Rightarrow$ What it means: This pretending is important. If a block can be changed into a phone, then eventually shapes and lines on a page can become words. Words are symbols that stand for very real things.
- A child writes "SV" on a paper and puts it on a block structure to let others know it is to be "saved."
$\Rightarrow$ What it means: This child is paying attention to the sounds in words and letters, and is using writing to share ideas.
$\square$ A child tells a story about the princess in the block castle.
$\Rightarrow$ What it means: This child is using imagination and learning that stories have a beginning, middle, and end. If an adult will write down the story, the child learns that words we say can be put into writing.


## SOCIAL SKILLS

Blocks are a tool for learning SOCIAL SKILLS! When playing with blocks, children can learn to:

- Share

There are enough blocks for you and your brother to both build something.

- Solve problems

How can we both use these blocks and be firefighters?

- Recognize feelings

It makes him angry when I tell him what to do.

- Work together

How about if you are the firefighter and I'm the ambulance driver?

- Take turns

You can have these when I'm done.

- Live with limits

No throwing blocks. Keep the blocks in this area.

- Use self-control

I know you really want to knock down that tower.
You're doing a good job of staying away from it.

- Making choices

Do you want to play with LEGOs or with the wooden blocks this morning?

To encourage SOCIAL SKILLS in your child, use words such as:

| Share | Imagine | Limits |
| :--- | :--- | :--- |
| Take turns | Think | Encourage |
| Decide | Together | Respect |
| Listen | Feelings | Self-control |
| Wait | Happy | Patience |
| Start | Angry | Easy |
| Stop | Frustrated | Hard |
| Help | Afraid | Choice |
| Ask | Alone |  |
| Create | Friend |  |
| Pretend | Cooperate |  |

SOCIAL SKILLS in action:

- A girl was playing with blocks and a boy sat down next to her and asked, "Can I play with you?" The girl responded, "No, these are my blocks!" The boy became quiet, obviously upset with her response. The girl pushed some of her blocks over to him and said, "Well, here. You can play with these."
$\Rightarrow$ What it means: The boy showed he knew how to ask, rather than just take away toys. The girl responded to his hurt feelings and decided to share her blocks. They are both developing social skills.



## PHYSICAL SKILLS

Blocks are a tool for learning PHYSICAL SKILLS! When playing with blocks, children can learn:

- Eye-hand coordination

Stack these blocks up on top of each other.

- Small muscles skills

Let's pick up these blocks and put them in this bucket.

- Large muscle skills

Bending, stretching, reaching, and walking when playing with blocks.

- Impulse control

I like how you are controlling your hands so you don't knock it over.
$\square$ Strength
These are heavy! Can you carry them over there okay?
$\square$ Where their bodies are in comparison to the space around them.

You walked around John's blocks so carefully!



To encourage PHYSICAL SKILLS in your child, use words such as:

| Stop | Walk | Touch |
| :--- | :--- | :--- |
| Go | Carry | Strong |
| Up | Sit | Gentle |
| Down | Bend | Slow |
| Balance | Kneel | Quick |
| Stack | Tiptoe | Careful |
| Move | Reach |  |
| Pick up | Pass |  |
| Hold | Push |  |
| Drop | Pull |  |

PHYSICAL SKILLS in action:

- The children were building a tall block tower. They had to bend over to pick up blocks, grab the blocks with their hands, and stretch to reach the top of the tower. They then walked very carefully around it so they would not knock it over.
$\Rightarrow$ What it means: These children are developing both large and small muscles and learning to control their bodies in space.
- Two boys sat on the floor, building a block road for their cars. They lined up their blocks end to end, making sure the edges touched. They then jumped back and forth over the road, laughing.
$\Rightarrow$ What it means: These children are using the small muscles in their fingers to carefully line up the blocks. Jumping uses large muscles, developing both strength and control.



## WHAT'S A PLAY PARTNER TO DO?

1. Play more on the floor with the children. Watch the children as they build before adding gentle suggestions to help the play develop.
2. Tell the children what they can do with blocks rather than what they can't do.

The blocks stay on the table.
Take apart your tower with your hands.
The blocks are for building.
3. TALK, TALK, TALK. Talk about what your child is doing. Talk about what you are doing. Describe what you see. Use interesting vocabulary.
4. Use open-ended questions to allow a child to explain a situation. Questions such as these encourage your child to think about what they're doing and encourage them to talk about it:

Tell me about your building.
What do you think the people are talking about in your house?
5. Help children to solve their own problems. Give general problem-solving ideas rather than specific solutions.

This is one way to build a gate. Will that work for your project?
6. Vary the cleanup routines to involve children in the process.

- Give the children a warning that cleanup time is coming.
We can play for five minutes, and then we'll clean

up.
- Give the child a choice about how to accomplish the task.
Are you going to first put away the long blocks or the short blocks?
$\square$ Join in with the child and make it a game.
Do you have strong muscles? Show me your muscles when you help pick up the blocks.
- Sing a cleanup song together.

This is the way we pick up our toys,
Pick up our toys,
Pick up our toys,
This is the way we pick up our toys, Before we go to bed.


## STAGES OF BLOCK PLAY

## STAGE 1. DISCOVERING BLOCKS

Children will explore individual blocks and their physical qualities by carrying, pushing, feeling, tasting, holding, and dropping them. For more discoveries: Offer an assortment of block types and simple containers.

## STAGE 2. STACKING BLOCKS

Children can stack blocks vertically or place them in a horizontal line. Beginning block builders often use a combination of stacking.

For more discoveries: Try a small assortment of the same type of blocks.

## STAGE 3. COMPLEX STACKING

Children will combine vertical and horizontal stacks to create more complex patterns. Children may stack vertically and horizontally to make a three-dimensional structure with no interior space. For more discoveries: Try providing pattern cards.

## STAGE 4. MAKING ENCLOSURES WITH BLOCKS

Children will make enclosures flat on the floor. Children begin to name the construction while building or when it is completed.

For more discoveries: Offer toy farm animals, people, and cars.

## STAGE 5. CREATING BRIDGES OR ARCHES WITH BLOCKS

Children will place a block that spans the space between two supporting blocks.

For more discoveries: Offer pictures of famous bridges or a piece of blue cloth and boats.

## STAGE 6. COMBINING ENCLOSURES AND BRIDGES WITH BLOCKS

Children will make more complex buildings and use them as settings for dramatic play. Children also begin to share ideas and build cooperatively with others.

For more discoveries: Try supplying blank paper and pencils to make signs, or provide photographs of famous structures.

## STAGE 7. BUILDING WITH PATTERNS AND SYMMETRY

Children will plan structures that have patterns and symmetry with details such as ramps and doors. They may do this cooperatively with other children.

For more discoveries: Give children color cubes or plants and photographs of famous paintings or buildings.

## STAGE 8. BUILDING BLOCK STRUCTURES THAT REPRESENT OBJECTS FOR PRETEND PLAY

Children will plan and create structures in blocks and use them in role-playing situations. Buildings are often kept standing for several days.

For more discoveries: Try providing measuring tools, homebuilding magazines, and dress-up clothes.

## Where Can I Buy These Blocks?

Many teaching-supply catalogs offer a variety of blocks for classroom and home use. Local retailers also offer smaller sets that might be just as durable, affordable, and suitable for home use. Check a variety of sources to find the blocks your family will enjoy.

Available resources include:


- Cardboard Blocks

Knowledge Emporium, www.knowledgeemporium.biz

- Foam Blocks and Color Cubes

Lakeshore Learning Materials, www.lakeshorelearning.com

- KEVA Planks

MindWare, www.mindware.com

- Unit Blocks

Community Playthings, www.communityplaythings.com
(This list is not an endorsement of retailers or manufacturers. It is simply a listing of available resources.)


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