Evidence-Based Practices to Support Students with Mathematics Difficulties

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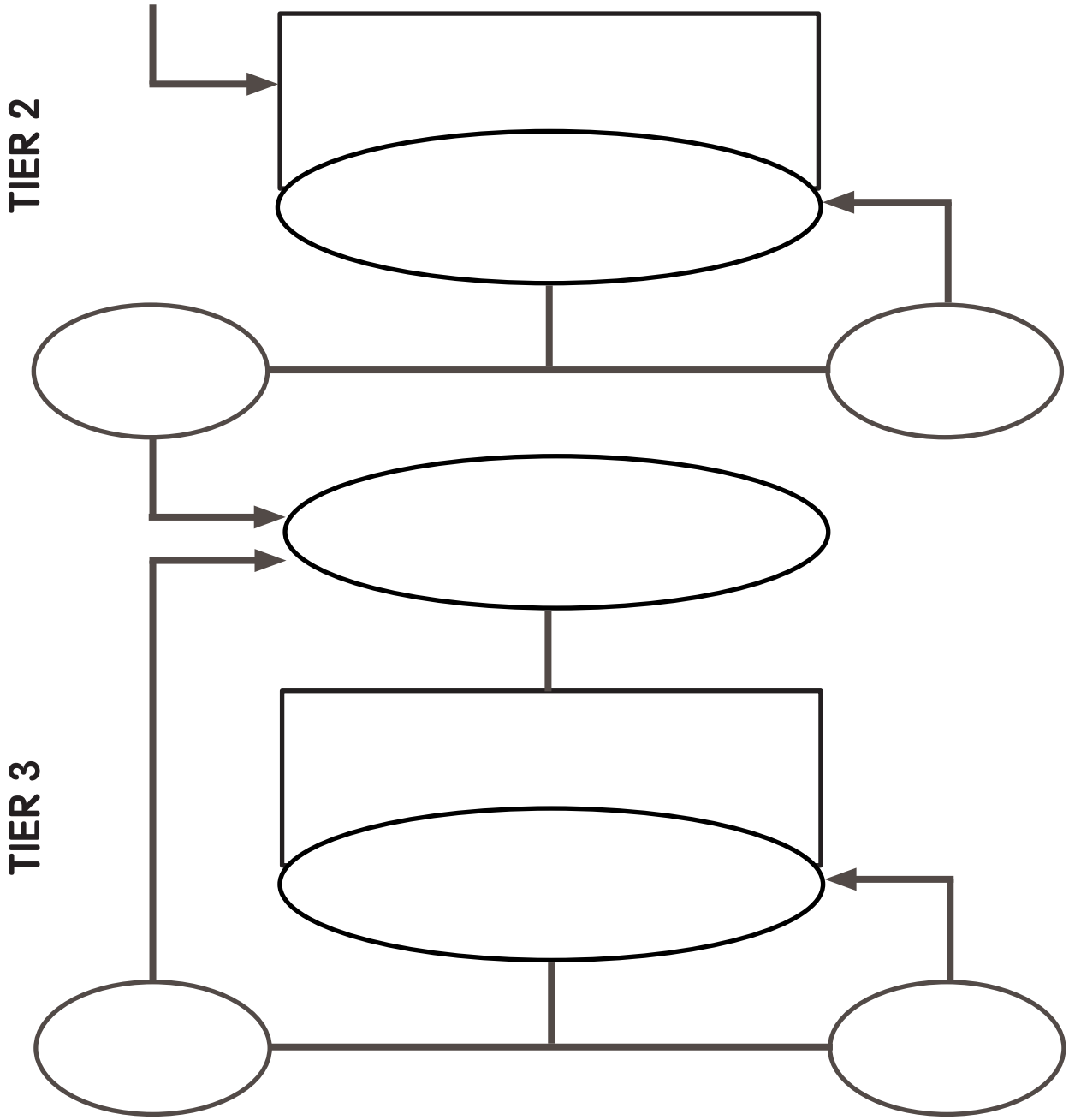


Explicit Instruction

MODELING

PRACTICE

SUPPORTING PRACTICES

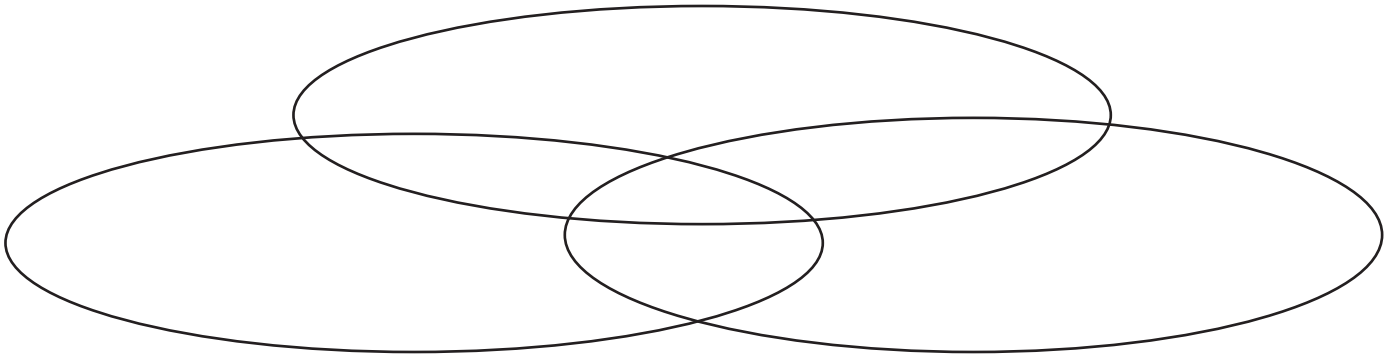
Mathematical Language

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.

Mathematical Language

Instead of that…	Say this…

Multiple Representations



Fractions

Three Models

Fraction	Length	Area	Set
$\frac{2}{3}$			
$\frac{1}{4}$			
$1\frac{1}{2}$			
$\frac{3}{7}$			

Geometry

Triangles

Name	Properties	Examples
Equilateral		
Isosceles		
Scalene		
Acute		
Obtuse		
Right		

Quadrilaterals

Name	Properties	Examples
Parallelogram		
Rectangle		
Rhombus		
Square		
Trapezoid		

Concepts of Addition and Subtraction

Addition	Subtraction

Concepts of Multiplication and Division

Multiplication	Division

Problem Solving

Three Things to Remember

Attack Strategies

Additive Word Problems

Problem type	Definition	Examples			Equation	Graphic organizer
Total		Total unknown	Part unknown			
Difference		Difference unknown	Greater unknown	Lesser unknown		
Change (increase)		End unknown	Start unknown	Change unknown		
Change (decrease)		End unknown	Start unknown	Change unknown		

Additive Word Problems

A. Megan baked 28 sugar cookies and 24 chocolate chip cookies. Enter the total number of cookies Megan baked in all.	B. Jana has 107 wooden beads and 68 glass beads. How many more wooden beads than glass beads does Jana have?
C. A bus had 13 passengers. At the next stop, more passengers got on the bus. Now, there are 28 passengers. How many passengers got on the bus?	D. Martina had some money. Then, she spent $42 on a sweater. Now, she has $13. How much money did she have to start with?

Problem type	Definition	Examples			Equation	Graphic organizer
Equal Groups						
Comparison						
Combinations						
Ratios and Proportions						

Multiplicative Word Problems

Multiplicative Word Problems

A. Ms. Thompson sold 6 cartons of cherries at the Farmers' Market. Each carton holds 25 cherries. How many cherries did she sell?	B. Jane bought 24 light bulbs. The light bulbs come in packs of 4. How many packs of light blubs did Jane buy?
C. Susan has 3 times as many books as Mary. Mary has 18 books. Which equation can be solved to figure out how many books Susan has?	D. There are 176 slices of bread in 8 loaves. If there are the same number of slices in each loaf, how many slices of bread are in 5 loaves?

Adaptations

Implement with greater fidelity	
Embed behavioral supports	
Increase dosage	
Adapt mathematics content	
Utilize explicit instruction	
Explicitly teach transfer	