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GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the	and Activities	Selected from FSIM:	
	Curriculum Outcomes		Number Resource	
	from FSIM: Number		Books	
	Resource Books			
N4.1 Demonstrate an	Whole and Decimal	Saying The Number	Number Sense: Pages 56 –	Base Ten Bingo (online interactive)
understanding of whole	Numbers KU4:	Sequence By Ones And	57	
numbers to 10 000	The whole numbers	Tens (Course Book, p. 174)	Constant Numbers	Comparing Number Values (online
(pictorially, physically,	are in a particular order,		Bicycle Odometer	interactive)
orally, in writing, and	and there are patterns	Up To & Over 100 and Up	Numbers as Words	
symbolically) by:	in the way we say them	To & Through The Hundreds (Course Book,	Place Value Case Study 3 (Number	Number Snow How (link to
representing	that help us to	рр. 171-173)	Sense Book pp. 60 - 62)	printable game)
describing	remember the order.	ρρ. 171-173)	Did You Know? (Number	
comparing two			Sense Book p. 63)	Place Value Charts (online, tablet
numbers	Whole and Decimal	Read, Write And Say	Jense Book pr 65,	friendly)
ordering three or	Numbers KU5:	Numbers (Course Book,	Number Sense: Pages 68 –	,,
more numbers.	There are patterns in	pp. 190 - 191)	69	Expanded Form Game (link to
	the way we write whole	Dinosaurs (Course Book,	Wipeout	printable game)
	numbers that help us to	p. 180)	Counting in Hundreds	,
	remember their order.	43 Candies (Course Book,	Multiplying by 10	Roll it – Make it – Expand it
		p. 184)	Three-Digit Numbers Did	(printable game)
	Whole and Decimal		You Know? (Number	(printage game)
	Numbers KU6:	116 Candies (Course Book,	Sense Book p. 67)	
	Place value helps us	p. 186)	Number Sense: 76 – 77	
	to think of the same	Flexible Numbers (Course	• Trading	
	whole number in	Book, p. 192)	Representing Numbers)	
	different ways and this		Word Problems	
	can be helpful.		Arranging Objects	
	can be neipiul.		3 5 3,223	
	Whole and Decimal		Number Sense: 90 – 91	
			Clothesline	
	Numbers KU8:		Correct Order	
	We can compare and		Skip Counting	
	order the numbers		Estimating	
	themselves.			

GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the	and Activities	Selected from FSIM:	
	Curriculum Outcomes		Operation Sense	
	from FSIM: Operation		Resource Books	
	Sense Resource Books			
N4.2 Demonstrate an	Operations KU1:		Operation Sense: Pages 36	Millionaire Bravo Game: Addition of
understanding of	Adding and		- 39	4-digit numbers (online interactive
addition of whole	subtracting numbers		Classroom Problems	for partners or teams)
numbers with answers	are useful when we:		Analyzing Word	
to 10 000 and their	- change a quantity by		Problems • Number Lines	Math Invaders (online interactive)
corresponding	adding more or taking		Classifying Problems	
subtractions (limited to	some away		Classifying Froblems	Ghost Blasters III: 2-digit minus 2-
3 and 4- digit numerals)	- think of a quantity as	Empty Boxes (Course		digit subtraction (online interactive
by:	combined of parts	Book, pp. 210 - 211)		for partners)
using personal	- equalize or compare			
strategies for adding	two quantities.			Speed Grid Challenge (online
and subtracting				interactive)
 estimating sums and 	Computations KU2:		Operation Sense: Pages	
differences	 We can think of a 		130 – 131	Guess My Number (online
 solving problems 	number as a sum or		The Answer IsGrid Partitions	interactive)
involving addition and	difference in different		• Ten-Frames	
subtraction	ways. We can rearrange		Breaking Up	Roll it! Rounding Game (link to
	the parts of an addition	Change Tasks 1 and 2	0.1	printable)
	without changing the	(Course Book, pp, 131,		
	quantity.	151- 152)		
			Operation Sense: Pages	
	Computations KU4:		146 – 147	
	Place value and basic		Moving Squares Duilding on Bosics	
	number facts together		Building on BasicsCombinations to 100 •	
	allow us to calculate		Math Methods	
	with any whole or	How Much Taller?	Non-Standard Place	
	decimal number.	(Course Book, p. 131)	Value Case Study 1	
			(Operations Sense Book,	
			pp. 150 – 151)	

Computations KU5:	Find the solutions Set A	Operation Sense: Pages	
There are strategies	(Course Book p. 161)	156 – 158	
we can practice to help	(Course book p. 101)	• Decade	
us do calculations in our		Doubling	
		Compensation	
head.		• Front-End Loading 1, 2, 3	
		Case Study 3 (Operations	
Computations KU6:		Sense Book, pages 172 -	
 There are some 		175)	
special calculating			
methods that we can		Operation Sense: Pages	
use for calculations we		168 - 169	
find hard to do in our		Trading	
head.		Try Another Way	
		Other Methods	
Computation KU8:			
Rounding, imagining a		Operation Sense: Page	
number line, and using		199	
properties of numbers		Compare Answers	
and operations help us		Rounding	
to estimate			
calculations.			
Calculations.			
		Operation Sense: Pages	
Computations KU10:		205 - 206	
 Thinking about what 		Problems in Context	
makes sense helps us to		Check the Answer	
check and interpret the		Sheek the / thewer	
results of calculations.			
Operations Background			
Notes:			
Operation Sense, p.			
22 – 24, 26 – 29, 108-			
109; 113-115			
100, 110 110	L		

GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the Curriculum	and Activities	Selected from FSIM:	
	Outcomes from FSIM: Number		Number AND Operation	
	AND Operation Sense Books		Sense Resource Books	
N4.3 Demonstrate an	Whole and Decimal Numbers	Story Problem 2 (Course	Number Sense: Pages 76 -	<u>Dice Multiplication</u> (link to
understanding of	KU6:	Book, pp. 132, 156 - 157)	79	printable)
multiplication of whole	Place value helps us to think of		Grid Partitions	
numbers (limited to	the same whole number in	Calculator Number		<u>Double Dice Battles</u> (link to
numbers less than or	different ways and this can be	Sentences (Course Book,		printable)
equal to 10) by:	helpful.	pp. 133, 158)		
 applying mental 	Operations KII2			"Rolling Multiples"
mathematics strategies	Operations KU3: • Multiplying numbers is useful	Find the Solution, Sets A,	Operation Sense: Pages	(document)
-skip counting from a known fact - using doubling or halving	when we:	B, C (Course Book, pp.134	52 - 53	
- using doubling or halving and	- Repeat quantities	– 135, 161 – 163)	Equal Groups	Math Under the Sea (arrays)
adding or subtracting one more	- Use rates		 Classifying Problems 	(online)
group - using patterns in the 9s facts	- Make ratio comparisons or		Think Board	
using repeated doubling.	changes (scales)		 Combination Problems 	Math Madness (online)
 explaining the results 	- Make arrays and combinations		Multiplication	
of multiplying by 0 and	- Need products of measures.		Rate Problems	Estimate Products (online)
1				
	Operations KU5: Repeating equal		Operation Sense: Pages	
N4.4 Demonstrate an	quantities and partitioning a		76 – 77	
understanding of	quantity into equal parts helps us relate multiplication and division		• Jugs	
multiplication (2- or 3-	and understand their properties.		More or Less than One	
digit by 1- digit) by:	and understand their properties.		Constructing Arrays	
using personal				
strategies for	Operations KU6:		Operation Sense: Pages	
multiplication, with and	The same operation can be said		83 - 84	
without concrete	and written in different ways.		• Equal Groups	
materials	ĺ		Two for Each	
using arrays to	Operations KU8:		Math Language	
represent multiplication	Thinking of a problem as a number		Saying Symbols	

 connecting concrete 	sentence often helps us solve it.	Operation Sense: Pages 97	
epresentations to	Sometimes we need to rewrite the	- 98	
ymbolic	number sentence in a different but	• Signs	
representations	equivalent way.	Choose the Operation	
estimating products		Related Numbers	
solving problems.	Computations KU1:		
Solving problems.	The same number fact will be true	Operation Sense: Pages	
	no matter how you count the	122 - 123	
	objects or what the objects are.	Animal Patterns	
		Multiplication Facts	
	Computations KU3:	Forgotten Facts	
	We can think of a number as a	Doubles and Halves	
	multiplication or division in		
	different ways. We can rearrange	Operation Sense: Pages	
	the factors of a multiplication	138 - 139	
	without changing the quantity.	• Arrays	
		Planning	
	Computations KU4:	• Tree Planting	
	Place value and basic number	• Multiples of 3	
	facts together allow us to calculate		
	with any whole or decimal number.	Operation Sense: Pages	
		146-147	
	Computations KU5:	Grid Partitions	
	There are strategies we can	Personal Strategies	
	practice to help us do calculations	Explaining Procedures	
	in our head.		
		Operation Sense: Pages	
	Operations Background Notes:	156-158	
	• See "Multiplication Facts" and	• Decade	
	"Techniques for Mental	Multiply the Parts	

• Constructing Arrays

Factoring

"Techniques for Mental

109-115)

Calculation", (Operation Sense, p.

GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the Curriculum	and Activities	Selected from FSIM:	
	Outcomes from FSIM: Number		Number AND Operation	
	AND Operation Sense Books		Sense Resource Books	
N4.5 Demonstrate an	Whole and Decimal Numbers	Story Problem 2 (Course	Number Sense: Pages 76 -	Matching Division (online)
understanding of	KU6:	Book, pp. 132, 156 - 157)	79	
division (1-digit divisor	 Place value helps us to think of 		Grid Partitions	Division as an Unknown Factor
and up to 2-digit	the same whole number in	Calculator Number		(link to printable)
dividend) to solve	different ways and this can be	Sentences (Course Book,		
problems by:	helpful.	pp. 133, 158)		Missing Numbers: Division
using personal	0			(link to printable)
strategies for dividing	Operations KU4:	Find the Solution, Sets A,	Operation Sense: Pages	
with and without	 Dividing numbers is useful when we: 	B, C (Course Book, pp.134	64 - 65	<u>Identify the Unknown</u> (link to
concrete materials	- Share or group a quantity into a	– 135, 161 – 163)	Think Board	printable)
 estimating quotients 	given number of portions		 Sharing and Grouping 	
 explaining the results 	- Share or group a quantity into		Calculator	Amanda Bean's Amazing
of dividing by 1	portions of a given size		Array Model	<u>Dream</u> (link to printable)
 solving problems 	- Need products of measures.		Different Views	
involving division of				"Roll and Divide" (document)
whole numbers	Operations KU5:		Operation Sense: Pages	
 relating division to 	Repeating equal quantities and		76 – 77	
multiplication.	partitioning a quantity into equal		• Jugs	
	parts helps us relate multiplication		More or Less than One	
	and division and understand their properties.		Constructing Arrays	
			Operation Sense: Pages	
	Operations KU6:		83 - 84	
	The same operation can be said		Equal Groups	
	and written in different ways.		Two for Each	
	Operations KIII		Math Language	
	Operations KU8: Thinking of a problem as a number		Saying Symbols	
	sentence often helps us solve it.		Operation Sense: Pages 97	
	Sometimes we need to rewrite the		- 98	
	number sentence in a different but		• Signs	
			Choose the Operation	

equivalent way.	Related Numbers
Computations KU1:	Operation Sense: Pages
The same number fact will be true	122 - 123
no matter how you count the	Animal Patterns
objects or what the objects are.	Multiplication Facts
	Forgotten Facts
Computations KU3:	Doubles and Halves
We can think of a number as a	
multiplication or division in	Operation Sense: Pages
different ways. We can rearrange	138 - 139
the factors of a multiplication	• Arrays
without changing the quantity.	• Planning
	Tree Planting
Computations KU4:	• Multiples of 3
Place value and basic number	
facts together allow us to calculate	Operation Sense: Pages
with any whole or decimal number.	146-147
	Grid Partitions
Computations KU5:	Personal Strategies
There are strategies we can	Explaining Procedures
practice to help us do calculations	
in our head.	Operation Sense: Pages
	156-158
	• Decade
	Multiply the Parts
	Constructing Arrays
	Factoring

GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the Curriculum	and Activities	Selected from FSIM:	
	Outcomes from FSIM: Number		Number AND Operation	
	Sense Book		Sense Resource Books	
N4.6 Demonstrate an	Fractions KU1:	Partitioning Paper – no	Number Sense: pages 102	"Playground Fractions" p. 208
understanding of	When we split something into	folding (Number Sense, p.	- 106	TS-CM 3-5
fractions less than or	two equal-sized parts, we say	105)	Everyday Halves	
equal to one by using	we have halved it and that each		 Sharing Strategies 	"More, Less, or Equal to One
concrete and pictorial	part is half the original thing.	Sorting Shapes ((Number	 Approximate/Exact 	Whole" p. 214 TS-CM 3-5
representations to:		Sense, p. 105)	 Collections Case Study 1 	
 name and record 	Fractions KU2:		(Number Sense Book)	"Given the whole, find the
fractions for the parts of	We can partition objects and	Comparing Fractions	pages 109 – 111	part" p. 215 – 216, TS-CM 3-5
a whole or a set	collections into two or more	(Number Sense, p. 105)		
 compare and order 	equalsized parts and the		Number Sense: Pages 114	"On The Line" p. 218 TS-CM 3-
fractions	partitioning can be done in	Chocolate Bar Thirds	- 117	5
 model and explain 	different ways.	(Number Sense, p. 116)	Three Colors	
that for different			Equal Portions	Tony's Fraction Pizza Shop
wholes, two identical	Fractions KU3:	Sharing with Odd	• Thirds	(online interactive)
fractions may not	We use fraction words and	Numbers (Number Sense,	 Grouping Case Study 2, 	
represent the same	symbols to describe parts of a	p. 117)	(Number Sense Book) pp.	Exploring Equivalent Fractions
quantity	whole. The whole can be an		121 – 123	with Legos (link to printable)
 provide examples of 	object, a collection or a	Did You Know? (Number		
where fractions are	quantity.	Sense, p. 120)	Number Sense: Pages 128	Ordering Fractions: Partner
used.			- 130	Game (link to printable)
	Fractions KU4:		What Is the Whole?	
	The same fractional quantity		Finding Fractions	<u>Fraction Number Line</u>
	can be represented with a lot of	Comparing Chocolate	Measuring Metres	Concentration (link to
	different fractions. We say	Bars (Number Sense, p.	Fractions and Shape	printable)
	fractions are equivalent when	137)	Fraction Words	
	they represent the same			
	number or quantity.	Did You Know? (Number	Number Sense: Pages 136	
		Sense, p. 139)	- 138	
	Fractions KU 5:		 Fractions of Collections 	
	We can compare and order		Equivalent Fractions	

fractional numbers and place	Equivalence
them on a number line.	• Marbles
	Equivalent Fractions
	Number Sense: Pages 145
	- 148
	What Number Am I?
	Fraction Tapes (refer to
	Case Study 3, pp. 149-
	151)
	Ordering and
	Comparing Fractions
	Fraction Cards
	Sorting Fractions
	Fraction Number Line

GRADE 4 Number	Key Understandings	Sample Diagnostic Tasks	Sample Learning Tasks	Math Station Ideas:
Specific Outcomes	underpinning the Curriculum	and Activities	Selected from FSIM:	
	Outcomes from FSIM: Number		Number AND Operation	
	Sense Book		Sense Resource Books	
N4.7 Demonstrate an	Whole and Decimal Numbers		Number Sense: Pages 83 -	<u>Treefrog Treasure</u> (online
understanding of	KU7:		84	interactive; level 3)
decimal numbers in	We can extend the patterns in		 Clothesline 	
tenths and hundredths	the way we write whole		• Tenths	Place Value Yahtzee (link to
(pictorially, orally, in	numbers to write decimals.		 Larger Decimals 	printable)
writing, and			Number Scrolls	
symbolically) by:	Fractions KU6:			Roll It! Rounding Game (link to
describing	 A fractional number can be 		Course Book: Page 59	printable)
representing	written as a division or as a		Decimal Place Value	
 relating to fractions. 	decimal.			Decimal Place Value with
			Number Sense: Pages 154	Playing Cards (link to
N4.8 Demonstrate an	Operations KU1:		- 156	instructions)
understanding of	 Adding and subtracting 		 Linking Decimals to 	
addition and	numbers are useful when we:		Fractions	Comparing Decimals Game
subtraction of decimals	- change a quantity by adding		Concentration	(link to printable)
limited to hundredths	more or taking some away			
(concretely, pictorially,	- think of a quantity as			Real World Math (link to
and symbolically) by:	combined of parts			printable)
 using compatible 	- equalize or compare two	Empty Boxes (Course		
numbers	quantities.	Book, pp. 210 - 211)		Make a Buck (link to printable)
 estimating sums and 				
differences	Computations KU2:			Decimal Addition and
using mental math	• We can think of a number as a			Subtraction Game (link to
strategies	sum or difference in different			printable)
 solving problems. 	ways. We can rearrange the			
	parts of an addition without			
	changing the quantity.			
	Computations KU4:	Change Tasks 1 and 2		
	 Place value and basic number 	(Course Book, pp, 131,		

T		
facts together allow us to	151- 152)	
calculate with any whole or		
decimal number.		
Computations KU5:		
There are strategies we can	How Much Taller?	
practice to help us do	(Course Book, p. 131)	
calculations in our head.		
Computations KU6:	Find the solutions Set A	
There are some special	(Course Book p. 161)	
calculating methods that we c	an	
use for calculations we find		
hard to do in our head.		
Computation KU8:		
Rounding, imagining a numb	er	
line, and using properties of		
numbers and operations help	us	
to estimate calculations.		
Computations KU10:		
Thinking about what makes		
sense helps us to check and		
interpret the results of		
calculations.		
Operations Background Notes		
• Operation Sense, p. 22 – 24,		
26 – 29, 108-109; 113-115		