

## Mathematizing Made Easy

Open-Ended Questions | Advanced Language & Vocabulary



**Mathematizing :** treating a subject or challenge in mathematical terms.

In regards to early learning, teachers can provide a variety of materials and tools for exploring mathematical concepts with students.

Included in this document are a series of open-ended questions and terminology you can introduce to your students when mathematizing.

# Mathematizing Made Easy - Open-Ended Questions



## Exploring Shapes & Space

- Where have you seen this shape before?
- Can you find something like this in the classroom?
- How did you decide to use a triangle for the roof?
- Do you think this shape would roll? Why/why not?
- How could we stack these?
- Tell me about what you built with the blocks. I'm going to draw a map of it without looking. Tell me what it looks like and what I should put where.
- Can you tell me how to get to the \_\_\_\_\_ from here?

## Prediction & Estimation

- How many more blocks will you need?
- How many balls do you think will fit in the jar?
- How tall will your structure be?
- How many cups will we need for snack time?
- How many steps to get to the playground?
- Which cup will hold the most sand? How do you know?
- How many times can you bounce a balloon in the air before it touches the ground?
- Which shape will be used most often?

## Exploring Patterns

- What do you think is going to happen first? Next?
- Do you see a pattern? Tell me about it.
- How could we make this pattern with these different materials?
- How could we make a different pattern?
- Can you draw your pattern? What will you do first?
- How did the pattern change? Did something happen that made it change? Do you think it will change again?

## Investigation & Reasoning

- How did you decide to do that first?
- How do you know?
- Why do you think...?
- Can you tell me more?
- What else can you find that works like this?
- What would happen if..?
- I wonder how this could be changed?
- What would the pattern be?
- What if...?
- I wonder why...?

## Exploring Position & Space

high/medium/low	right/left	inside/outside
around	between	here/there
on/off	front/back/side	in/out
above/below	middle	start/end
over/under	far/near	in front/behind
through	up/down	

## Counting & Comparing

- How many of each kind?
- How are these alike/different?
- Which is taller/shorter/longer?
- Which is bigger/smaller?
- Which has more/fewer?
- How many do you see?

# Mathematizing Made Easy: Advanced Language & Vocabulary



## Measuring & Comparing

longer/shorter	twice as many	higher/lower
heavier/lighter	greater/less than	faster/slower
wider/narrower	warmer/cooler	
bigger/smaller	wide/narrow	
curved/straight	more/fewer than	
taller/shorter	holds more/less	
just as many	same/different	

## Time & Force

slow/fast	sudden/smooth	tense/loose
heavy/light	strong/weak	

## Joining & Separating

put together	total	are left
in all	take away	remove

## Verification & Probability

check	correct	agree	disagree
sure/unsure	likely/unlikely	maybe	impossible

## Prediction, Cause & Effect

could happen	might happen	because	since
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## Math Terminology 1

circle	hexagon	pattern
triangle	trapezoid	problem
square	cube	predict
rectangle	sphere (ball)	estimate
oval	cone	sort
star	pyramid	measure
diamond	number	symmetry

## Math Terminology 2

map	quarter	year
match	dollar	one
group	clock	two
half	hour	three
penny	minute	four
nickel	day	
dime	month	