



STEMIE Math Activities



	Activity	Description	Topic(s)	Level(s)
1	Let's Count to Five!	Sing "Five Green and Speckled Frogs" using teacher-made puppets to give concrete model for each number word.	Counting	<ul style="list-style-type: none"> • Number Word Sayer: Foundations • Chanter • Reciter
2	Mealtimes [Number Word Sayer: Foundations]	Use number words during mealtimes to model verbal counting.	Counting	<ul style="list-style-type: none"> • Number Word Sayer: Foundations
3	Which Has More?	Show children changing the number of objects to foster noticing of objects.	Subitizing Comparing Number	<ul style="list-style-type: none"> • Number Sener: Foundations • Very Small Number Recognizer • Comparison Sener: Foundations
4	Find My Home	Show children how to match collections of objects to obvious one-to-one containers.	Subitizing Comparing Number	<ul style="list-style-type: none"> • Small Collection Namer • Maker of Small Collections • Early Comparison Corresponder

5	Setting the Table	Encourage children to practice one-to-one correspondence by giving each person or doll at a table one of each object for a table setting.	Comparing Number	<ul style="list-style-type: none"> • Early Comparison Corresponder
6	Adding Animals	Provide experiences of changing numbers by showing children changing quantities of objects of interest, such as stuffed animals.	Adding/ Subtracting	<ul style="list-style-type: none"> • Arithmetic Senser
7	Mealtimes [Addition and Subtraction]	Introduce basic concepts of addition and subtraction during mealtimes.	Adding/ Subtracting	<ul style="list-style-type: none"> • Arithmetic Senser: Foundations
8	Sing Along Subtractions	Use finger plays to incorporate addition and subtraction concepts.	Adding/ Subtracting	<ul style="list-style-type: none"> • Preverbal +/-
9	Feed the Animals	Encourage children to “feed” stuffed animals in allotments up to three.	Adding/ Subtracting	<ul style="list-style-type: none"> • Preverbal +/-
10	All Together!	Provide parts that fit together, such as stacking rings or blocks.	Composing Number	<ul style="list-style-type: none"> • Actor on Parts: Foundations
11	Numbers in Nature	Take children on a nature walk and encourage them to quantify the parts of wholes.	Composing Numbers	<ul style="list-style-type: none"> • Parts Combiner
12	Is It Fair?	During snack time, encourage children to divide foods between friends to make it fair.	Multiplying/Di viding	<ul style="list-style-type: none"> • Beginning Grouper and Distributive Sharer
13	Time to Eat	During pretend play, encourage children to share pretend food items.	Multiplying/ Dividing	<ul style="list-style-type: none"> • Nonquantitative Sharer: Foundations
14	Buried Treasure	Hide toys on one half of a sandbox and encourage children to find them.	Fractions	<ul style="list-style-type: none"> • Foundations: Early Proportional Thinker
15	Musical Patterns	Provide musical instruments and engage children in making rhythmic patterns.	Patterning	<ul style="list-style-type: none"> • Intuitive Patterner: Foundations

16	Groovy Patterns	Engage children to make simple ABAB patterns with body movements.	Patterning	<ul style="list-style-type: none"> • Pattern Recognizer
17	Shapes in Dramatic Play 1	Shapes in the Nursery: Provide objects for dolls that are geometric shapes. Talk with children about the shape names during pretend play.	2D Shapes	<ul style="list-style-type: none"> • “Same Thing” Comparer: Foundations
18	Shapes in Dramatic Play 1	Shapes in the Kitchen: Use play dishes or food that have clear geometric faces. Talk with children about the shape names during pretend play.	2D Shapes	<ul style="list-style-type: none"> • “Same Thing” Comparer: Foundations
19	Shapes in Dramatic Play 2	Shapes in the Kitchen: Use play dishes or food that have clear geometric faces. Talk with children about the shape names during pretend play.	2D Shapes	<ul style="list-style-type: none"> • Shape Matcher – Identical, Orientations, Sizes
20	Shapes in Dramatic Play 2	Find My Match: Provide shapes of different colors and sizes. Challenge children to match a shape you identify, varying challenges through different orientations or sizes.	2D Shapes	<ul style="list-style-type: none"> • Shape Matcher – Identical, Orientations, Sizes
21	Find the Shapes All Around	Challenge children to find shapes in the environment – at the grocery store, on the playground, or at the library.	Disembedding Shapes	<ul style="list-style-type: none"> • Intuitive Disembedder: Foundations
22	Find the Smallest Shape	Provide geoboards to feel shapes and shapes within shapes. Focuses on children with no or low vision.	Disembedding Shapes	<ul style="list-style-type: none"> • Shapes-in-Shapes Disembedder

23	Let's Explore with Blocks	Encourage children to freely move 3D shapes, labeling them during the play.	3D Shapes	<ul style="list-style-type: none"> • Separate Blocks Actor: Foundations • 3D Perceiver: Foundations
24	Let's Stack with Blocks	Engage children in block play composition – stacking blocks and making lines.	3D Shape Composition	<ul style="list-style-type: none"> • Stacker • Line Maker • Same Shape Stacker
25	What Will Fit?	Read “What Will Fit?” by Grace Lin then challenges children to determine what objects fit into various containers.	Spatial Visualization	<ul style="list-style-type: none"> • Concrete Slider, Flipper, Turner
26	Spatial Orientation 1	Which is Your Favorite: Use objects of interest to children to challenge them to reach for or crawl toward the object.	Spatial Orientation	<ul style="list-style-type: none"> • Foundations of Spatial Orientation • Path Integrater
27	Spatial Orientation 1	Going on a Walk: Narrate movement using positional words during a walk.	Spatial Orientation	<ul style="list-style-type: none"> • Foundations of Spatial Orientation • Path Integrater
28	Spatial Orientation 2	Letter Delivery: Create letters and challenge children to deliver them, using directional language as the child navigates.	Spatial Orientation	<ul style="list-style-type: none"> • Place Learner • Local-Self Framework User
29	Spatial Orientation 2	Going on a Bear Hunt: Read “Going on a Bear Hunt” then challenge children to move through a space intentionally created to be	Spatial Orientation	<ul style="list-style-type: none"> • Place Learner • Local-Self Framework User

		accessible to children with limited mobility.		
30	Length in Block Play	Engage children in block play, incorporating attention to and language about length.	Length	<ul style="list-style-type: none"> • Length Sensor: Foundations
31	Arts and Crafts Measurement	During art play, incorporate attention to and language about length.	Length	<ul style="list-style-type: none"> • Length Sensor: Foundations
32	Homes for the Animals	Challenge children to make homes for animals of the correct length using blocks.	Length	<ul style="list-style-type: none"> • Length Quantity Recognizer
33	Outdoor Play [Length Quantity Recognizer]	Facilitate conversation and engagement with length concepts during outdoor play.	Length	<ul style="list-style-type: none"> • Length Quantity Recognizer
34	Can You Cover the Shape	Provide tissue paper of assorted sizes and challenge children to use it to cover precut shapes.	Area	<ul style="list-style-type: none"> • Area Sensor: Foundations
35	The Sorcerer's Umbrella	Tell children a story about gnomes who need a cover from the rain. Drawing pictures in chalk, children to create umbrellas of the correct size to protect the gnomes from the "rain" that you will spray over the chalk pictures.	Area	<ul style="list-style-type: none"> • Physical Coverer and Counter
36	Foundations of Volume	Use water table play to allow children to explore concepts of volume.	Volume	<ul style="list-style-type: none"> • Volume Sensor: Foundations
37	Bath Time [Volume Sensor]	Use bath time to introduce concepts of volume.	Volume	<ul style="list-style-type: none"> • Volume Sensor: Foundations
38	Mealtimes [Volume]	Use mealtimes to introduce concepts of volume.	Volume	<ul style="list-style-type: none"> • Volume Sensor: Foundations

	Senser: Foundations]			
39	Outdoor Play [Volume Senser: Foundations]	Use outdoor play to introduce concepts of volume	Volume	<ul style="list-style-type: none"> • Volume Senser: Foundations
40	Walks Outside]	Introduce volume vocabulary during a nature walk.	Volume	<ul style="list-style-type: none"> • Volume Senser: Foundations
41	What Will Fit? [Volume Quantity Recognizer]	Read “What Will Fit?” by Grace Lin then challenges children to determine what objects fit into various containers.	Volume	<ul style="list-style-type: none"> • Volume Quantity Recognizer
42	Bath Time [Volume Quantity Recognizer]	Use bath time to develop concepts of volume.	Volume	<ul style="list-style-type: none"> • Volume Quantity Recognizer
43	Outdoor Play [Volume Quantity Recognizer]	Use outdoor play to develop concepts of volume.	Volume	<ul style="list-style-type: none"> • Volume Quantity Recognizer
44	Which Holds More?	Use varied sizes of containers and challenge children to make guesses about their capacity.	Volume	<ul style="list-style-type: none"> • Volume Quantity Recognizer
45	Exploring Force and Motion]	Engage children to move their bodies and objects in space to explore angles and turns.	Angle and Turn	<ul style="list-style-type: none"> • Angle and Turn Senser: Foundations
46	A Walk in the Park [Angle Senser]	Take children on a walk and incorporate language and concepts about angle and turn.	Angle and Turn	<ul style="list-style-type: none"> • Angle and Turn Senser: Foundations
47	Let’s Go for a Drive]	During a drive with children, incorporate language and concepts about angle and turn.	Angle and Turn	<ul style="list-style-type: none"> • Angle and Turn Senser: Foundations
48	In, Out, and Around]	Construct tunnels from large boxes and encourage children to move	Angle and Turn	<ul style="list-style-type: none"> • Angle and Turn Senser: Foundations

		themselves through the created angles and turns.		
49	Exploring Ramps	Model creation and use of ramps to move objects, showing the effect of larger inclines.	Angle and Turn	<ul style="list-style-type: none"> • Intuitive Angle Builder
50	A Walk in the Park [Intuitive Angle Builder]	Incorporate language and concepts about angle and turn in outdoor activities	Angle and Turn	<ul style="list-style-type: none"> • Intuitive Angle Builder
51	Alike and Not Alike	Provide items that are alike and not alike, supporting their exploration and comparison	Data & Classification	<ul style="list-style-type: none"> • Foundations: Similarity Intuiter
52	Nature Sets	Gather natural objects during a nature walk, compare their similar and dissimilar attributes.	Data & Classification	<ul style="list-style-type: none"> • Similar/Dissimilar Maker