Pattern Parade

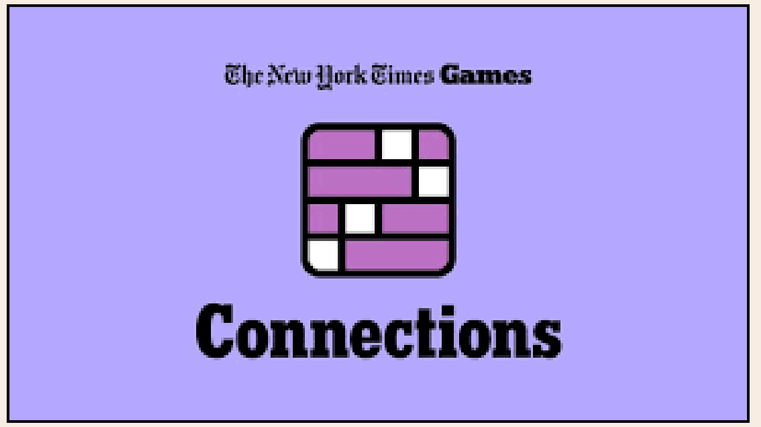


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Public Media

Icebreaker

- Find a person with a matching card.
- Once you find a match, find a seat together.
- How many of you play a daily game or two?





Learning Objective

Participants will be able to identify the various developmental stages of working with patterns and describe activities to support learning at each stage.

Ohio's Early Childhood Core Knowledge & Competencies

Area: Learning Environments & Experiences

Knowledge Base: Learning Experiences

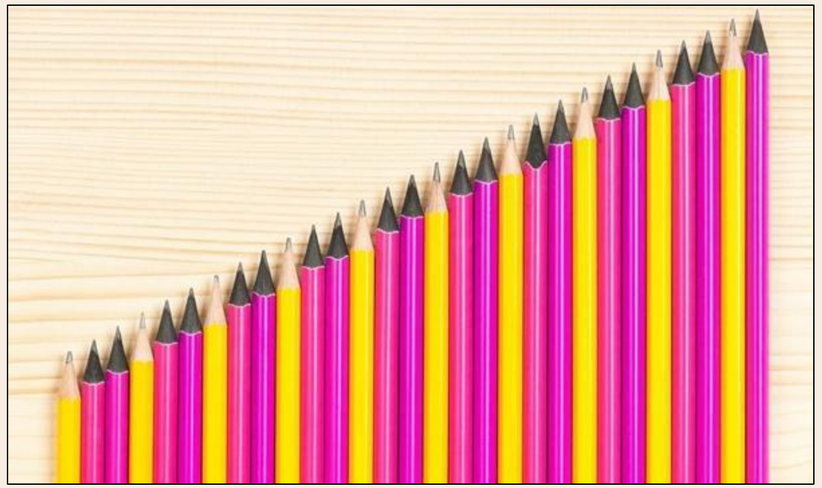
Knowledge: The strategies that create a rich environment that fosters curiosity, thinking, and problem-solving

Competency: Supports and encourages children's participation in a variety of learning experiences that foster curiosity, thinking, and problem-solving

What are Patterns?

A pattern is a sequence of things in our world that repeats and follows a rule.

- repeats more than one time
- follows a specific rule (unit of repeat)
- is a predictable repetition of elements



What patterns do you see?







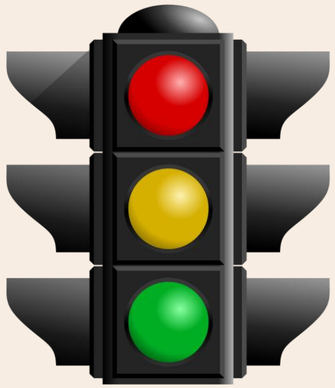




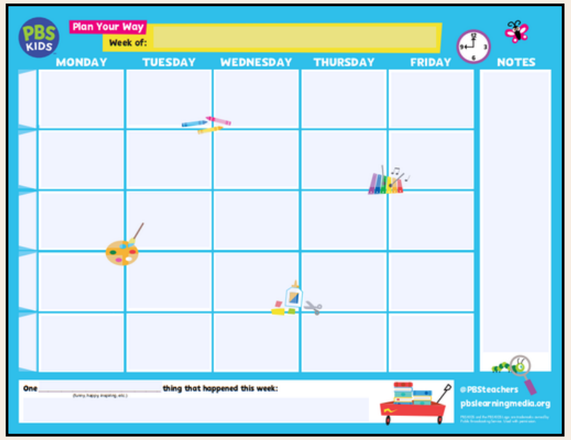














What are the Types of Patterns?

- **Repeating patterns** - ABABAB, ABBCABBCABBC, AABBAABB, etc.
- **Growing pattern** - increase or decrease in a predictable and systematic way
- **Spatial patterns** - shapes, symmetry, cyclical/border patterns

What are the Pattern Forms?

- Visual
- Movement
- Sound

Why are Patterns Important?

- Help us make predictions
- Help us with tasks in daily life
- Basis for more advanced math (math is the “science of patterns”)
- Helps to develop executive function skills (inhibitory control, cognitive flexibility, planning and organization, and working memory)

What are the various stages of working with preschoolers on patterns?

- Sorting and classifying
- Copying patterns
- Describing patterns
- Extending and creating patterns

Sorting and Classifying

helps children to understand various attributes in order to recognize and create patterns

Sorting

- grouping or separating by a simple characteristic that is given to them, how are things alike and different

Classifying

- grouping by categories selected by the person doing the classifying, usually, by more complex attributes

Early Learning and Development Standards

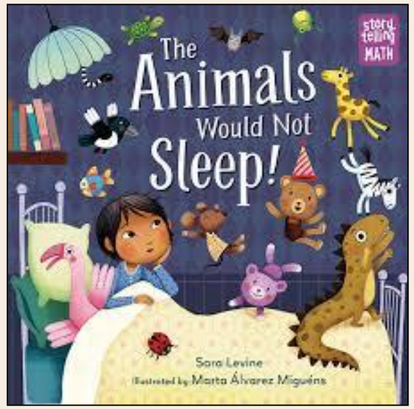
Mathematics

3.b. Develops the ability to sort.

Indicator	Example
Notices differences between familiar and unfamiliar people, objects, and places.	• Looks back and forth between caregiver who is wearing glasses and one who is not, then reaches for the glasses. • Notices when a different caregiver enters the room.
Matches two objects that are the same and selects similar objects from a group.	• Matches two identical fire trucks. • Points out that Seema and Jackson both have blue plates at the lunch table. • Removes all the red blocks from the bucket of blocks, with help.
Sorts objects into two or more groups by their similarities or differences.	• Puts toy cars in one pile and airplanes in another. • Places all the red pegs in one bowl, the white pegs in another bowl and the green pegs in a third bowl. • Sorts blocks into three piles: cylinders, rectangular prisms, and cubes.
Sorts and classifies objects by one or more attributes (e.g., color, size, shape).	• Sorts red and blue counting bears into two piles, and then separates the bigger bears from the smaller bears in each group. • Sorts blocks by shape for storing on block shelf at clean-up time and says, "I put all of the round blocks together."

Day 1 - Sorting and Classifying

Book: *The Animals Would Not Sleep!* by Sara Lavine



Videos:

Sort, Sort, Sort



All Sorts of Things



Activity: Bead and Breathing Wand



Center Activity: Animal Sort

Games:

Sorta-ma-gogo



Go Fetch!



Copying Patterns

helps children to understand one-to-one correspondence of patterns

- Starts with matching - one for one
- Copying patterns can be done with manipulatives, words, songs, or movement
- Draw children’s attention to what is the same and what is different in the components of your pattern (This leads to the next stage, which is describing patterns.)

Early Learning and Development Standards

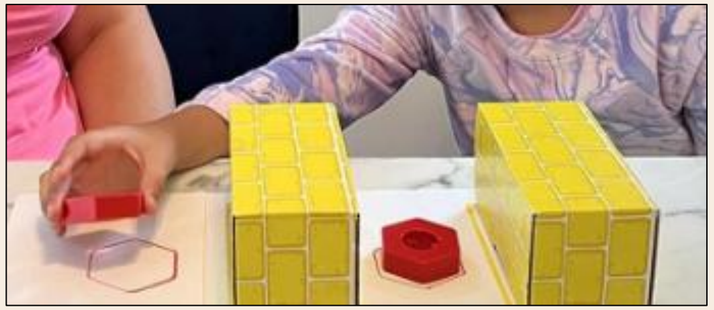
3.c. Develops understanding of patterns.

Indicator	Example
Initiates repeated movements.	• Makes cooing sound repeatedly when interacting with an adult. • Kicks several times at a cloth book with crinkly paper inside that makes noise.
Copies a repeating pattern.	• Moves arms along with teacher singing, "Head, shoulders, knees, and toes." • Uses colored pattern blocks to copy a pattern picture. • States a repeating pattern in a rhyming game, "Blue shoe, blue shoe, who's it? Not you!"
Recognizes, duplicates, and extends simple patterns (i.e., ABAB) using attributes such as color, shape, or size.	• Places the bears in a row of big, little, big, little following the teacher's model. • Notices alternating pattern in the floor tiles and points it out to a friend.

Executive Function in Copying Patterns

- Pattern Generalization - using different items to create the same pattern, which increases cognitive flexibility





- Pattern Replication - involves using working memory, especially when working with auditory patterns

Day 2 - Simple Patterns

Book: *Pitter Pattern* by Joyce Hesselberth



Video: *Zadie's Shell Shuffle*



Activity: Zadie’s Shell Shuffle and Flower Garden Design

Center Activity: Cookie Cutter art

Games:

Planet Pal

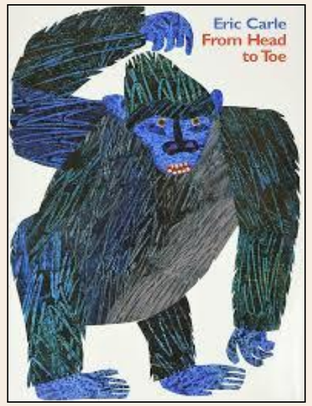


Pattern Palooza Fair



Day 3 - Movement Patterns

Book: *From Head to Toe* by Eric Carle



Videos:

Step, Step, Bounce



Elmo Slide



Wombat Wiggle



CeCe's Birthday Bash



Activity: Carrot Cake Dance and Mixed-Up Activity



Center Activity: Mosaic Game

Games:

Chicken Dance

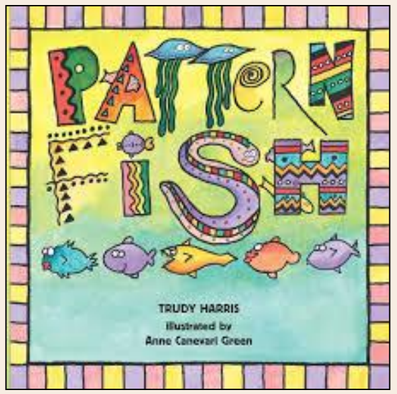


Dance Party



Day 4 - Sound Patterns

Book: *Pattern Fish* by Trudy Harris



Videos:

Short-Short-Short-Long



Rooster's Music Making Song



Activity: Instrument and Sound Pattern Creation

Center Activity: Musical Instrument Sort

Games:

Music Maker



Pinkamusical Garden



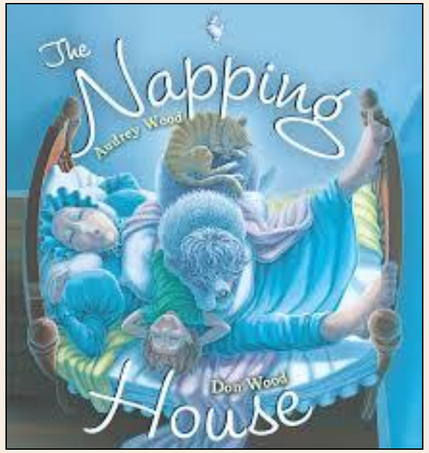
Describing Patterns

teaches children how to understand and talk about patterns

- Ask the children to take the lead in describing the pattern with their own words
- Respond by repeating back what they say with the vocabulary words mixed in
- Vocabulary of patterns – same, different, copy, next, between, repeat/repeating, alternating, sequence, another, rule, unit, extend
- Ask open-ended questions like “What part repeats over and over?” and “Why is this a pattern?”

Day 5 - Patterns in Stories

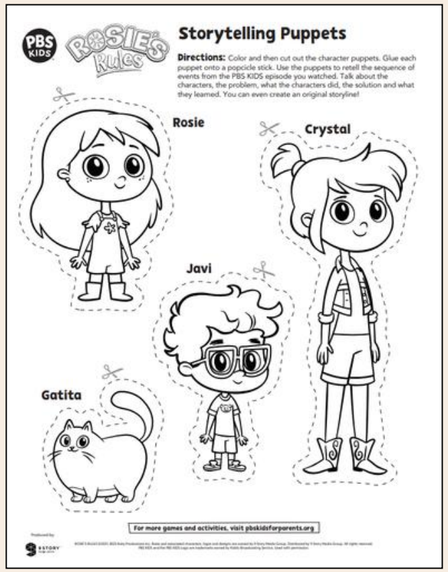
Book: *The Napping House*



Video: *Rosie's Magic Show*



Activity: Rosie’s Magic Show Storytelling Puppets



Center Activity: Growing Patterns with Cards

Games:

Step It Out!



Froyo Stand



Patterns Across the Curriculum

When we describe patterns in the classroom, we can go beyond basic patterns or AB patterns.

Examples:

- Days of the week, Months of the year
- Calendar
- Life Cycles
- Sun/Moon or Day/Night
- Phases of the Moon
- Rainbow
- Seasons
- Story Sequencing
- Rhythm and Rhyme in stories and poetry

Extending and Creating Patterns

helps children to understand how to keep the pattern going

- By asking children what comes next, they automatically need to start looking for a unit of repeat
- Moving beyond just knowing what comes next to defining the unit of repeat
- Patterns can be social by having children create patterns together, or create them for each other, or challenge someone by having the other person find the mistake

Executive Function in Extending and Creating Patterns

- Pattern creation - involves planning and organization
- Cognitive flexibility - creating a pattern based on one attribute and then creating a pattern with a different attribute



Learn & Play Treasure Chests

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