KENTUCKY CENTER FOR MATHEMATICS

Alice Gabbard

Cindy Aossey

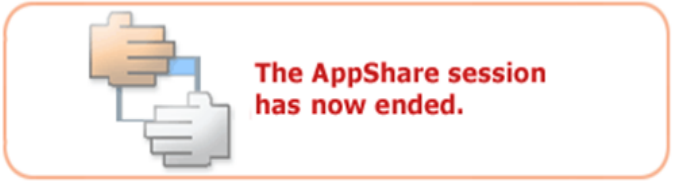
The Kentucky Numeracy Project

Session 1, January 2011

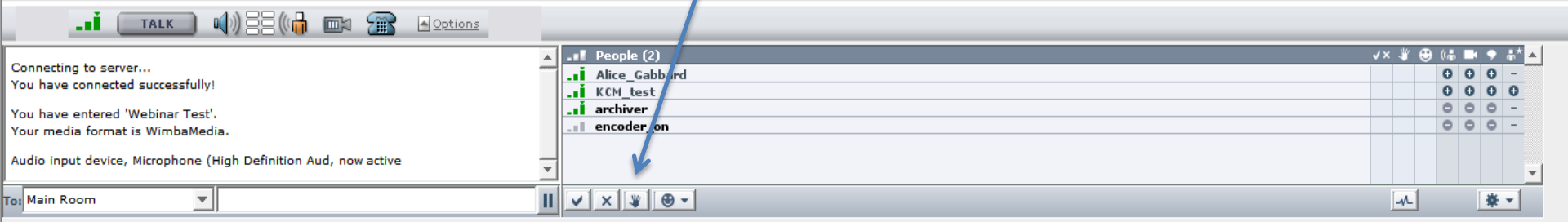
Frank McGoron

Kris Jarboe

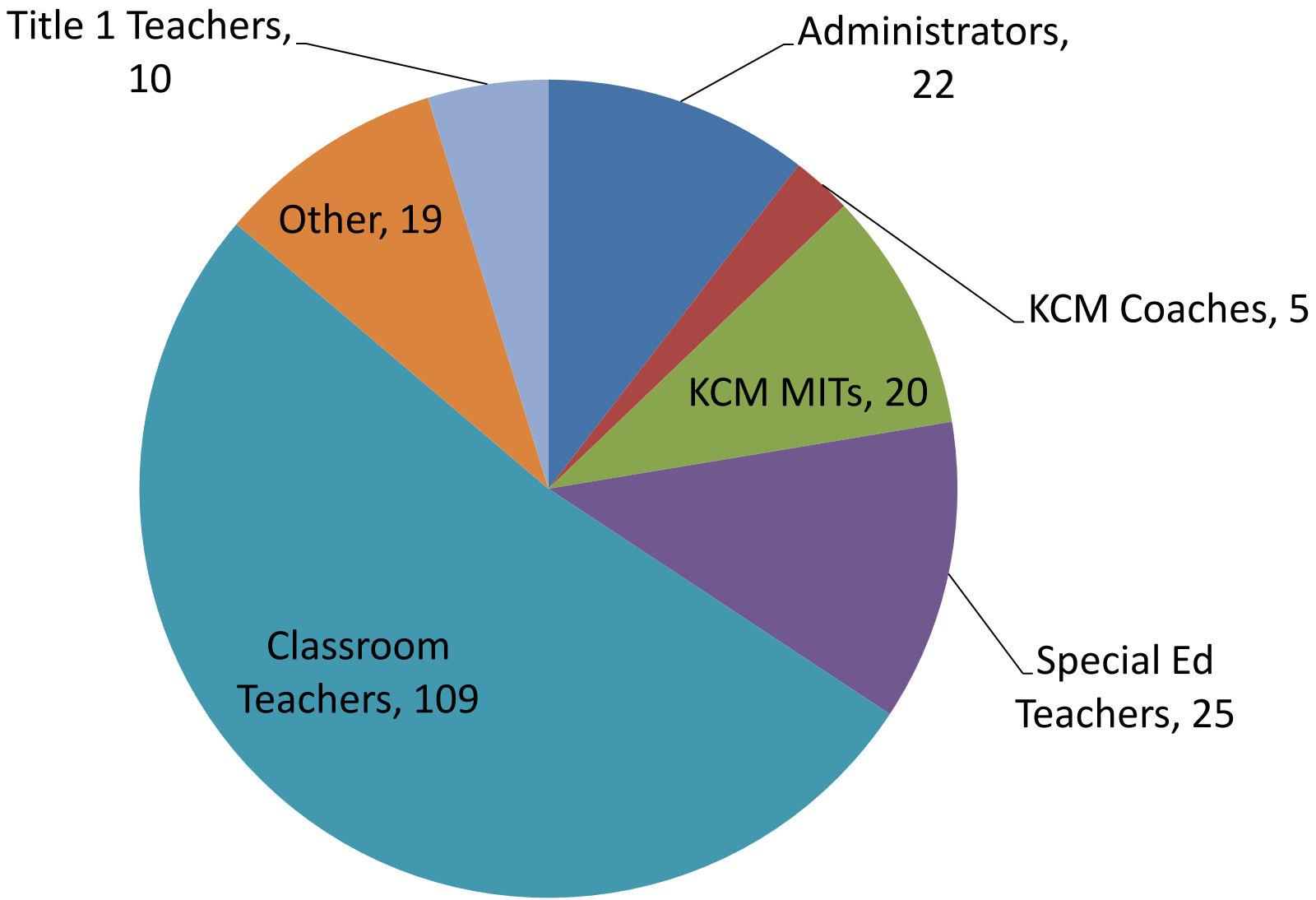

The Kentucky
Numeracy
Project
4) CLOSING
3) PRACTICAL APPLICATIONS
2) INTERVENTION GUIDE
1) INTRODUCTION



Response Keys



210 Attendees



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"A meta-analysis of the results shows that early math skills have the greatest predictive power [of later achievement], followed by reading and then attention skills."

Duncan, Dowsett, et. al. (Nov. 2007).

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***Reading*:English/Language Arts**

as

_____*:*Mathematics

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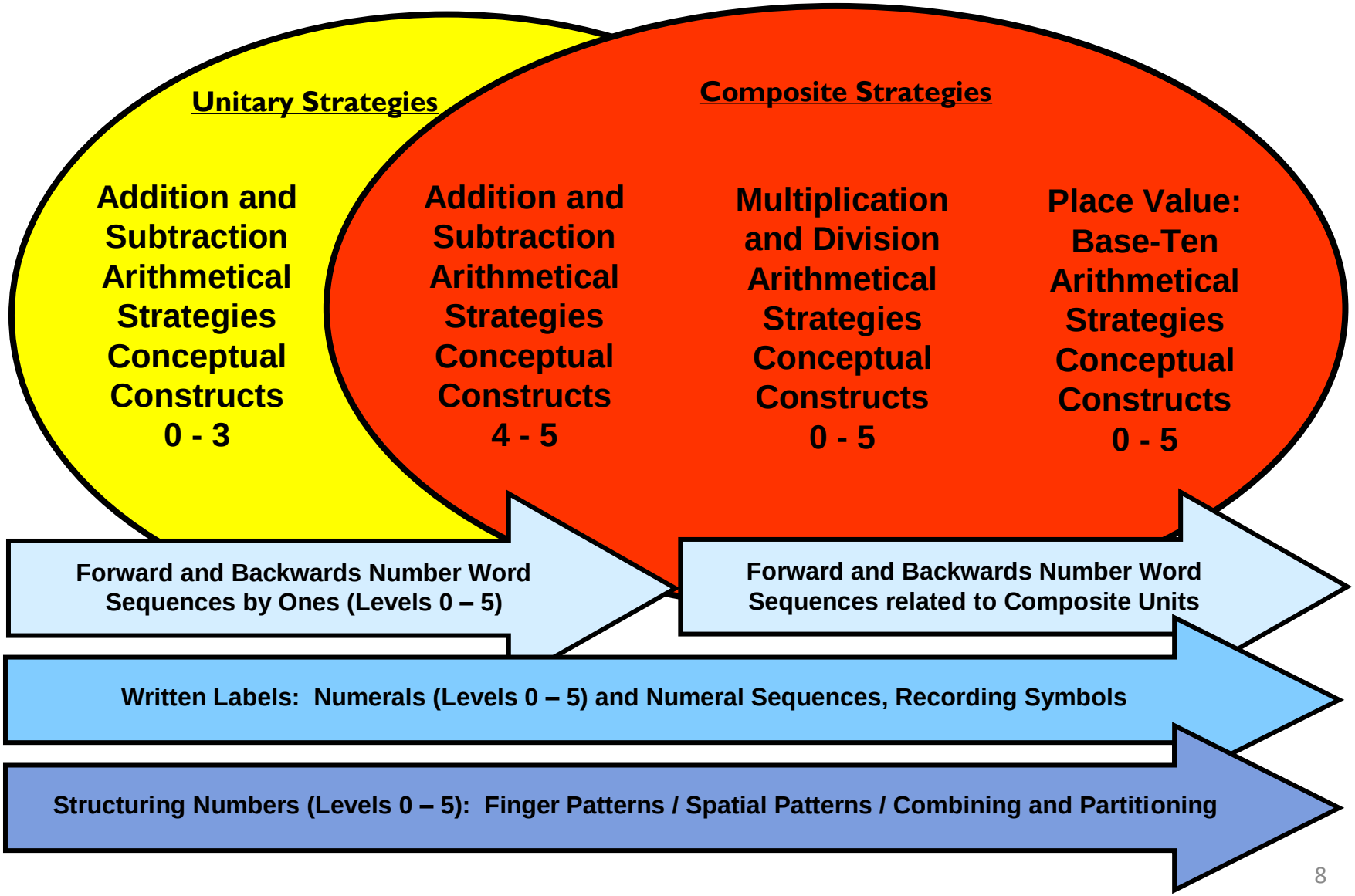
*Reading:*English/Language Arts

as

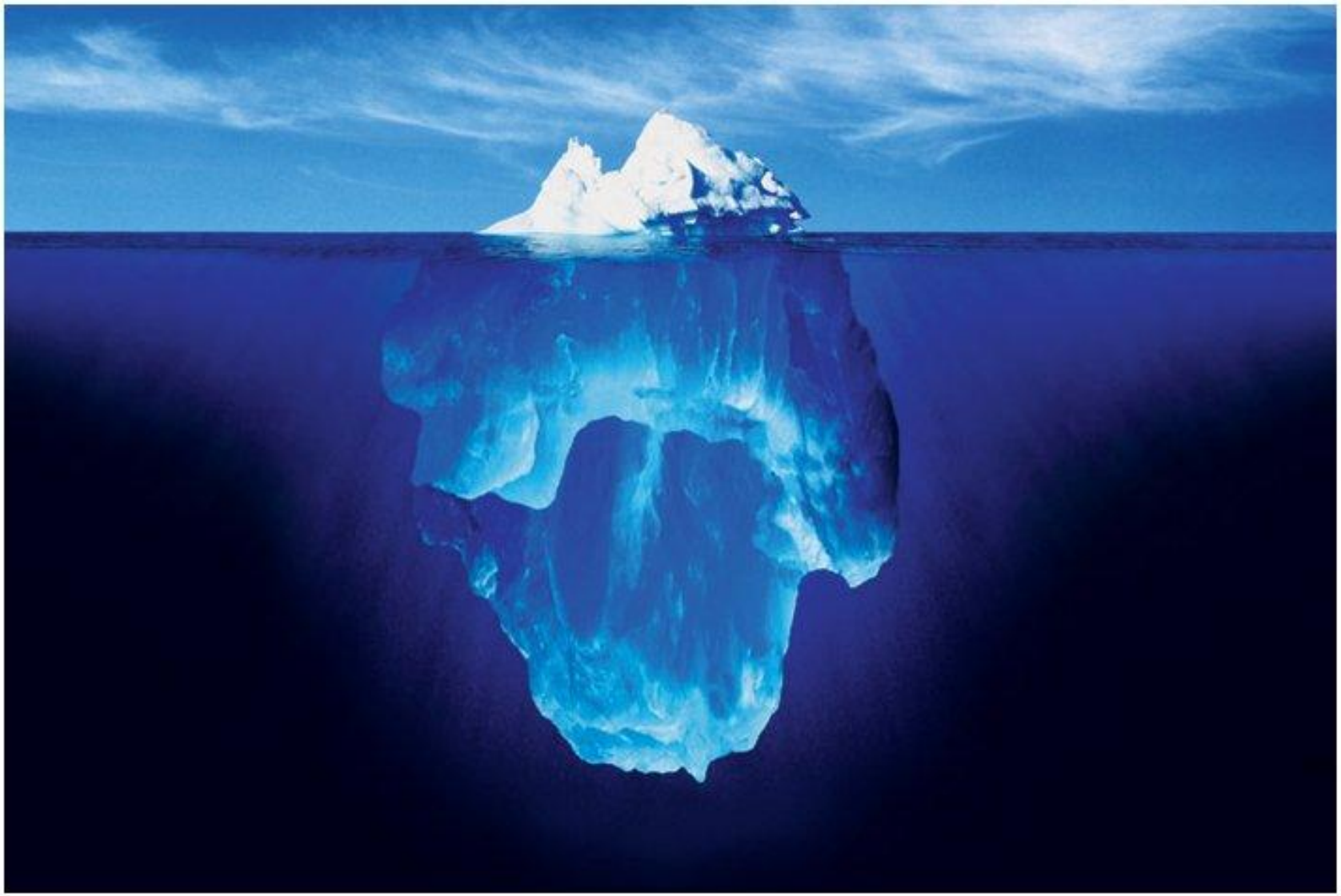
*Number Sense:*Mathematics

The Learning Framework in Number

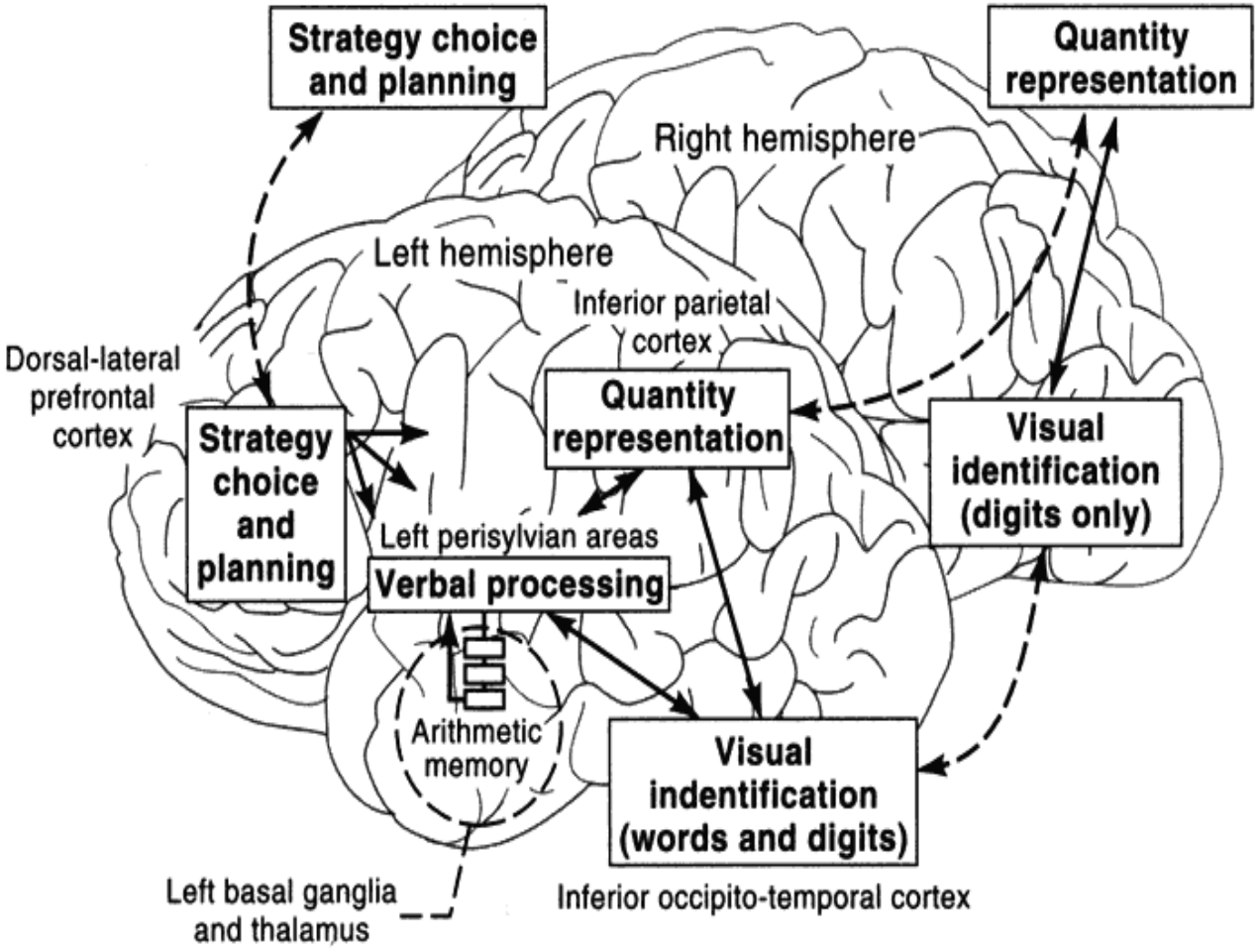


KY Common Core Academic Standards (KCAS)

Teaching for Depth



Based on the work of David Webb, Freudenthal Institute



From Dehaene, shared by Brown and Kroeger, UC

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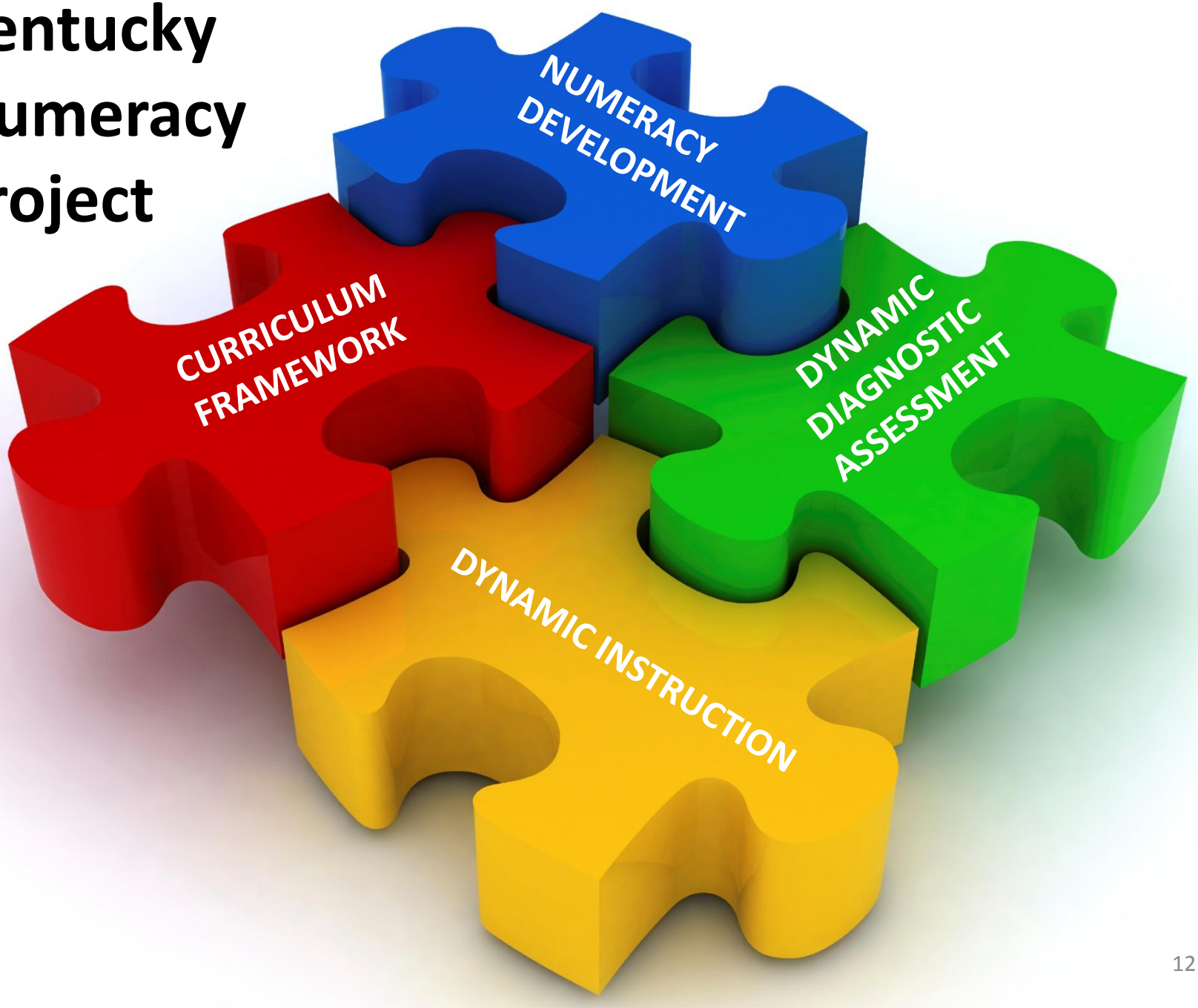

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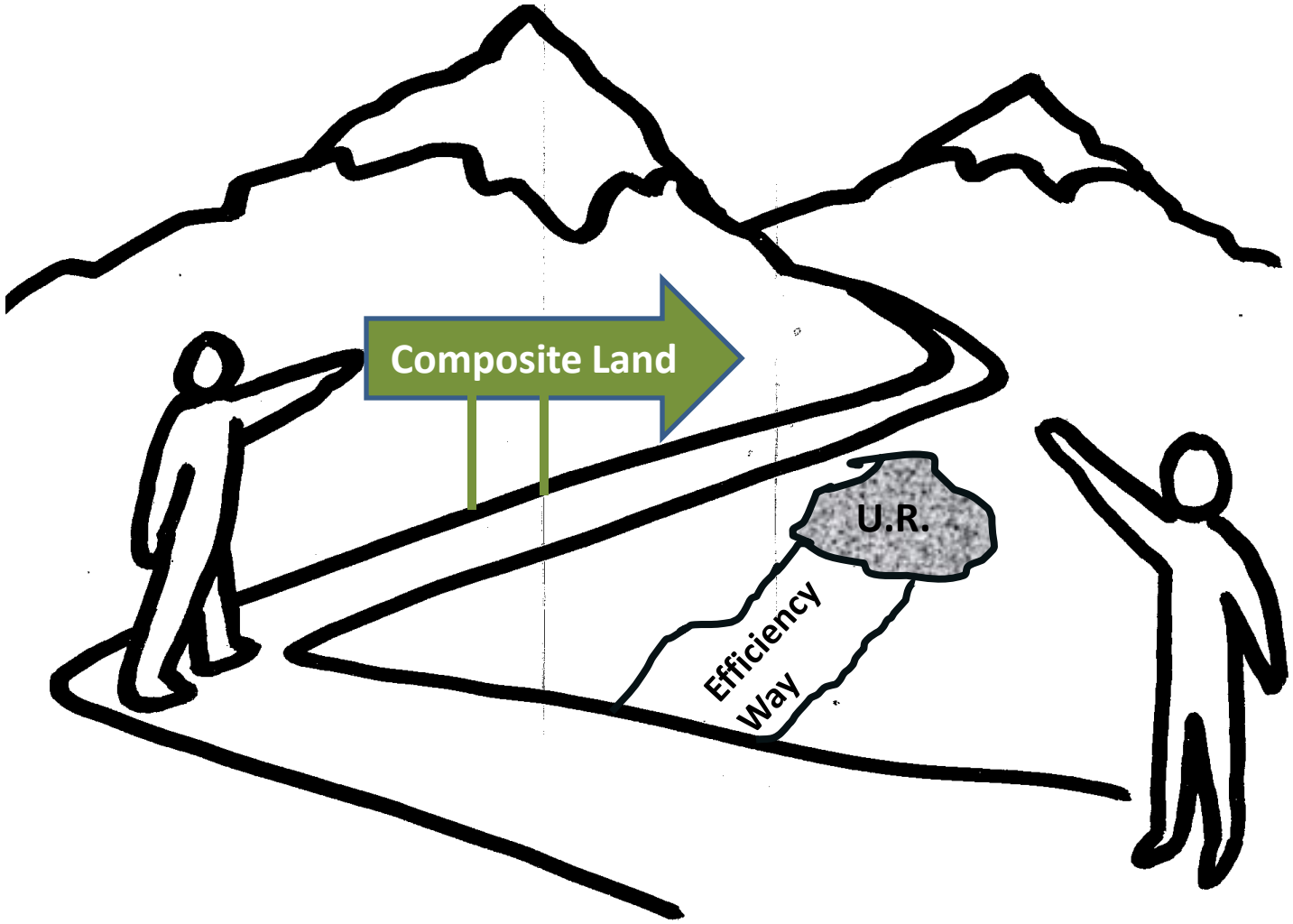

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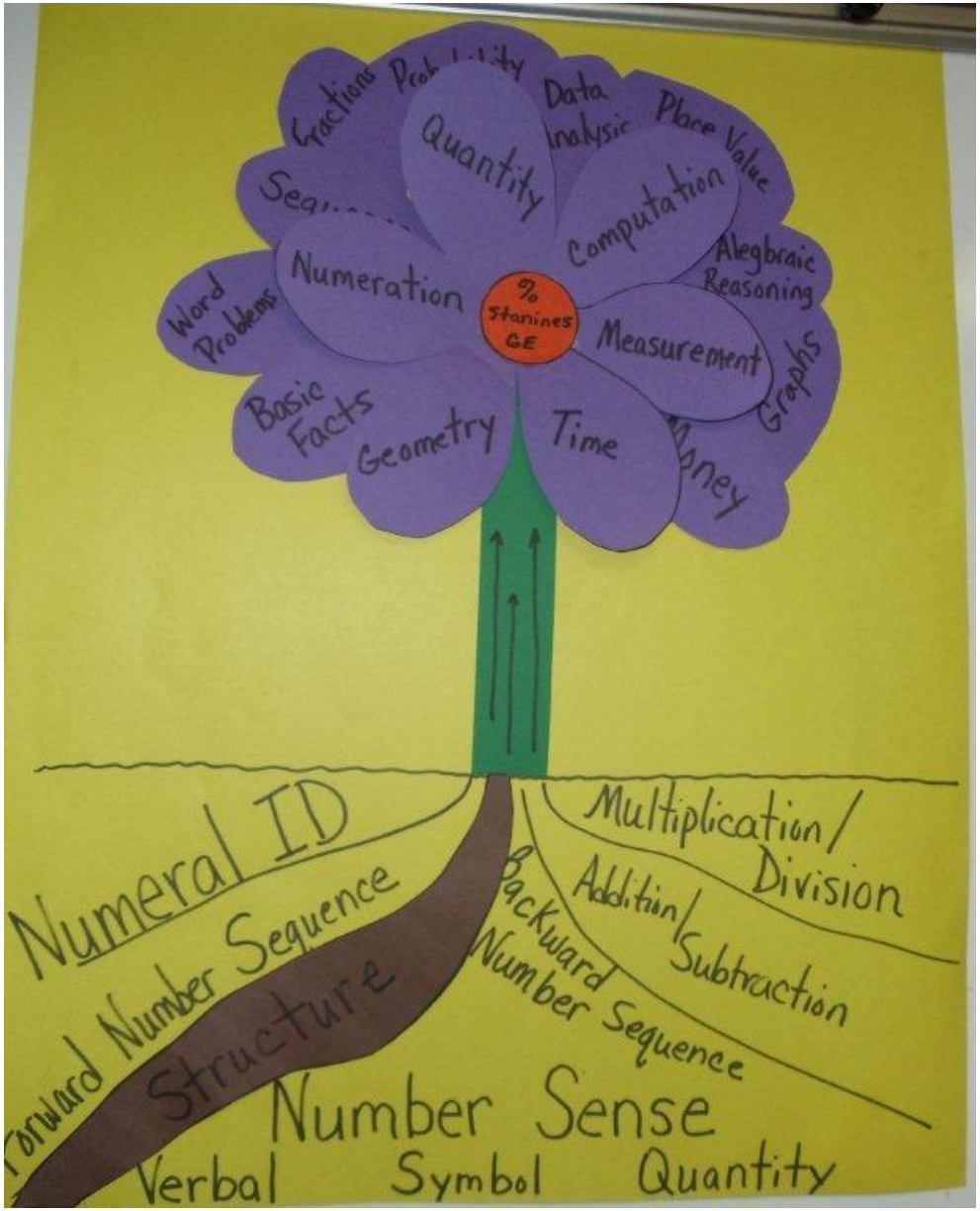

From Lynn Hambrick and Valeria Bodell, Carlisle County Elementary

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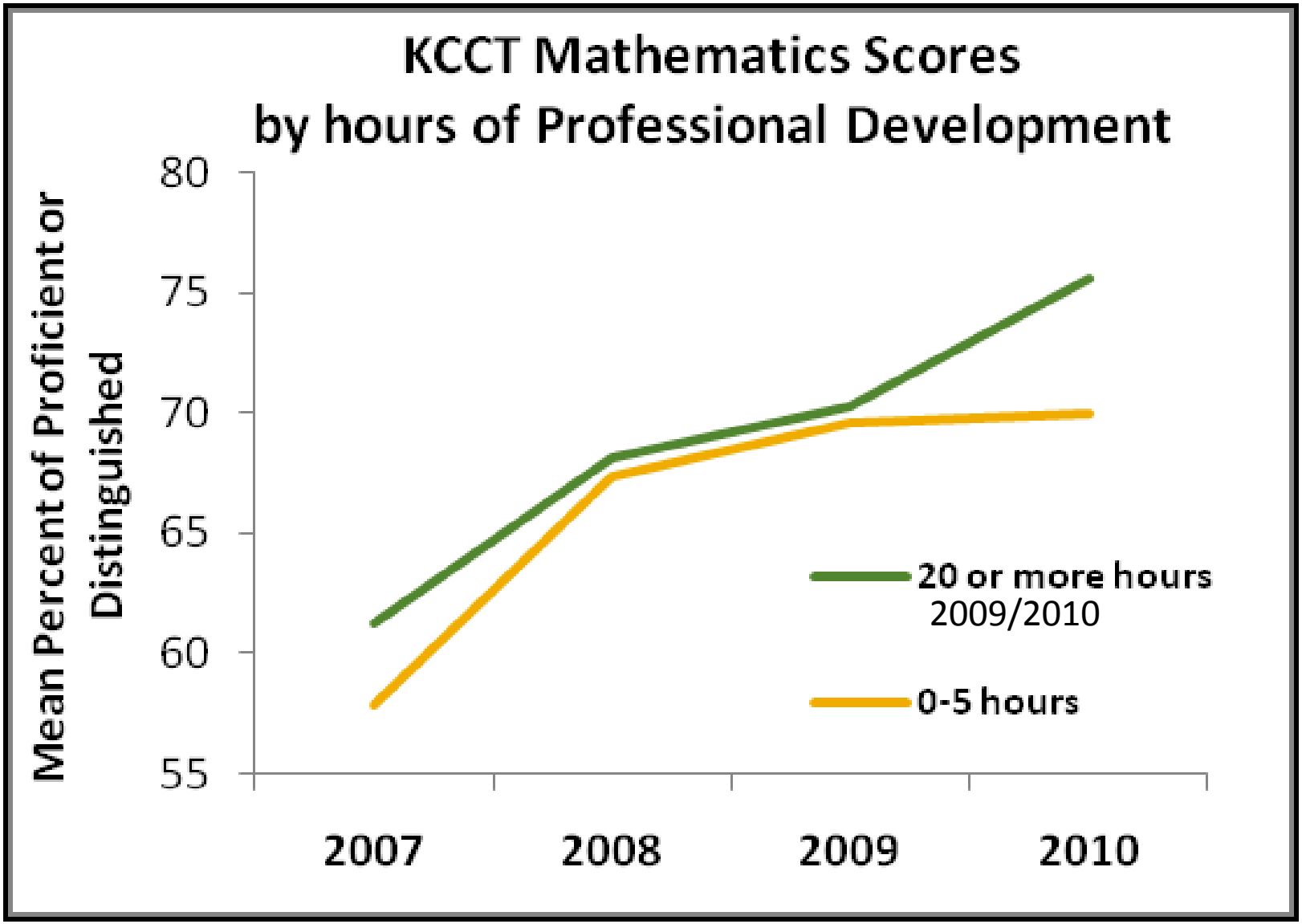

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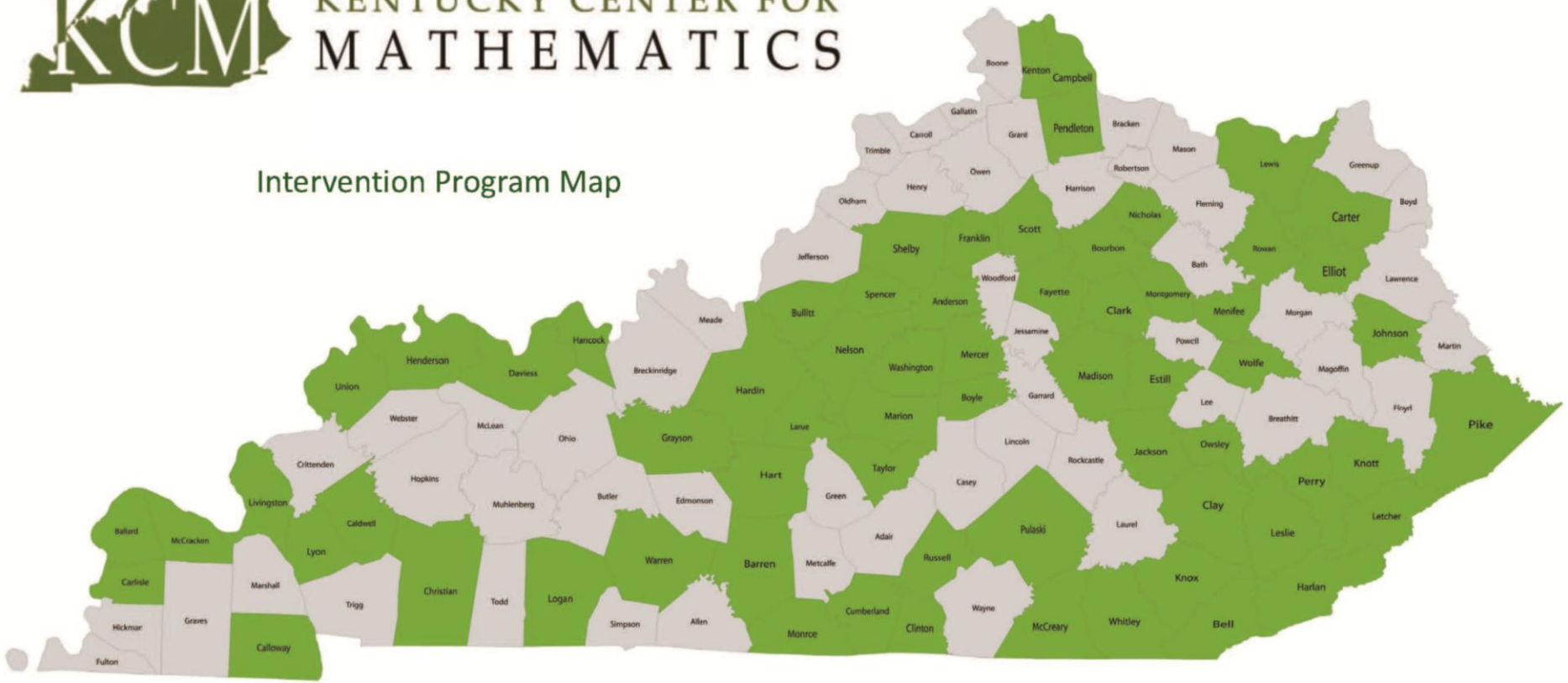
Intervention Program Map



The Kentucky Numeracy Project

Resources and professional development for teachers working to build strong numeracy foundations

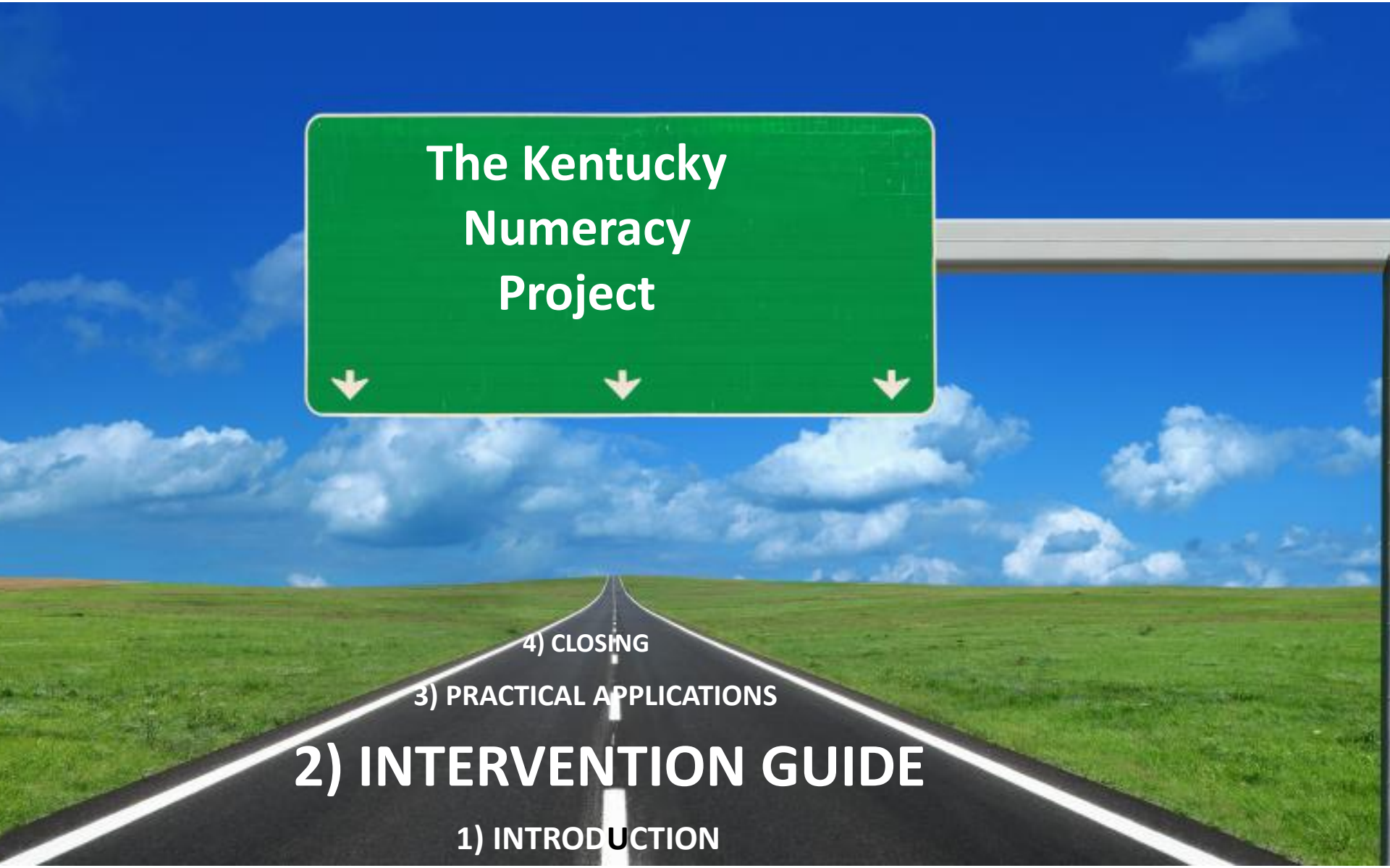
Alice Gabbard, Director; Frank McGoron, KNP Consultant

KCM Regional Coordinators: **Cynthia Aossey**, University of Kentucky; **Mary Helen Hodges**, Murray State University; **Linda Jewell**, Kentucky State University; **Linda Montgomery**, Morehead State University; **Gwen Morgan**, Kentucky Valley Educational Cooperative; **Wilma Rogers**, Western Kentucky University.

Special thanks to: **Petey MacCarty** and **Kurt Kinsey** for providing exceptional training and support; **Bob Wright** for developing the rigorous Math Recovery professional development program; **Jenny Cobb** and the **US Math Recovery Council** for establishing and supporting a highly-professional learning community of teacher scholars.

Contributors: This resource compilation and the related professional development leadership is made possibly through the selfless dedication of **Kentucky's highly-trained force of mathematics intervention teachers** (named with the entries submitted on the Intervention Guide) whose positions are funded through the Kentucky Mathematics Achievement Fund. Additionally, many of the KCM's talented regional coordinators contributed many hours to reviewing, polishing and creating supplemental activities.

KCM – facilitating teacher growth for state-wide student success in mathematics: Coaching/Intervention/Adult Education. Located at Northern Kentucky University; supported by the Kentucky Council on Postsecondary Education and the Kentucky Department of Education


The Kentucky
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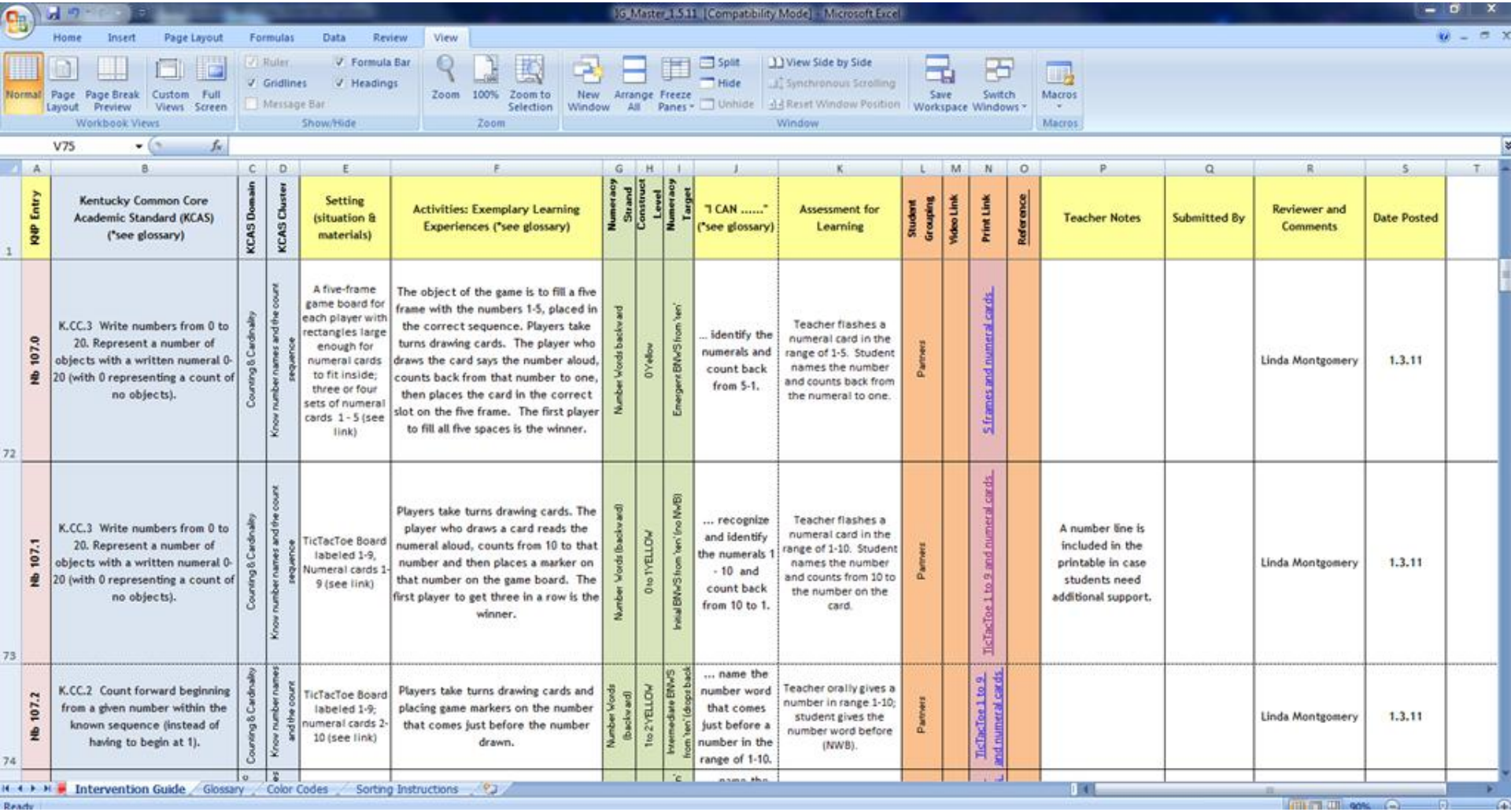
Project
4) CLOSING
3) PRACTICAL APPLICATIONS
2) INTERVENTION GUIDE
1) INTRODUCTION

KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target (from AVMR)	"I CAN ....." (*see glossary)
Nb 107.3	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'	... name the number word that comes just before a number in the range of 1-10.
Nb 107.4	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	Bingo Game Board labeled with random numbers 1-29; numeral cards 2-30 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	3 to 4 RED	Facile BNWS from 'thirty'	... name the number just before a given number in the range of 1-30
Nb 107.5	K.CC.1 Count to 100 by ones and by tens.	Counting & Cardinality	Know number names and the count sequence	TicTacToe board labeled w/"9's" 19-99;decade numeral cards 20-100 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	4 to 5 BLUE	Facile BNWS from 'one hundred'	... name the number word before in the range of 1-100.
Nb 109.0	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	No materials needed	Teacher counts backward from 5 to 1 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words backward	0 YELLOW	Emergent BNWS from 'ten'	... detect errors in counting and identify which number was omitted from a sequence as the teacher counts.
Nb 109.1	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	No materials needed	Teacher says a backward counting sequence in the range of 10 to 1 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words (backward)	0 to 1 YELLOW	Initial BNWS from 'ten' (no NWB)	... detect errors in counting and identify which number was omitted from the sequence as the teacher is counting.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	KAP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." (*see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference	Teacher Notes	Submitted By	Reviewer and Comments	Date Posted	
72	Nb 107.0	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	A five-frame game board for each player with rectangles large enough for numeral cards to fit inside; three or four sets of numeral cards 1 - 5 (see link)	The object of the game is to fill a five frame with the numbers 1-5, placed in the correct sequence. Players take turns drawing cards. The player who draws the card says the number aloud, counts back from that number to one, then places the card in the correct slot on the five frame. The first player to fill all five spaces is the winner.	Number Words backward	0 Yellow	Emergent BMWS from 'ten'	... identify the numerals and count back from 5-1.	Teacher flashes a numeral card in the range of 1-5. Student names the number and counts back from the numeral to one.	Partners		5 frames and numeral cards				Linda Montgomery	1.3.11	
73	Nb 107.1	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9, Numeral cards 1-9 (see link)	Players take turns drawing cards. The player who draws a card reads the numeral aloud, counts from 10 to that number and then places a marker on that number on the game board. The first player to get three in a row is the winner.	Number Words (backward)	0 to 1 YELLOW	Initial BMWS from 'ten' (no NWB)	... recognize and identify the numerals 1 - 10 and count back from 10 to 1.	Teacher flashes a numeral card in the range of 1-10. Student names the number and counts from 10 to the number on the card.	Partners		TicTacToe 1 to 9 and numeral cards		A number line is included in the printable in case students need additional support.		Linda Montgomery	1.3.11	
74	Nb 107.2	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	1 to 2 YELLOW	Intermediate BMWS from 'ten' (drops back)	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gives a number in range 1-10; student gives the number word before (NWB).	Partners		TicTacToe 1 to 9 and numeral cards				Linda Montgomery	1.3.11	

Intervention Guide | Glossary | Color Codes | Sorting Instructions

	A	B	C	D	E	F	G	H	I	J	K
1	KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target (from AVMR)	"I CAN ....." (*see glossary)	Assessment f Learning
75	Nb 107.3	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gi number in range student gives the n word before (NV
76	Nb 107.4	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	Bingo Game Board labeled with random numbers 1-29; numeral cards 2-30 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	3 to 4 RED	Facile BNWS from 'thirty'	... name the number just before a given number in the range of 1-30	Teacher orally gi number in range student gives nu word before (NV
	107.5	K.CC.1 Count to 100 by ones and by	& Cardinality	r names and the sequence	TicTacToe board labeled w/"9's" 19-99;decade	Players take turns drawing cards and placing game markers on the	ds (backward)	5 BLUE	om 'one hundred'	... name the number word	Teacher orally numbers in range w/special attenti

	A	B	C	D	E	
1	KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activi
75	Nb 107.3	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players t
	07.4	K.CC.2 Count forward beginning from a given number within the	Cardinality	names and the quence	Bingo Game Board labeled with random numbers	Players t

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75	Nb 107.3	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players t
	07.4	**Number words backward** K.CC.2 Count forward beginning from a given number within the	Cardinality	names and the quence	Bingo Game Board labeled with random numbers	Players t

[N] Number Words and Numerals

Nf – Number words forward

Nb – Number words backward

Ni – Numeral ID

[S] Structuring

[A] Addition and Subtraction

[M] Multiplication and Division

[T] Tens and Ones

	A	B	C	D	E	
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	07.4	K.CC.2 Count forward beginning from a given number within the	Cardinality	names and the quence	Bingo Game Board labeled with random numbers	Players t

Task Number

	A	B	C	D	E	F	G	H
1	KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level
74	Nb 107.2	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	1 to 2 YELLOW
75	Nb 107.3	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Operation & Algebraic Thinking	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW
76	Nb 107.4	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count sequence	Bingo Game Board labeled with random numbers 1-29; numeral cards 2-30 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	3 to 4 RED
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Task group

	A	B	C	D	E	
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	07.4	K.CC.2 Count forward beginning from a given number within the	Cardinality	names and the quence	Bingo Game Board labeled with random numbers	Players t

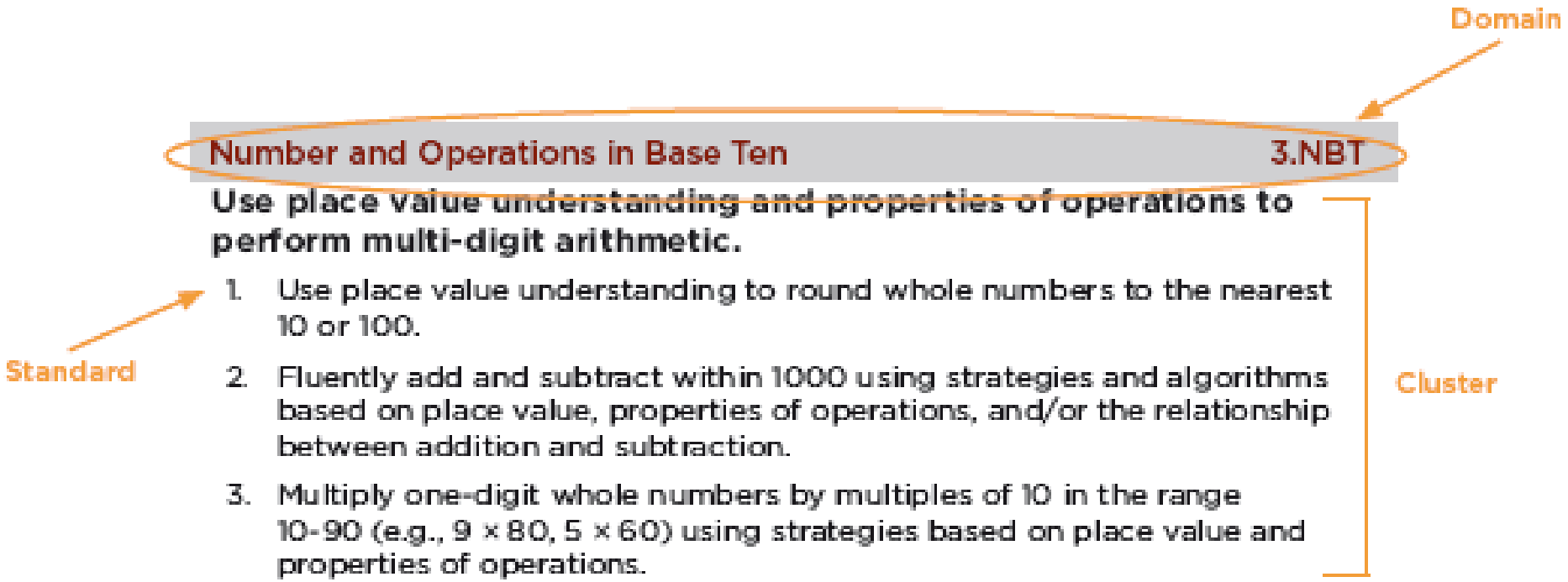
Standards ***define what students should understand and be able to do.***

Clusters ***summarize groups of related standards.***

Standards from different clusters may sometimes be closely related, because *mathematics is a connected subject*.

Domains ***are larger groups of related standards.***

Standards from different domains may sometimes be closely related.



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C	D	E	F	G	H	I
KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target
Thinking	Know number names and the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'
...ality)	...mes and the ...uence	Bingo Game Board labeled with	Players take turns drawing cards and	(backward)	...RED	...om 'thirty'

	E	F	G	H	I	J	K	L	M	N	O
	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target (from AVMR)	"I CAN ....." (*see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference
the count sequence	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gives a number in range 1-10; student gives the number word before (NWB).	Partners		TicTacToe 1 to 9 and numeral cards	
count sequence	Bingo Game Board labeled with random numbers 1-29; numeral cards 2-30 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	3 to 4 RED	Facile BNWS from 'thirty'	... name the number just before a given number in the range of 1-30	Teacher orally gives a number in range 1-30; student gives number word before (NWB)	Partners		Bingo 1 to 29 and numeral cards	
			d)		dred'					al	

Tic Tac Toe Boards 1-9

4	2	7
1	3	6
8	9	5

1	5	3
8	2	6
7	9	4

4	7	2
8	1	3
5	6	9

9	3	1
2	4	7
8	6	5

Number Cards 1 to 10

4	8	
3	7	
2	6	10
1	5	9

C	D	E	F	G	H	I
KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target
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take turns drawing cards and game markers on the number comes just before the number drawn.	Words (backward)	3 to 4 RED	BNWS from 'thirty'	... name the number just before a given number in the	Teacher orally gives a number in range 1-30; student gives number word before (NWB)	Partners

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F	G	H	I	J	K	L
vities: Exemplary Learning periences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target (from AVMR)	"I CAN ....." (*see glossary)	Assessment for Learning	Student
take turns drawing cards and game markers on the number comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gives a number in range 1-10; student gives the number word before (NWB).	Partners
take turns drawing cards and game markers on the number comes just before the number drawn.	Words (backward)	3 to 4 RED	BNWS from 'thirty'	... name the number just before a given number in the	Teacher orally gives a number in range 1-30; student gives number word before (NWB)	Partners

F	G	H	I	J	K	L
vities: Exemplary Learning periences (*see glossary)	Numeracy Strand (from AVMR)	Construct Level (from AVMR)	Numeracy Target (from AVMR)	"I CAN ....." (*see glossary)	Assessment for Learning	Student
: take turns drawing cards and game markers on the number comes just before the number drawn.	Number Words (backward)	2 to 3 YELLOW	Facile BNWS from 'ten'	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gives a number in range 1-10; student gives the number word before (NWB).	Partners
: take turns drawing cards and game markers on the number comes just before the number drawn.	Words (backward)	3 to 4 RED	BNWS from 'thirty'	... name the number just before a given number in the	Teacher orally gives a number in range 1-30; student gives number word before (NWB)	Partners

K	L	M	N	O	P	Q	R	S	T
ssment for earning	Student Grouping	Video Link	Print Link	Interactive Website	Reference	Teacher Notes	Submitted By	Reviewer and Comments	Date Posted
r orally gives er in range 1- udent gives mber word re (NWB).	Partners		TicTacToe 1 to 9 and numeral cards					Linda Montgomery and Mary Helen Hodges	1.3.11
r orally gives er in range 1-	ers		numeral cards					Linda Montgomery	

K	L	M	N	O	P	Q	R	S	T
ssment for earning	Student Grouping	Video Link	Print Link	Interactive Website	Reference	Teacher Notes	Submitted By	Reviewer and Comments	Date Posted
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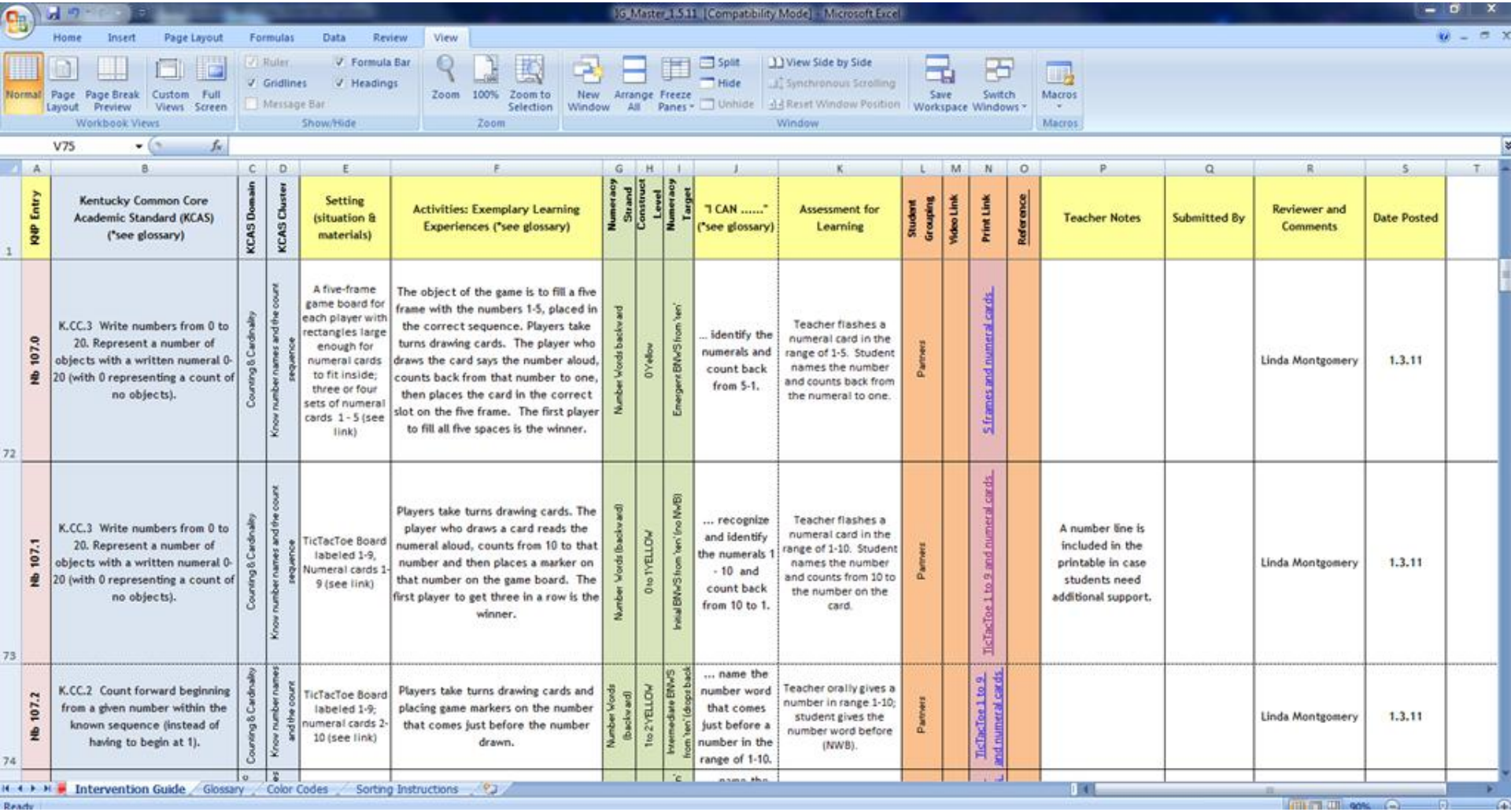
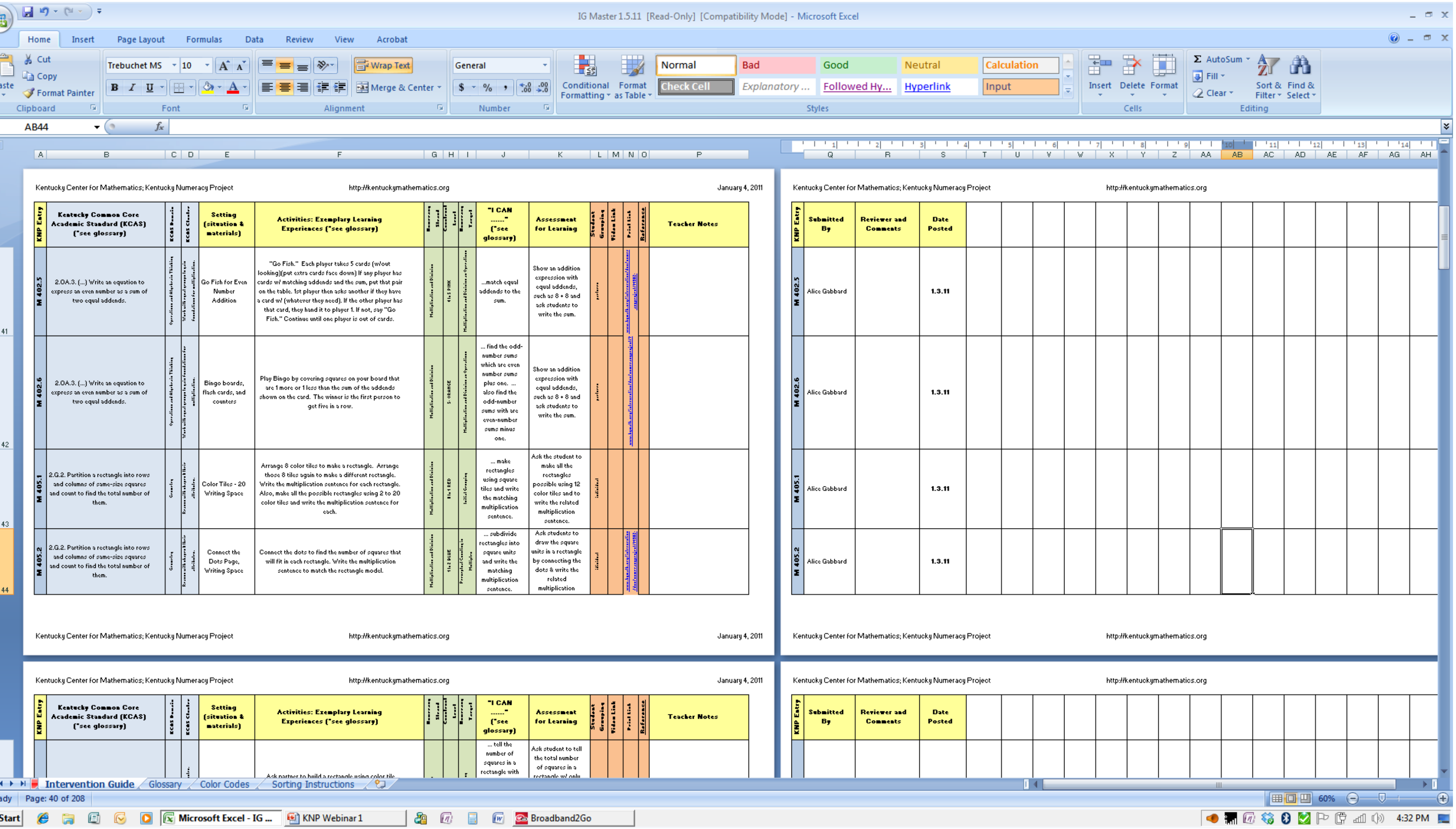
r orally gives er in range 1-	ers		numeral cards					Linda Montgomery	



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	KAP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." (*see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference	Teacher Notes	Submitted By	Reviewer and Comments	Date Posted	
72	Nb 107.0	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	A five-frame game board for each player with rectangles large enough for numeral cards to fit inside; three or four sets of numeral cards 1 - 5 (see link)	The object of the game is to fill a five frame with the numbers 1-5, placed in the correct sequence. Players take turns drawing cards. The player who draws the card says the number aloud, counts back from that number to one, then places the card in the correct slot on the five frame. The first player to fill all five spaces is the winner.	Number Words backward	0 YELLOW	Emergent BMWS from 'ten'	... identify the numerals and count back from 5-1.	Teacher flashes a numeral card in the range of 1-5. Student names the number and counts back from the numeral to one.	Partners		5 frames and numeral cards				Linda Montgomery	1.3.11	
73	Nb 107.1	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board labeled 1-9, Numeral cards 1-9 (see link)	Players take turns drawing cards. The player who draws a card reads the numeral aloud, counts from 10 to that number and then places a marker on that number on the game board. The first player to get three in a row is the winner.	Number Words (backward)	0 to 1 YELLOW	Initial BMWS from 'ten' (no NWB)	... recognize and identify the numerals 1 - 10 and count back from 10 to 1.	Teacher flashes a numeral card in the range of 1-10. Student names the number and counts from 10 to the number on the card.	Partners		TicTacToe 1 to 9 and numeral cards		A number line is included in the printable in case students need additional support.		Linda Montgomery	1.3.11	
74	Nb 107.2	K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting & Cardinality	Know number names and the count	TicTacToe Board labeled 1-9; numeral cards 2-10 (see link)	Players take turns drawing cards and placing game markers on the number that comes just before the number drawn.	Number Words (backward)	1 to 2 YELLOW	Intermediate BMWS from 'ten' (drops back	... name the number word that comes just before a number in the range of 1-10.	Teacher orally gives a number in range 1-10; student gives the number word before (NWB).	Partners		TicTacToe 1 to 9 and numeral cards				Linda Montgomery	1.3.11	

Intervention Guide | Glossary | Color Codes | Sorting Instructions


The Kentucky
Numeracy
Project
4) CLOSING
3) PRACTICAL APPLICATIONS
2) INTERVENTION GUIDE
1) INTRODUCTION



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January 4, 2011
KNP Entry
Kentucky Common Core Academic Standard (KCAS) (*see glossary)
KCAS Domain
KCAS Cluster
Setting (situation & materials)
Activities: Exemplary Learning Experiences (*see glossary)
"I CAN ......" (*see glossary)
Assessment for Learning
Student Grouping
Video Link
Print Link
Reference
Teacher Notes
M 402.5
2.OA.3. (...) Write an equation to express an even number as a sum of two equal addends.
Go Fish for Even Number Addition
"Go Fish." Each player takes 5 cards (w/out looking)(put extra cards face down) If any player has cards w/ matching addends and the sum, put that pair on the table. 1st player then asks another if they have a card w/ (whatever they need). If the other player has that card, they hand it to player 1. If not, say "Go Fish." Continue until one player is out of cards.
...match equal addends to the sum.
Show an addition expression with equal addends, such as 8 + 8 and ask students to write the sum.
M 402.6
2.OA.3. (...) Write an equation to express an even number as a sum of two equal addends.
Bingo boards, flash cards, and counters
Play Bingo by covering squares on your board that are 1 more or 1 less than the sum of the addends shown on the card. The winner is the first person to get five in a row.
... find the odd-number sums which are even number sums plus one. ... also find the odd-number sums with are even-number sums minus one.
Show an addition expression with equal addends, such as 8 + 8 and ask students to write the sum.
M 405.1
2.G.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
Color Tiles - 20 Writing Space
Arrange 8 color tiles to make a rectangle. Arrange those 8 tiles again to make a different rectangle. Write the multiplication sentence for each rectangle. Also, make all the possible rectangles using 2 to 20 color tiles and write the multiplication sentence for each.
... make rectangles using square tiles and write the matching multiplication sentence.
Ask the student to make all the rectangles possible using 12 color tiles and to write the related multiplication sentence.
M 405.2
2.G.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
Connect the Dots Page, Writing Space
Connect the dots to find the number of squares that will fit in each rectangle. Write the multiplication sentence to match the rectangle model.
... subdivide rectangles into square units and write the matching multiplication sentence.
Ask students to draw the square units in a rectangle by connecting the dots & write the related multiplication
Submitted By
Reviewer and Comments
Date Posted
Alice Gabbard
1.3.11
Intervention Guide
Glossary
Color Codes
Sorting Instructions
Page: 40 of 208
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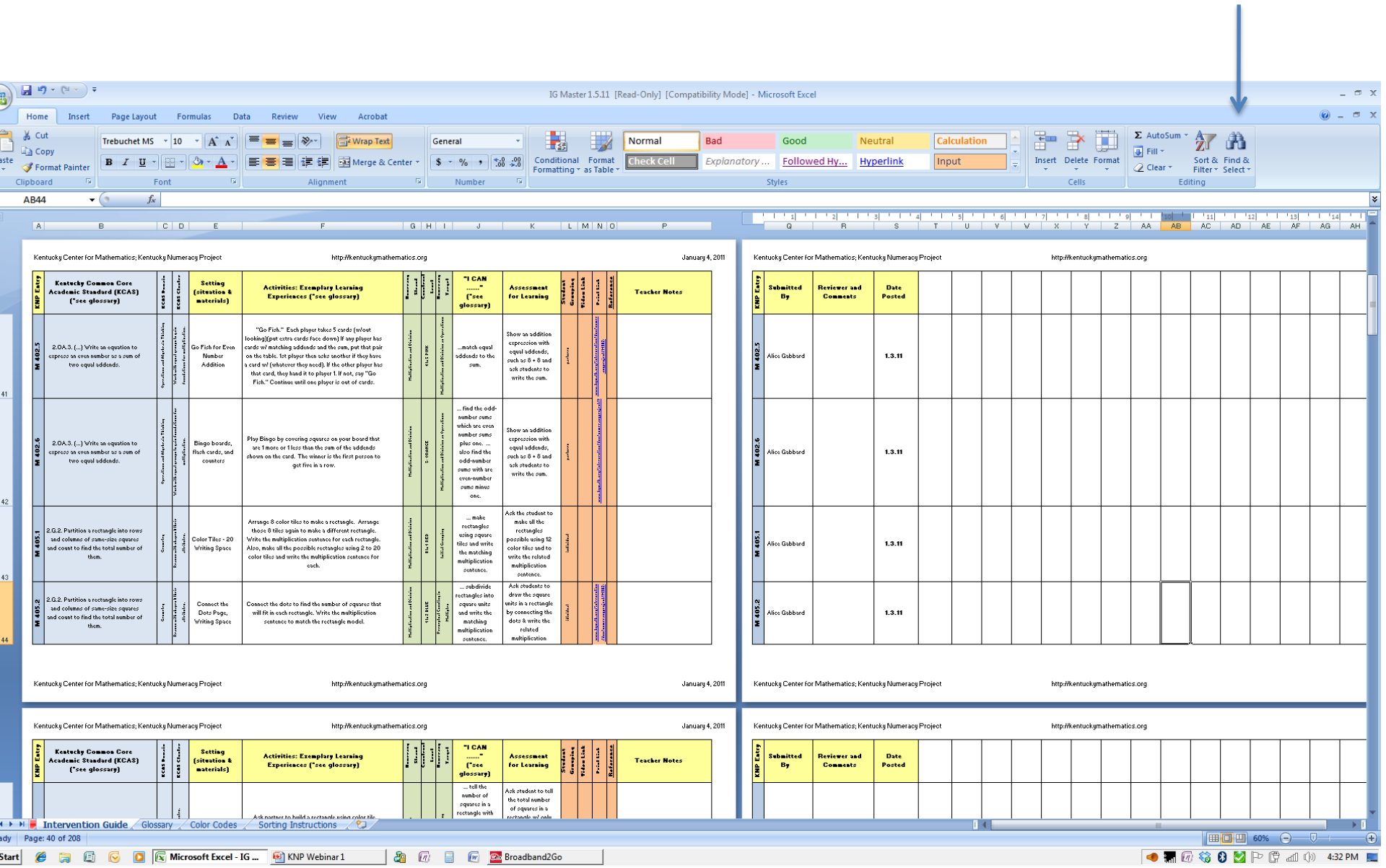
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January 4, 2011
KNP Entry
Kentucky Common Core Academic Standard (KCAS) ("see glossary)
Setting (situation & materials)
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Submitted By
Reviewer and Comments
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Intervention Guide
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Page: 40 of 208
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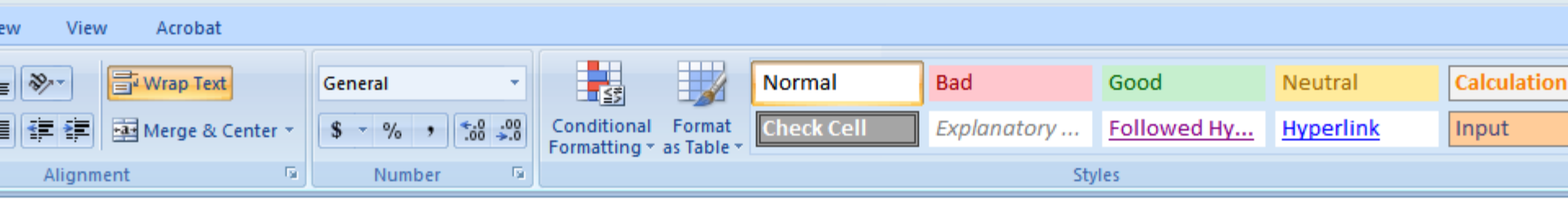

e number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategi

Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." (*see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference	Teacher Notes
Teacher says a forward counting sequence in the r... omits one numb... point every tin... identify the omit... counting sequenc... a point anytime ... identify	...d)		...dred'	... detect errors in						Teacher should vary the starting number in the sequence.
The student roll... card, and places ... on one turkey. T... die again and ... feathers on the ... student should then count the total number of feathers and either write or select a number card to express the total or sum.	Number W...	0 to 1...	Initial FM/St...	that occur when structuring to 5.	sheets	indepen...		http://www.mathwire.com/strat... egies/matsseasonal.html		
The student rolls a die or selects a card, and places that many feathers	...d)		...en'	...understand						

Find and Replace

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Find what: greater than, less than

Options >>

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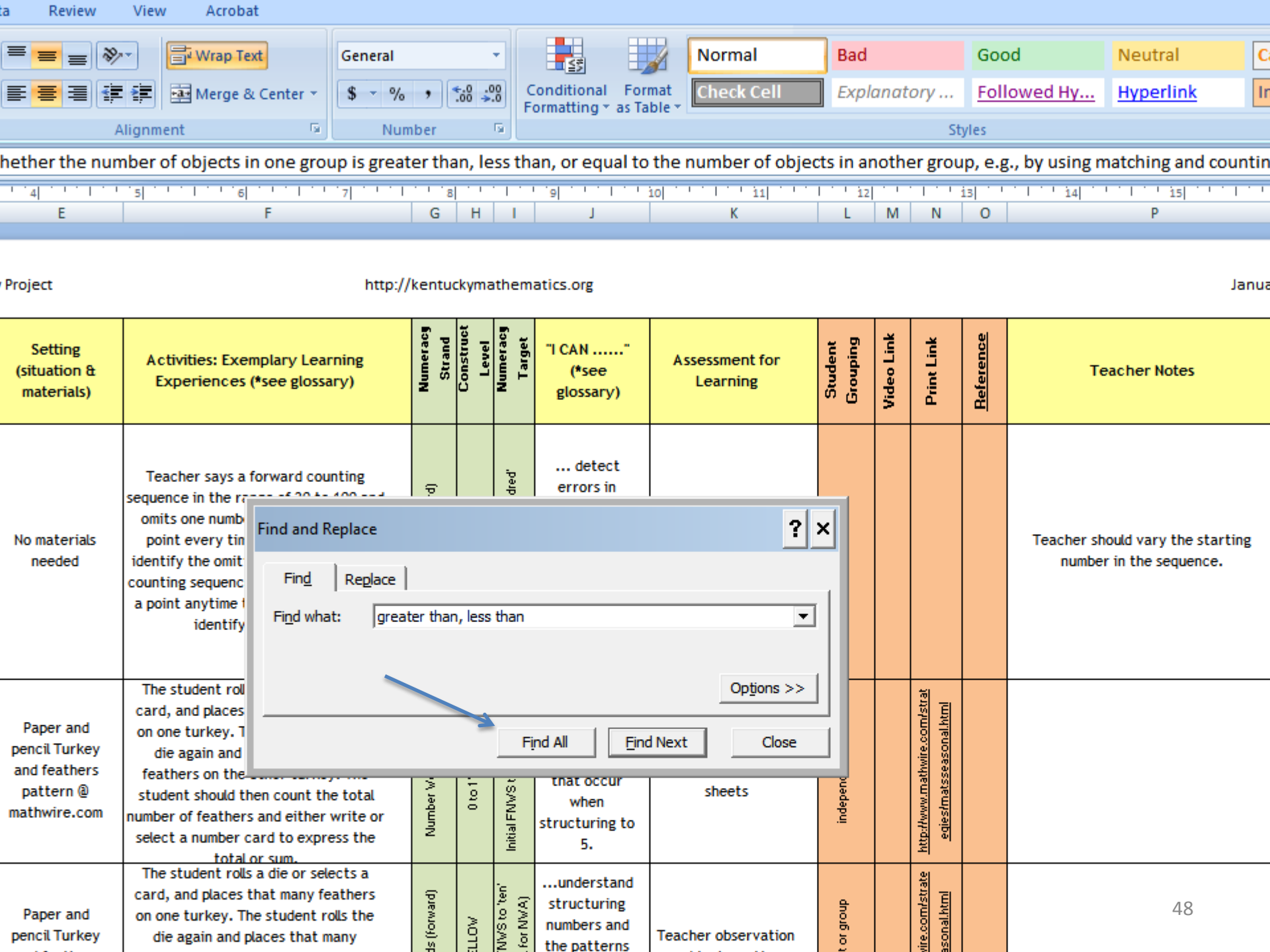
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Activities: Exemplary Learning Experiences (*see glossary)
Numeracy Strand
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Numeracy Target
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Teacher says a forward counting sequence in the
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Paper and pencil Turkey and feathers pattern @ mathwire.com
The student roll
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student should then count the total number of feathers and either write or select a number card to express the total or sum.
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Paper and pencil Turkey
The student rolls a die or selects a card, and places that many feathers on one turkey. The student rolls the die again and places that many
ds (forward)
ELLOW
NWS to 'ten'
for NWA)
...understand structuring numbers and the patterns
Teacher observation
t or group
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No materials needed	Teacher says a forward counting sequence in the range of 1 to 10 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words (forward)	2 to 3 YELLOW	Facile FNWS to 'ten'	... detect errors in counting and identify which number was omitted from the sequence as the teacher is counting.	Teacher will ask each student to count forward from various numbers in the range of 1 to 10.	Variour				Teacher should vary the starting number in the sequence.		Nf 116.3
No materials needed	Teacher says a forward counting sequence in the range of 1 to 30 a omits one number. Students ear point every time they accurately ide the omitted number from the cour sequence. The teacher earns a po anytime the students cannot identi error.				... detect errors						her should vary rting number in e sequence.		Nf 116.4

cy Project January 4, 2011 Kentucky

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Book	Sheet	Name	Cell	Value
IG Master 1.5.11.xls	Intervention Guide		B177	K.CC.6 Identify w
IG Master 1.5.11.xls	Intervention Guide		B178	K.CC.6 Identify w

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cy Project January 4, 2011 Kentucky

Setting (situation & materials)	Activities: Exemplary Learn Experiences ("see glossar									cher Notes	Submitted By	KNP Entrg	Re C
No materials needed	Teacher says a forward counting sequence in the range of 30 to 100 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words (forward)	4 to 5 PURPLE	Facile FNWS to 'one hundred'	... detect errors in counting and identify which number was omitted from the sequence as the teacher is counting.	Teacher will ask each student to count forward from various numbers in the range of 30 to 100.	Variour			Teacher should vary the starting number in the sequence.		Nf 116.5	Lind
Paper and pencil Turkey and feathers pattern	The student rolls a die or selects a card, and places that many feathers on one turkey. The student rolls the die again and places that many feathers on the	Number Words (forward)	1 YELLOW	'ten' (no NWA)	...understand structuring numbers and the patterns	Teacher observation and turky patten	Student group				Wendie Edmonds	180.1	C

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rd beginning r within the ead of having 1).	Counting & Cardinality	Know number names and the count sequence	No materials needed	Teacher says a forward counting sequence in the range of 1 to 30 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words (forward)	3 to 4 GREEN	Facile FNWS to 'thirty'	... detect errors in counting and identify which number was omitted from the sequence as the teacher is counting.	Teacher will ask each student to count forward from various numbers in the range of 1 to 30.	Various				Teacher should vary the starting number in the sequence.	

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ematics; Kentucky Numeracy Project

on Core rd (KCAS) arg)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learn Experiences (*see glossar
by ones and	Counting & Cardinality	Know number names and the count sequence	No materials needed	Teacher says a forward countir sequence in the range of 30 to 100 omits one number. Students ear point every time they accurately ide the omitted number from the cour sequence. The teacher earns a pc anytime the students cannot identi error.
r the number up is greater qual to the in another natching and egies.	Counting & Cardinality	Compare numbers	Paper and pencil Turkey and feathers pattern @ mathwire.com	The student rolls a die or selects a and places that many feathers on turkey. The student rolls the die a and places that many feathers on other turkey. The student should t count the total number of feathers either write or select a number car express the total or sum.
r the number up is greater qual to the in another natching and	Counting & Cardinality	Compare numbers	Paper and pencil Turkey and feathers pattern @ mathwire.com	The student rolls a die or selects a and places that many feathers on turkey. The student rolls the die a and places that many feathers on other turkey. The student should t counts the total number of feather

Find and Replace

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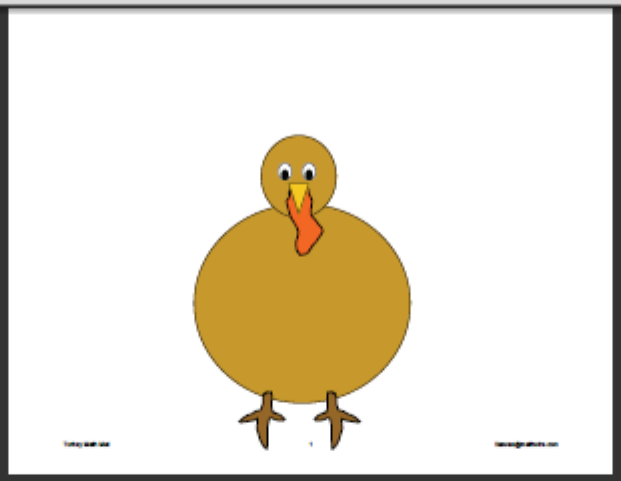
Find what: greater than, less than

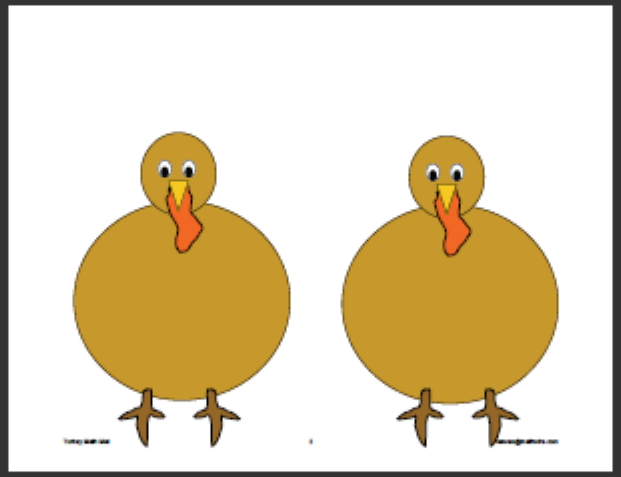
Choose One and Click on It

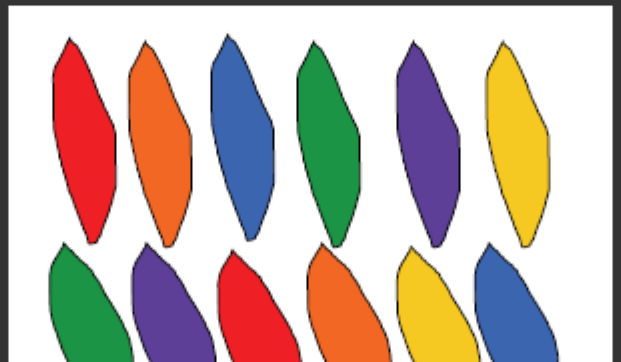
Book	Sheet	Name	Cell	Value
IG Master 1.5.11.xls	Intervention Guide		B177	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B178	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B179	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B180	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B181	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		F204	Students pairs: Player 1 takes a card from the deck an
IG Master 1.5.11.xls	Intervention Guide		B207	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B208	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B209	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B210	K.CC.6 Identify whether the number of objects in one
IG Master 1.5.11.xls	Intervention Guide		B211	K.CC.6 Identify whether the number of objects in one

Kentucky Center for Mathematics; Kentucky Numeracy Project http://kentuckymathematics.org

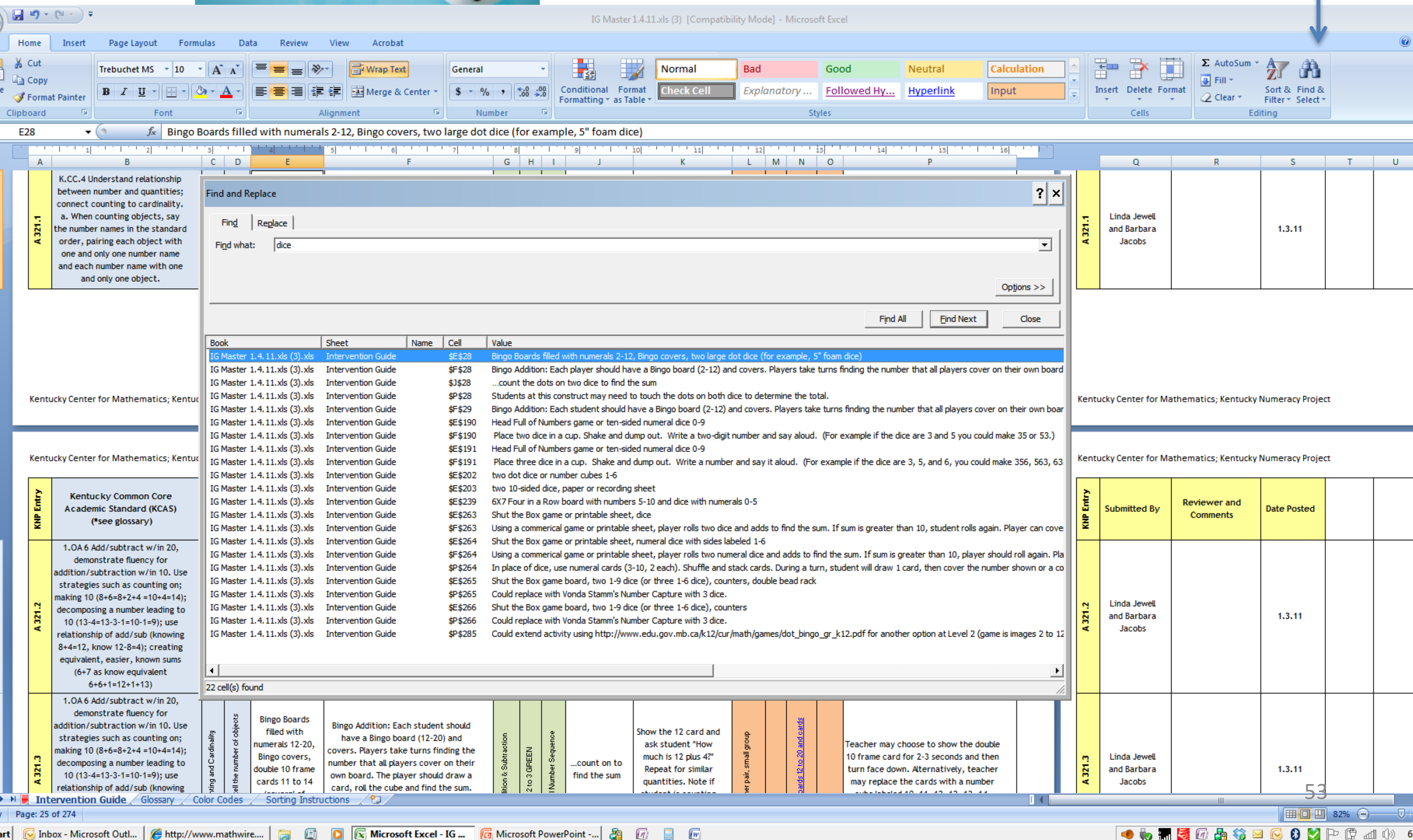
KNP Entry	Kentucky Common Core Academic Standard (KCAS) ("see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences ("see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." ("see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference	Teacher No
Nf 116.5	K.CC.1 Count to 100 by ones and by tens.	Counting & Cardinality	Know number names and the count sequence	No materials needed	Teacher says a forward counting sequence in the range of 30 to 100 and omits one number. Students earn a point every time they accurately identify the omitted number from the counting sequence. The teacher earns a point anytime the students cannot identify the error.	Number Words (forward)	4 to 5 PURPLE	Facile FNWS to 'one hundred'	... detect errors in counting and identify which number was omitted from the sequence as the teacher is counting.	Teacher will ask each student to count forward from various numbers in the range of 30 to 100.	Various				Teacher should the starting num the sequenc
Nf 180.1	K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Counting & Cardinality	Compare numbers	Paper and pencil Turkey and feathers pattern @ mathwire.com	The student rolls a die or selects a card, and places that many feathers on one turkey. The student rolls the die again and places that many feathers on the other turkey. The student should then count the total number of feathers and either write or select a number card to express the total or sum.	Number Words (forward)	0 to 1 YELLOW	Initial FNWS to 'ten' (no NWA)	...understand structuring numbers and the patterns that occur when structuring to 5.	Teacher observation and turky patten sheets	independent group		http://www.mathwire.com/freeare		Printa
Nf 180.2	K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Counting & Cardinality	Compare numbers	Paper and pencil Turkey and feathers pattern @ mathwire.com	The student rolls a die or selects a card, and places that many feathers on one turkey. The student rolls the die again and places that many feathers on the other turkey. The student should then counts the total number of feathers and either write or select a number card to express the total or sum.	Number Words (forward)	4 to 5 PURPLE	Facile FNWS to 'one hundred'	...understand structuring numbers and the patterns that occur when structuring to 10.	Teacher observation and turky patten sheets	independent or group		http://www.mathwire.com/freeare		
3	K.CC.6 Identify whether the number of objects in one group is greater	inality	ber	Paper and pencil Turkey and	The student rolls a die or selects a card, and places that many feathers on one turkey. The student rolls the die again	ruard)	OW	con' (drop back	...understand structuring numbers and	Teacher observation	group		m/freeareallturk		







Got Dice?


IG Master 1.4.11.xls (3) [Compatibility Mode] - Microsoft Excel
E28
Bingo Boards filled with numerals 2-12, Bingo covers, two large dot dice (for example, 5" foam dice)
Find and Replace
Find
Replace
Find what: dice
Options >>
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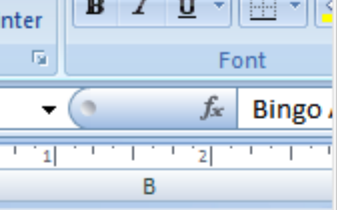
IG Master 1.4.11.xls (3).xls | Intervention Guide | E28 | Bingo Boards filled with numerals 2-12, Bingo covers, two large dot dice (for example, 5" foam dice)
IG Master 1.4.11.xls (3).xls | Intervention Guide | F28 | Bingo Addition: Each player should have a Bingo board (2-12) and covers. Players take turns finding the number that all players cover on their own board
IG Master 1.4.11.xls (3).xls | Intervention Guide | J28 | ...count the dots on two dice to find the sum
IG Master 1.4.11.xls (3).xls | Intervention Guide | P28 | Students at this construct may need to touch the dots on both dice to determine the total.
IG Master 1.4.11.xls (3).xls | Intervention Guide | F29 | Bingo Addition: Each student should have a Bingo board (2-12) and covers. Players take turns finding the number that all players cover on their own boar
IG Master 1.4.11.xls (3).xls | Intervention Guide | E190 | Head Full of Numbers game or ten-sided numeral dice 0-9
IG Master 1.4.11.xls (3).xls | Intervention Guide | F190 | Place two dice in a cup. Shake and dump out. Write a two-digit number and say aloud. (For example if the dice are 3 and 5 you could make 35 or 53.)
IG Master 1.4.11.xls (3).xls | Intervention Guide | E191 | Head Full of Numbers game or ten-sided numeral dice 0-9
IG Master 1.4.11.xls (3).xls | Intervention Guide | F191 | Place three dice in a cup. Shake and dump out. Write a number and say it aloud. (For example if the dice are 3, 5, and 6, you could make 356, 563, 63
IG Master 1.4.11.xls (3).xls | Intervention Guide | E202 | two dot dice or number cubes 1-6
IG Master 1.4.11.xls (3).xls | Intervention Guide | E203 | two 10-sided dice, paper or recording sheet
IG Master 1.4.11.xls (3).xls | Intervention Guide | E239 | 6X7 Four in a Row board with numbers 5-10 and dice with numerals 0-5
IG Master 1.4.11.xls (3).xls | Intervention Guide | E263 | Shut the Box game or printable sheet, dice
IG Master 1.4.11.xls (3).xls | Intervention Guide | F263 | Using a commerical game or printable sheet, player rolls two dice and adds to find the sum. If sum is greater than 10, student rolls again. Player can cove
IG Master 1.4.11.xls (3).xls | Intervention Guide | E264 | Shut the Box game or printable sheet, numeral dice with sides labeled 1-6
IG Master 1.4.11.xls (3).xls | Intervention Guide | F264 | Using a commerical game or printable sheet, player rolls two numeral dice and adds to find the sum. If sum is greater than 10, player should roll again. Pla
IG Master 1.4.11.xls (3).xls | Intervention Guide | P264 | In place of dice, use numeral cards (3-10, 2 each). Shuffle and stack cards. During a turn, student will draw 1 card, then cover the number shown or a co
IG Master 1.4.11.xls (3).xls | Intervention Guide | E265 | Shut the Box game board, two 1-9 dice (or three 1-6 dice), counters, double bead rack
IG Master 1.4.11.xls (3).xls | Intervention Guide | P265 | Could replace with Vonda Stamm's Number Capture with 3 dice.
IG Master 1.4.11.xls (3).xls | Intervention Guide | E266 | Shut the Box game board, two 1-9 dice (or three 1-6 dice), counters
IG Master 1.4.11.xls (3).xls | Intervention Guide | P266 | Could replace with Vonda Stamm's Number Capture with 3 dice.
IG Master 1.4.11.xls (3).xls | Intervention Guide | P285 | Could extend activity using http://www.edu.gov.mb.ca/k12/cur/math/games/dot_bingo_gr_k12.pdf for another option at Level 2 (game is images 2 to 12
22 cell(s) found
Kentucky Center for Mathematics; Kentucky Numeracy Project
Intervention Guide
Glossary
Color Codes
Sorting Instructions



CC.4 Understand relationship
tween number and quantities;
nect counting to cardinality.
When counting objects, say
number names in the standard
der, pairing each object with
e and only one number name
d each number name with one
and only one object.

Center for Mathematics; Kentuc

Center for Mathematics; Kentuc

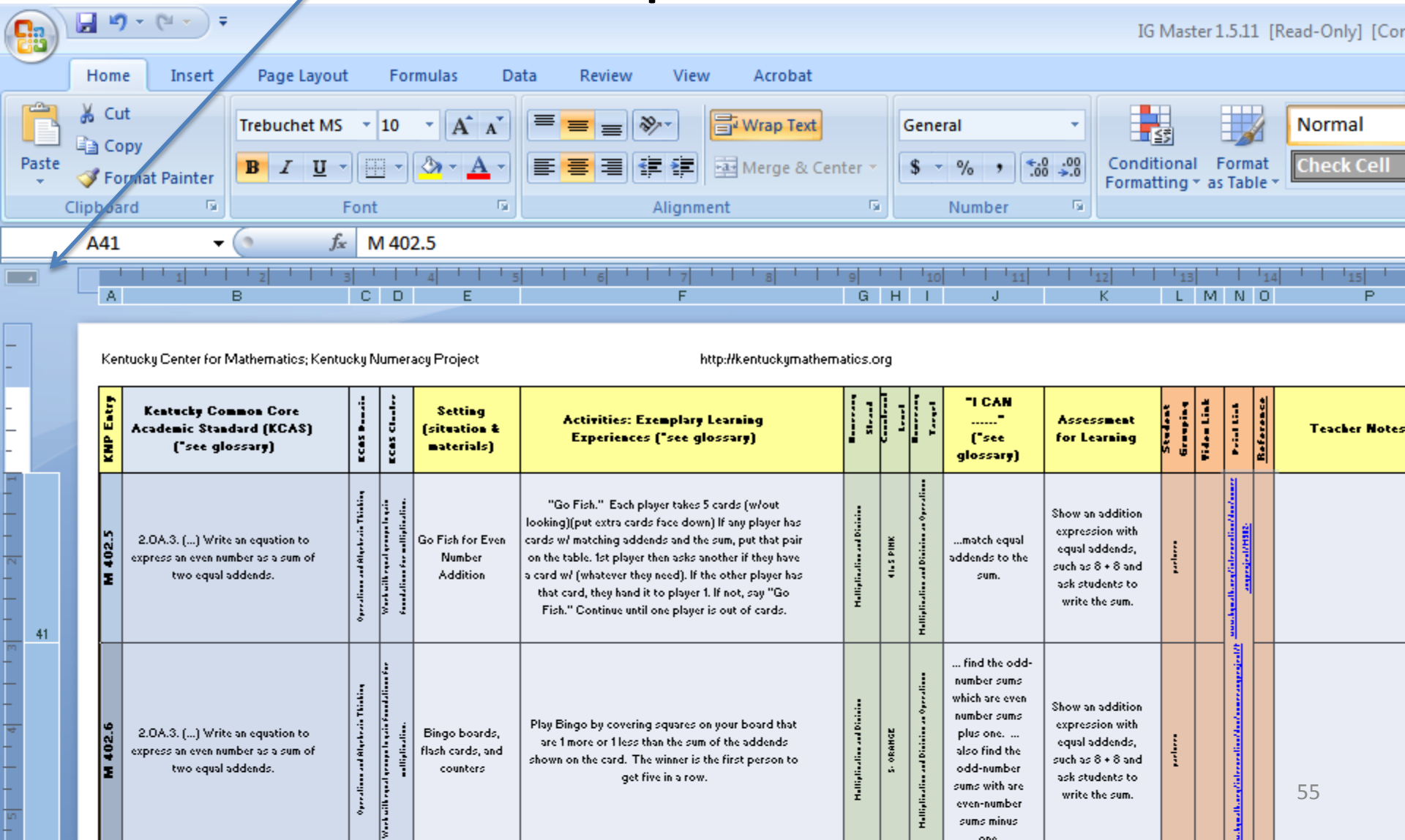
Kentucky Common Core
Academic Standard (KCAS)
(*see glossary)

Book	Sheet	Name	Cell	Value
IG Master 1.4.11.xls (3).xls	Intervention Guide		E28	Bingo Boards filled with numerals 2-12, Bingo covers, two large dot dice (for example,
IG Master 1.4.11.xls (3).xls	Intervention Guide		F28	Bingo Addition: Each player should have a Bingo board (2-12) and covers. Players take
IG Master 1.4.11.xls (3).xls	Intervention Guide		J28	...count the dots on two dice to find the sum
IG Master 1.4.11.xls (3).xls	Intervention Guide		P28	Students at this construct may need to touch the dots on both dice to determine the to
IG Master 1.4.11.xls (3).xls	Intervention Guide		F29	Bingo Addition: Each student should have a Bingo board (2-12) and covers. Players tak
IG Master 1.4.11.xls (3).xls	Intervention Guide		E190	Head Full of Numbers game or ten-sided numeral dice 0-9
IG Master 1.4.11.xls (3).xls	Intervention Guide		F190	Place two dice in a cup. Shake and dump out. Write a two-digit number and say aloud
IG Master 1.4.11.xls (3).xls	Intervention Guide		E191	Head Full of Numbers game or ten-sided numeral dice 0-9
IG Master 1.4.11.xls (3).xls	Intervention Guide		F191	Place three dice in a cup. Shake and dump out. Write a number and say it aloud. (Fo
IG Master 1.4.11.xls (3).xls	Intervention Guide		E202	two dot dice or number cubes 1-6
IG Master 1.4.11.xls (3).xls	Intervention Guide		E203	two 10-sided dice, paper or recording sheet
IG Master 1.4.11.xls (3).xls	Intervention Guide		E239	6X7 Four in a Row board with numbers 5-10 and dice with numerals 0-5
IG Master 1.4.11.xls (3).xls	Intervention Guide		E263	Shut the Box game or printable sheet, dice
IG Master 1.4.11.xls (3).xls	Intervention Guide		F263	Using a commerical game or printable sheet, player rolls two dice and adds to find the s
IG Master 1.4.11.xls (3).xls	Intervention Guide		E264	Shut the Box game or printable sheet, numeral dice with sides labeled 1-6
IG Master 1.4.11.xls (3).xls	Intervention Guide		F264	Using a commerical game or printable sheet, player rolls two numeral dice and adds to f
IG Master 1.4.11.xls (3).xls	Intervention Guide		P264	In place of dice, use numeral cards (3-10, 2 each). Shuffle and stack cards. During a tu
IG Master 1.4.11.xls (3).xls	Intervention Guide		E265	Shut the Box game board, two 1-9 dice (or three 1-6 dice), counters, double bead rack
IG Master 1.4.11.xls (3).xls	Intervention Guide		P265	Could replace with Vonda Stamm's Number Capture with 3 dice.
IG Master 1.4.11.xls (3).xls	Intervention Guide		E266	Shut the Box game board, two 1-9 dice (or three 1-6 dice), counters
IG Master 1.4.11.xls (3).xls	Intervention Guide		P266	Could replace with Vonda Stamm's Number Capture with 3 dice.
IG Master 1.4.11.xls (3).xls	Intervention Guide		P285	Could extend activity using http://www.edu.gov.mb.ca/k12/cur/math/games/dot_bingo

22 cell(s) found

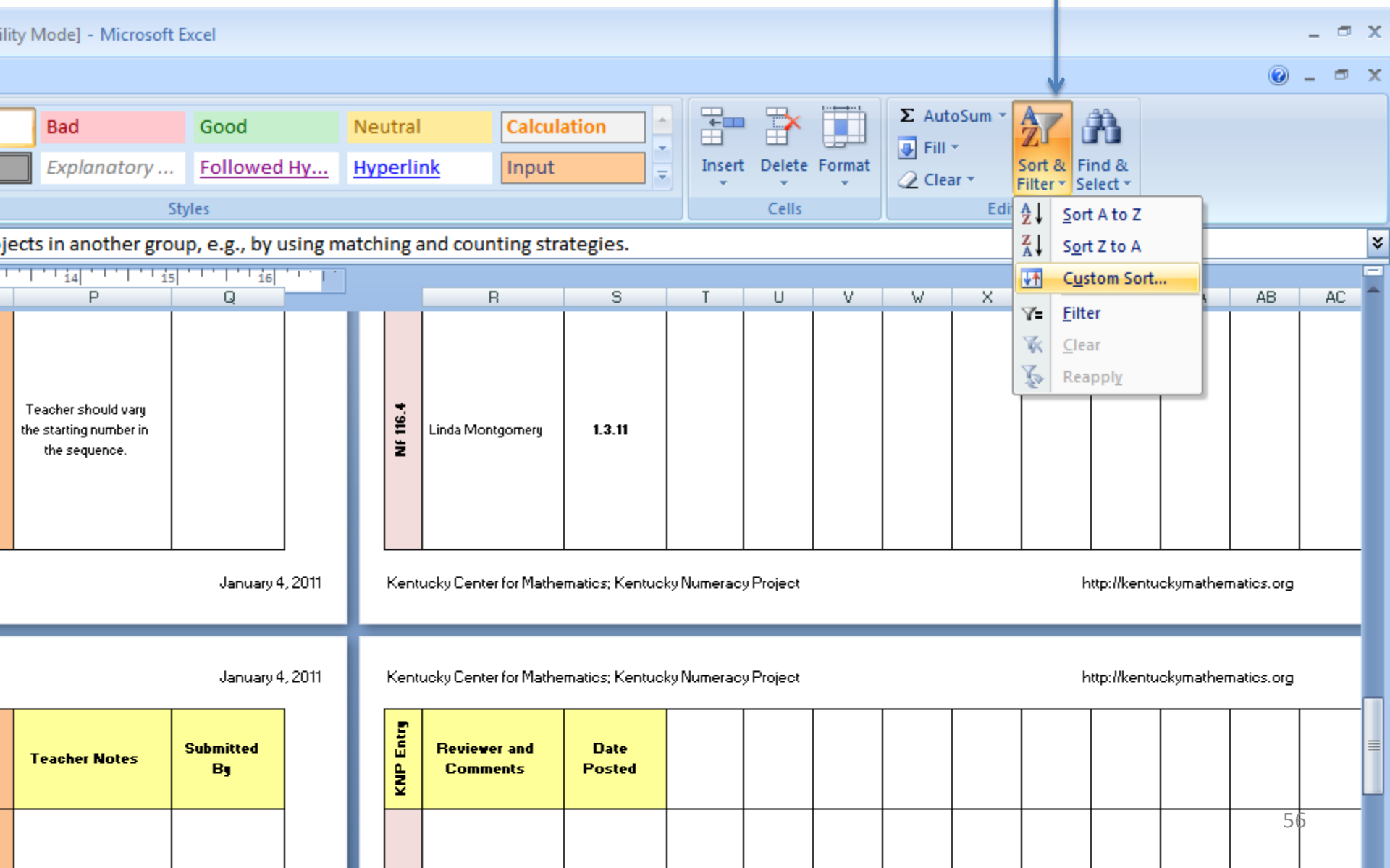
.OA 6 Add/subtract w/in 20, demonstrate fluency for ition/subtraction w/in 10. Use rategies such as counting on; ing 10 (8+6=8+2+4 =10+4=14); composing a number leading to 0 (13-4=13-3-1=10-1=9); use ationship of add/sub (knowing 4=12, know 12-8=4); creating	ounting and Cardinality	to tell the number of objects	Bingo Board filled with numerals 2-12, Bingo covers, two numeral cubes with	Bingo Addition: Each student should have a Bingo board (2-12) and covers. Players take turns finding the number that all players cover on their own board. The player should roll both dice and find the sum. The first student to	ddition & Subtraction	1 to 2 BLUE	Figurative counting	...add when items are screened	Show student a 6 and a 4 on numeral cubes and ask student "How much is 6 and 4?". If desired, repeat with other amounts.	artner pair, small group	Bingo Boards 2 to 12

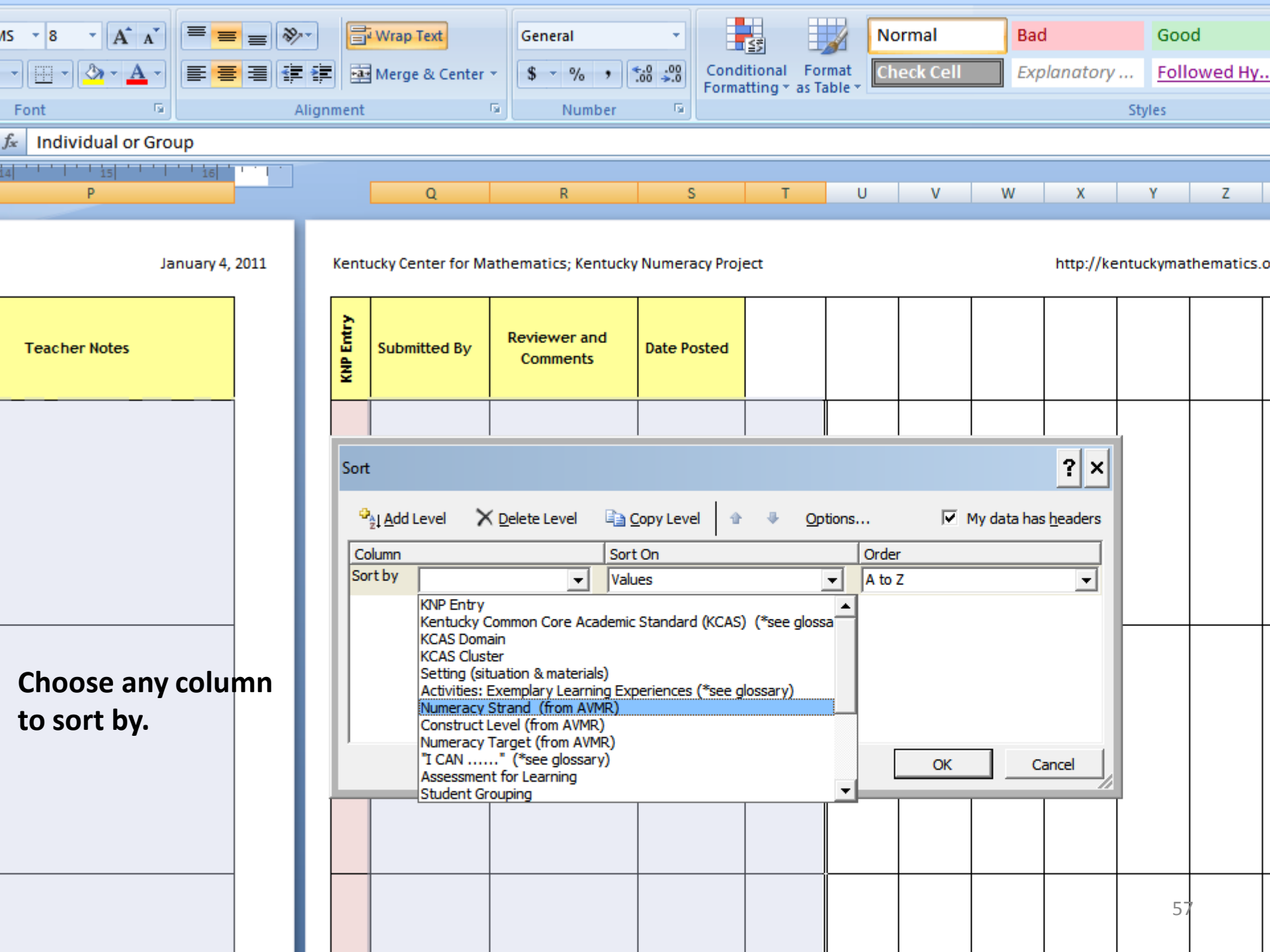
Before Sorting, ***ALWAYS*** Highlight the Entire Spreadsheet



See SAMPLE C
(for one possible re-organization based on a specific sorting result)

Custom Sort




Wrap Text
General
Merge & Center
Conditional Formatting
Format as Table
Normal
Bad
Good
Check Cell
Explanatory ...
Followed Hy..
Font
Alignment
Number
Styles
Individual or Group
P
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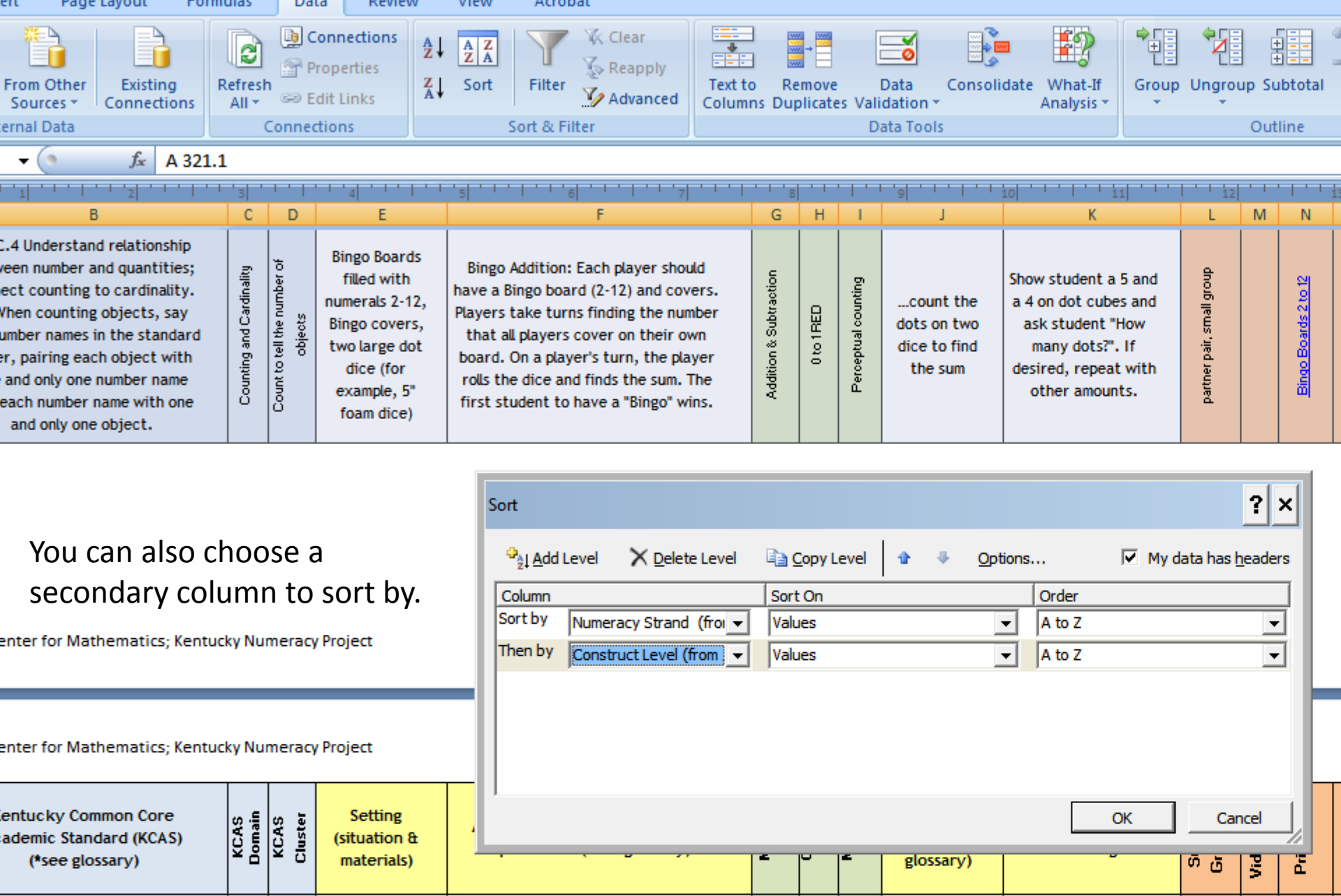
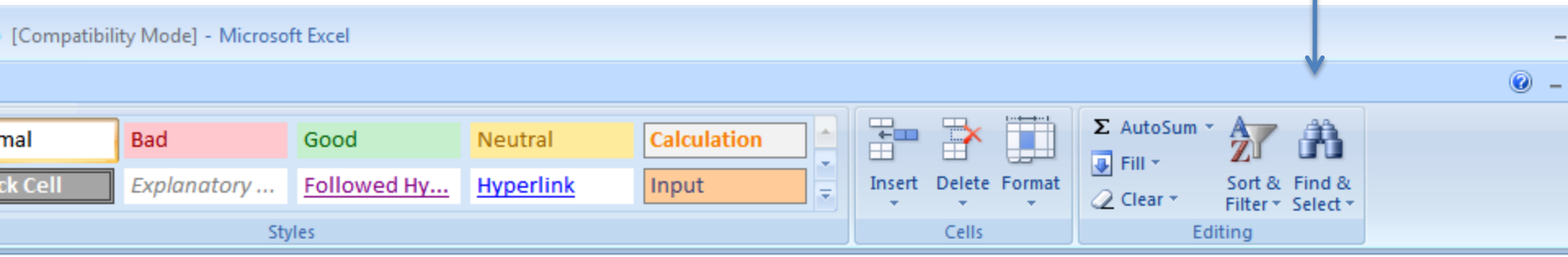
January 4, 2011
Kentucky Center for Mathematics; Kentucky Numeracy Project
http://kentuckymathematics.o
Teacher Notes
KNP Entry
Submitted By
Reviewer and Comments
Date Posted
Sort
Add Level
Delete Level
Copy Level
Options...
My data has headers
Column
Sort On
Order
Sort by
Values
A to Z
KNP Entry
Kentucky Common Core Academic Standard (KCAS) (*see glossa
KCAS Domain
KCAS Cluster
Setting (situation & materials)
Activities: Exemplary Learning Experiences (*see glossary)
Numeracy Strand (from AVMR)
Construct Level (from AVMR)
Numeracy Target (from AVMR)
"I CAN ....." (*see glossary)
Assessment for Learning
Student Grouping
OK
Cancel
Choose any column to sort by.


Page Layout
Formulas
Data
Review
View
Acrobat
From Other Sources
Existing Connections
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Text to Columns
Remove Duplicates
Data Validation
Consolidate
What-If Analysis
Group
Ungroup
Subtotal
External Data
Connections
Sort & Filter
Data Tools
Outline
A 321.1
B
C
D
E
F
G
H
I
J
K
L
M
N
.4 Understand relationship veen number and quantities; ect counting to cardinality. When counting objects, say umber names in the standard er, pairing each object with and only one number name each number name with one and only one object.
Counting and Cardinality
Count to tell the number of objects
Bingo Boards filled with numerals 2-12, Bingo covers, two large dot dice (for example, 5" foam dice)
Bingo Addition: Each player should have a Bingo board (2-12) and covers. Players take turns finding the number that all players cover on their own board. On a player's turn, the player rolls the dice and finds the sum. The first student to have a "Bingo" wins.
Addition & Subtraction
0 to 1 RED
Perceptual counting
...count the dots on two dice to find the sum
Show student a 5 and a 4 on dot cubes and ask student "How many dots?". If desired, repeat with other amounts.
partner pair, small group
Bingo Boards 2 to 12
You can also choose a secondary column to sort by.
enter for Mathematics; Kentucky Numeracy Project
Sort
Add Level
Delete Level
Copy Level
Options...
My data has headers
Column
Sort On
Order
Sort by
Numeracy Strand (fro
Values
A to Z
Then by
Construct Level (from
Values
A to Z
OK
Cancel
enter for Mathematics; Kentucky Numeracy Project
entucky Common Core ademic Standard (KCAS) (*see glossary)
KCAS Domain
KCAS Cluster
Setting (situation & materials)
glossary)
A 6 Add/subtract w/in 20, demonstrate fluency for ion/subtraction w/in 10. Use tegies such as counting on; g 10 (8+6=8+2+4 =10+4=14);
Bingo Board filled with
Bingo Addition: Each student should have a Bingo board (2-12) and covers.
Show student a 6 and a 4 on numeral cubes
68

Kentucky Center for Mathematics; Kentucky Numeracy Project **SEE KNP SAMPLE C** http://kentuckymathematics.org

KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." (*see glossary)	Assessment for Learning	Student
Ni 118.0	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	numeral cards 0-5	Lay out all numeral cards 1-5 randomly on the table. Ask the student to point to the ___(1-5). If student is incorrect, show the numeral and say it's name. Have the student repeat the name and trace it with his/her finger.	Numeral Identification	0 YELLOW	Numerals to 'ten'	... recognize numerals 1-5.	show student a random array of numerals and ask him/her to show you a specific numeral	
Ni 119.0	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	TicTacToe Board; random combinations of numerals 1-5; 3 sets of domino dot cards 1- 5; counters of 2 colors (1 for ea player)	Student partners play TicTacToe game. Shuffle dot cards and place them in a pile facedown. Players take turns choosing top card from draw pile, placing a marker on a corresponding numeral on the tic tac toe board.	Numeral Identification	0 YELLOW	Numerals to 'ten'	... recognize numerals to 5 and match quantities to them.	Teacher will show a numeral card in the range 1-5 and students will put up the matching number of fingers.	
Ni 122.0	K.CC.7 Compare two numbers between 1 and 10 presented as written numerals.	Counting & Cardinality	Compare numbers	two dot dice or number cubes 1-6	Student pairs each tosses a die and compare numbers. The student with the greater number makes a comparison statement ("5 is greater than 3") & writes the comparsion on a recording sheet. Record six comparisons.	Numeral Identification	0 YELLOW	Numerals to 'ten'	... identify and compare numerals 1-6.	Adapted from Everyday Day Counts Partner Games - game 19	
					Working in pairs, the students will						

Another “FIND” Function



K	L	M	N	O	P	Q	R	S	T	U
servation patten ets	independent or group		http://www.mathwire.com/strategies/matsseasonal.html			Nf 180.3	Wendie Edmonds	Cindy Aossey	1.3.11	
servation patten ets	independent or group		http://www.mathwire.com/strategies/matsseasonal.html			Nf 180.4	Wendie Edmonds	Cindy Aossey	1.3.11	

Kentucky Center for Mathematics; Kentucky Numeracy Project

KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: E Experienc
S 268.5	2.OA.2. Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.	Operations and Algebraic Thinking	Add and subtract within 20	Numeral cards, 2 each of 5 through 10	Student partne teacher give range 11 to 1 card and sho determines a addend. May b customized c
S 292.1	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	Bingo Cards (see link), Bingo covers, die with regular dot pattern or numeral cube (1 to 6)	Give each stu with multiple r 6. Use the generate a r Each student is on ONE squar rolled. Stud numeral, finge or frame. The in a row, down
S 292.2	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	Bingo Cards (see link), Bingo covers, cube with sides labeled "5,6,7,8,9,10"	Give each stu with multiple r 10 (5 versions die (or a sp random numbe is allowed to square match Students may finger pattern, The first stud down, or diag

283

284

285

Find and Replace

Find | Replace

Find what: bingo

Book	Sheet	Name	Cell	Value
IG Master 1.4.11.xls (3).xls	Intervention Guide		E28	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		F28	Bingo Addi
IG Master 1.4.11.xls (3).xls	Intervention Guide		N28	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		E29	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		F29	Bingo Addi
IG Master 1.4.11.xls (3).xls	Intervention Guide		N29	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		E30	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		F30	Bingo Addi
IG Master 1.4.11.xls (3).xls	Intervention Guide		N30	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		E31	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		F31	Bingo Addi
IG Master 1.4.11.xls (3).xls	Intervention Guide		N31	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		E42	Bingo boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		F42	Play Bingo
IG Master 1.4.11.xls (3).xls	Intervention Guide		N42	Bingo Boar
IG Master 1.4.11.xls (3).xls	Intervention Guide		E76	Bingo Game
IG Master 1.4.11.xls (3).xls	Intervention Guide		E99	Bingo Game
IG Master 1.4.11.xls (3).xls	Intervention Guide		E134	Bingo Game
IG Master 1.4.11.xls (3).xls	Intervention Guide		E169	Bingo Game
IG Master 1.4.11.xls (3).xls	Intervention Guide		E184	Bingo cards
IG Master 1.4.11.xls (3).xls	Intervention Guide		N184	kymath.org
IG Master 1.4.11.xls (3).xls	Intervention Guide		E185	Bingo cards
IG Master 1.4.11.xls (3).xls	Intervention Guide		N185	kymath.org
IG Master 1.4.11.xls (3).xls	Intervention Guide		E284	Bingo Card
IG Master 1.4.11.xls (3).xls	Intervention Guide		F284	Give each s
IG Master 1.4.11.xls (3).xls	Intervention Guide		N284	http://www
IG Master 1.4.11.xls (3).xls	Intervention Guide		E285	Bingo Card

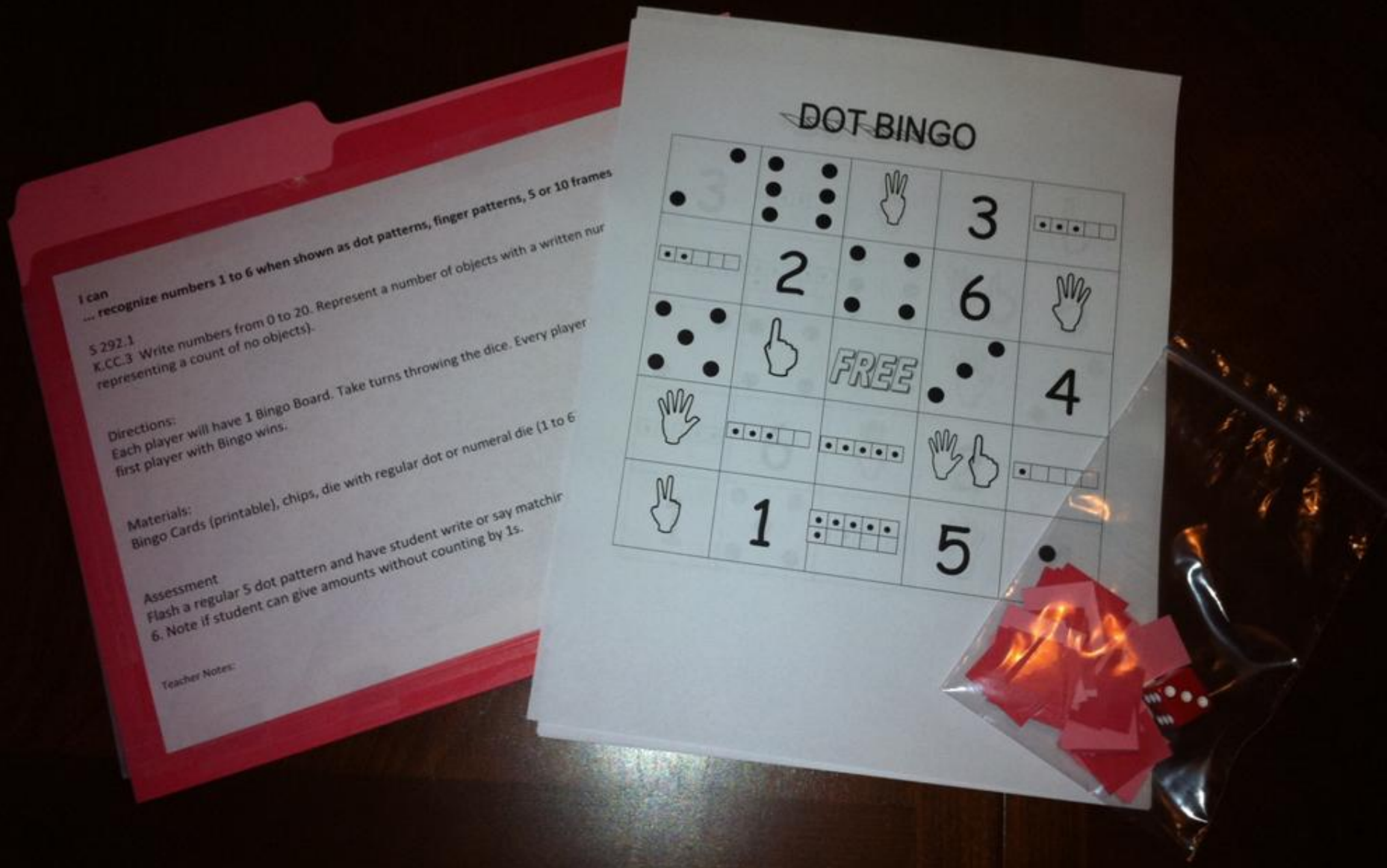
S 292.1	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	Bingo Cards (see link), Bingo covers, die with regular dot pattern or numeral cube (1 to 6)	Give each student a Bingo Card filled with multiple representations of 1-6. Use the die (or spinner) to generate a random number 1-6. Students can place a chip on ONE square matching the amount rolled, choosing the numeral, finger pattern, dot pattern or frame. Game end when a student has 5 in a row, down, or diagonally.	Structuring	0 to 1 RED	facile structurer to five	... recognize numbers 1 to 6 when shown as dot patterns, finger patterns, 5 or 10 frames or numeral.	Flash a regular 5 dot pattern and have student write or say matching number. Repeat for a regular 3 and a regular 6. Note if student can give amounts without counting by 1s.	small group whole class		http://www.edu.gov.mb.ca/k12/cur/math/gamut/dot_bingo_k.pdf	
S 292.2	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Counting & Cardinality	Know number names and the count sequence	Bingo Cards (see link), Bingo covers, cube with sides labeled "5,6,7,8,9,10"	Give each student a Bingo card filled with multiple representations of 5-10 (5 versions are avialable). Use the die (or spinner) to generate random numbers 5 to 10. Students can place a chip on ONE square matching the amount rolled, choosing the numeral, finger pattern, dot pattern, 10 frame. Game end when a student has 5 in a row, down, or diagonally.	Structuring	1 to 2 BLUE	intermediate structurer to ten	... recognize numbers 5 to 10 when shown as dot patterns, tally marks, finger patterns, 10 frames or numeral.	Teacher should flash 6 fingers and have student write or say matching number. Repeat for 4 fingers and 9.	small group		5-10 Bingo Boards	
S 292.3	K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	Operations and Algebraic Thinking	Understand addition as putting together and adding to, subtraction as	Bingo Cards (see link), Bingo covers, number cube with sides "0,1,2,3,4,5"	Give each student a Bingo card filled randomly with the numbers 0, 2, 4, 6, 8, 10 (6 versions available). Roll the cube and call out the number rolled. Players must determine the double of the number and then put a chip on ONE square with the double. Game end when a student has 5 in a row, down, or diagonally.	Structuring	2 to 3 GREEN	facile structurer to ten	... quickly determine the double of 1 through 5 without counting and without materials.	Ask student to write or say the sums of 4+4 and 3+3.	small group		Doubles Bingo Boards	

See KNP SAMPLE A

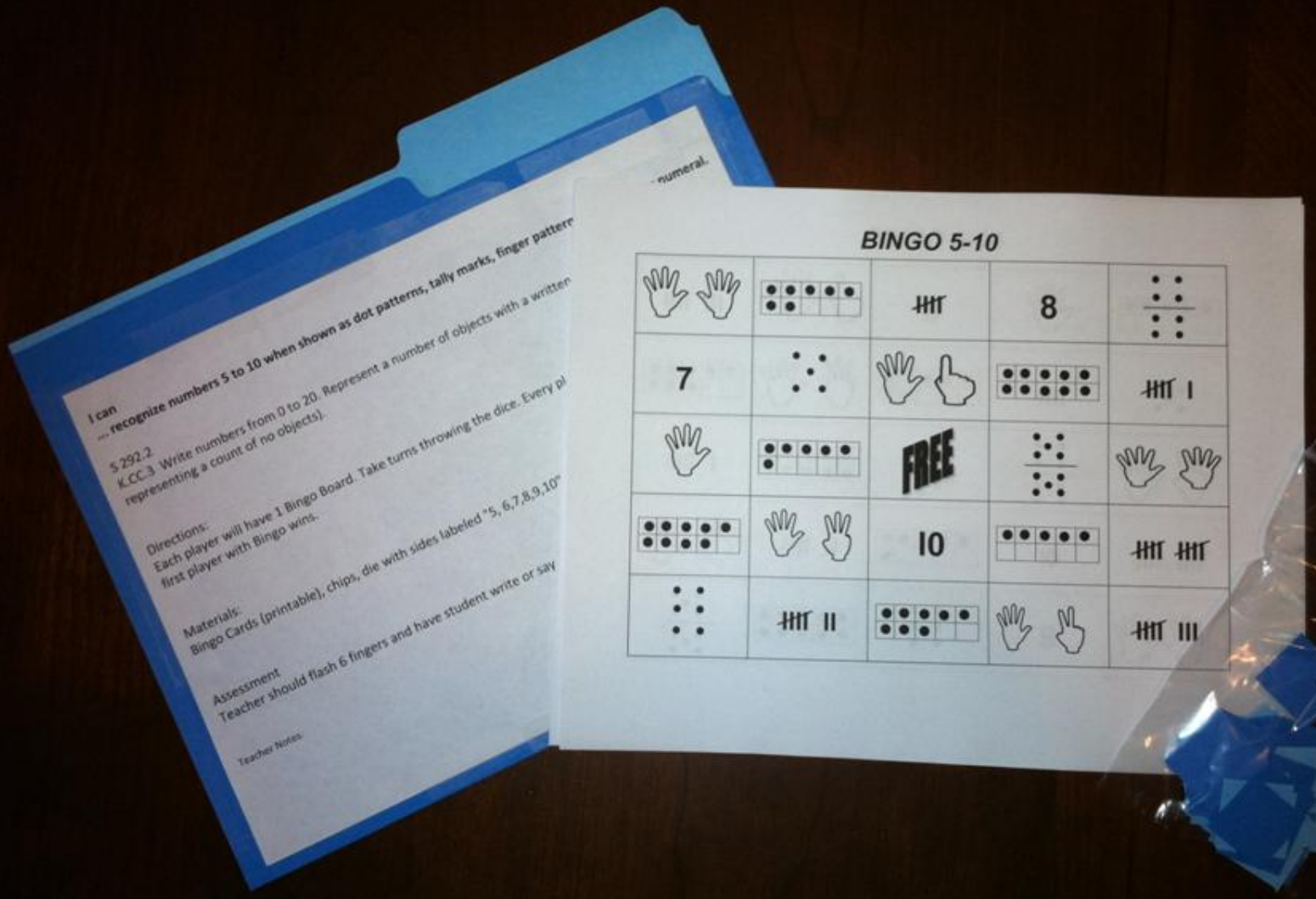
Kentucky Center for Mathematics; Kentucky Numeracy Project http://kentuckymathematics.org

KNP Entry	Kentucky Common Core Academic Standard (KCAS) (*see glossary)	KCAS Domain	KCAS Cluster	Setting (situation & materials)	Activities: Exemplary Learning Experiences (*see glossary)	Numeracy Strand	Construct Level	Numeracy Target	"I CAN ....." (*see glossary)	Assessment for Learning	Student Grouping	Video Link	Print Link	Reference
S 292.4	K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Number Base 10	rk with numbers 11-19 gain foundations for	Bingo cards (see link), Bingo covers, 20 frames (big enough for	Give each student a Bingo board filled randomly with the numbers 10 to 20 (6 versions available). Flash a 20 frame, arranged either pair-wise or 10+ with 10 to 20 dots. Players must determine the	Structuring	3 to 4 PURPLE	ermediate structurer to twenty	... recognize amounts flashed on a 20 frame.	Flash a 20 frame with 13 dots. Ask "How many dots? How many dots on the top row? How many dots on the	small group		ngo Boards 10-20 and cards	

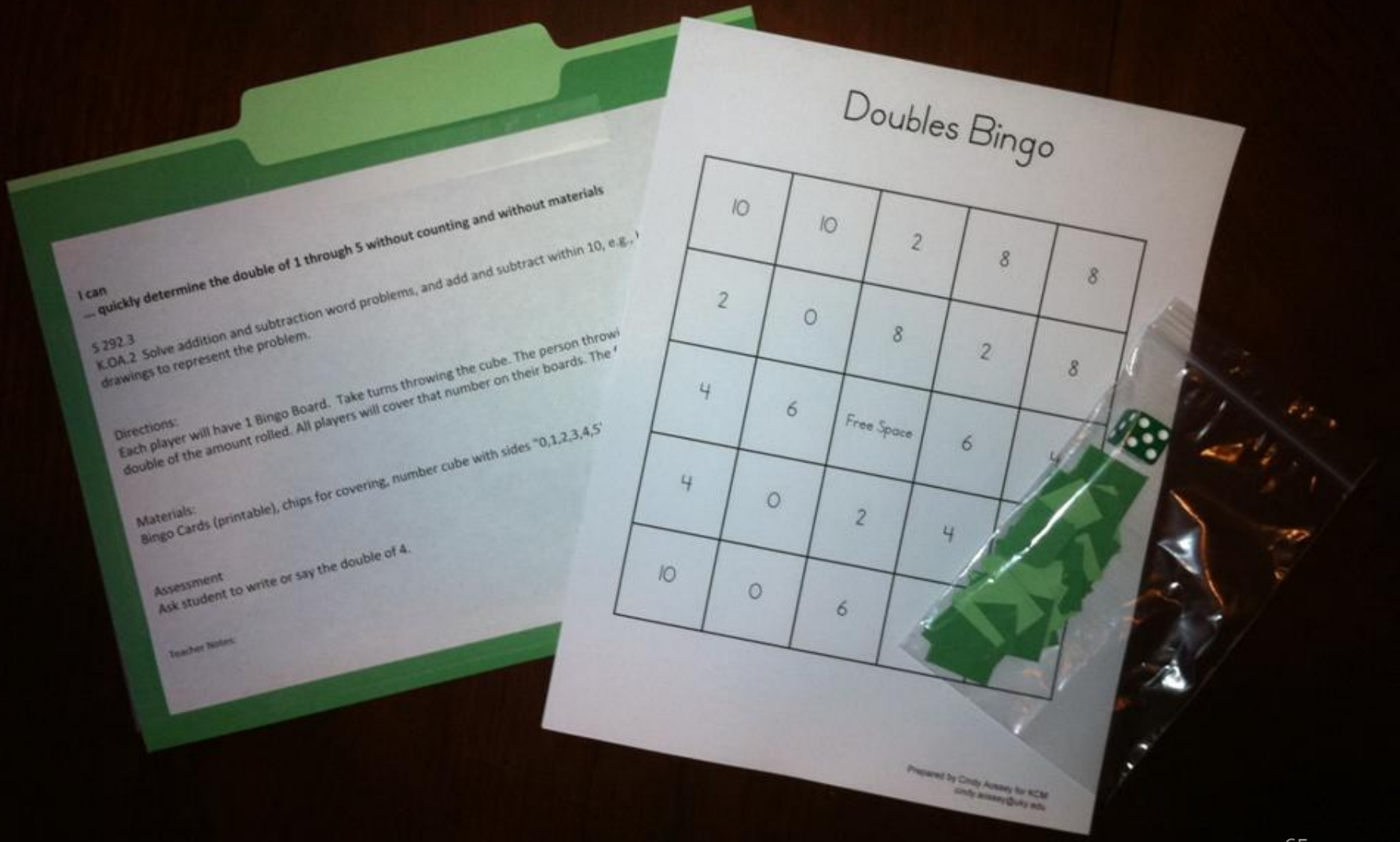
S 292.1


I can
... recognize numbers 1 to 6 when shown as dot patterns, finger patterns, 5 or 10 frames
S 292.1
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written nur
representing a count of no objects).
Directions:
Each player will have 1 Bingo Board. Take turns throwing the dice. Every player
first player with Bingo wins.
Materials:
Bingo Cards (printable), chips, die with regular dot or numeral die (1 to 6
Assessment
Flash a regular 5 dot pattern and have student write or say matchir
6. Note if student can give amounts without counting by 1s.
Teacher Notes:
DOT BINGO
3
2
6
FREE
4
1
5

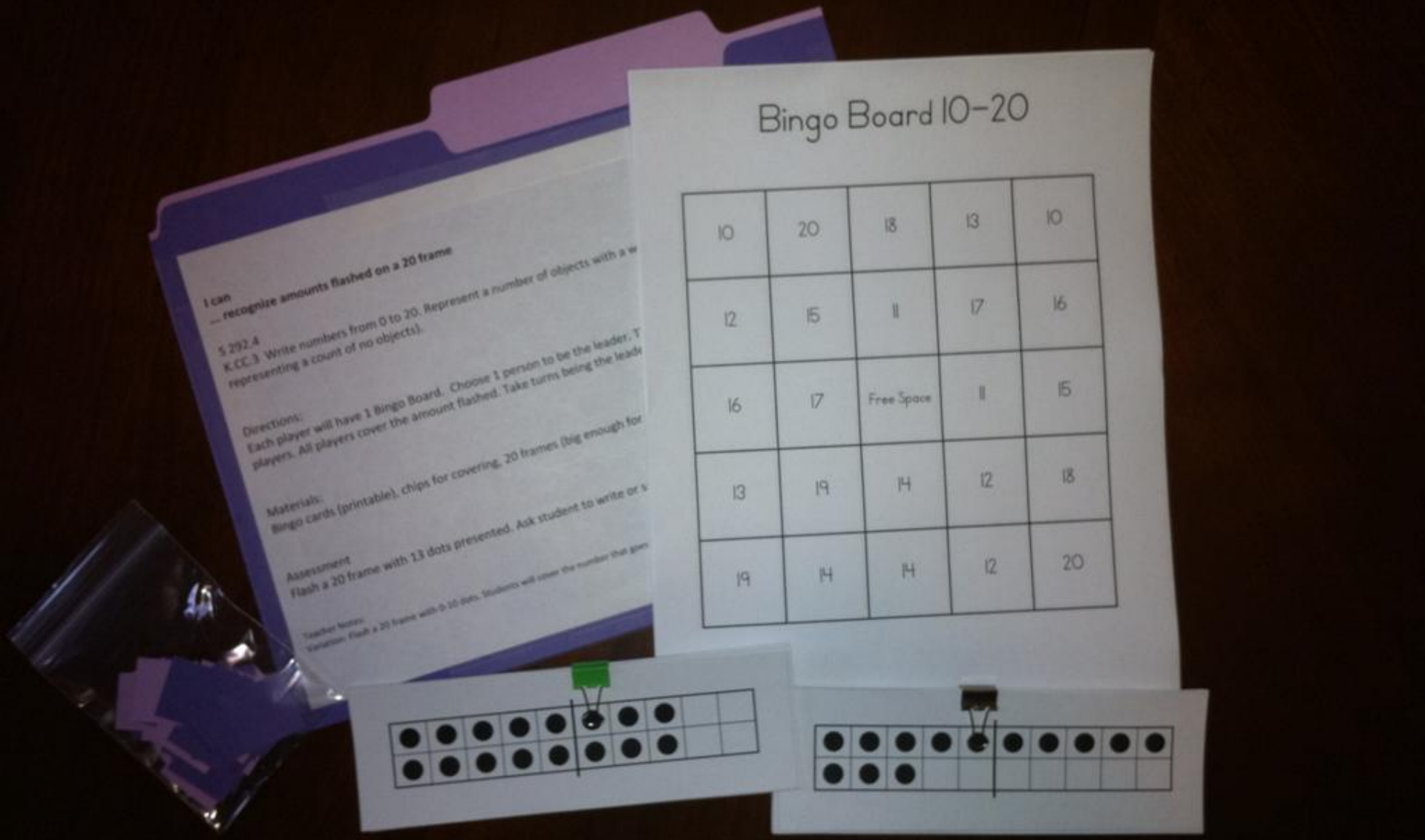
S 292.2


I can
recognize numbers 5 to 10 when shown as dot patterns, tally marks, finger patterr
S 292.2
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written
representing a count of no objects).
Directions:
Each player will have 1 Bingo Board. Take turns throwing the dice. Every pl
first player with Bingo wins.
Materials:
Bingo Cards (printable), chips, die with sides labeled "5, 6,7,8,9,10"
Assessment
Teacher should flash 6 fingers and have student write or say
Teacher Notes
numeral.
BINGO 5-10
8
7
FREE
10

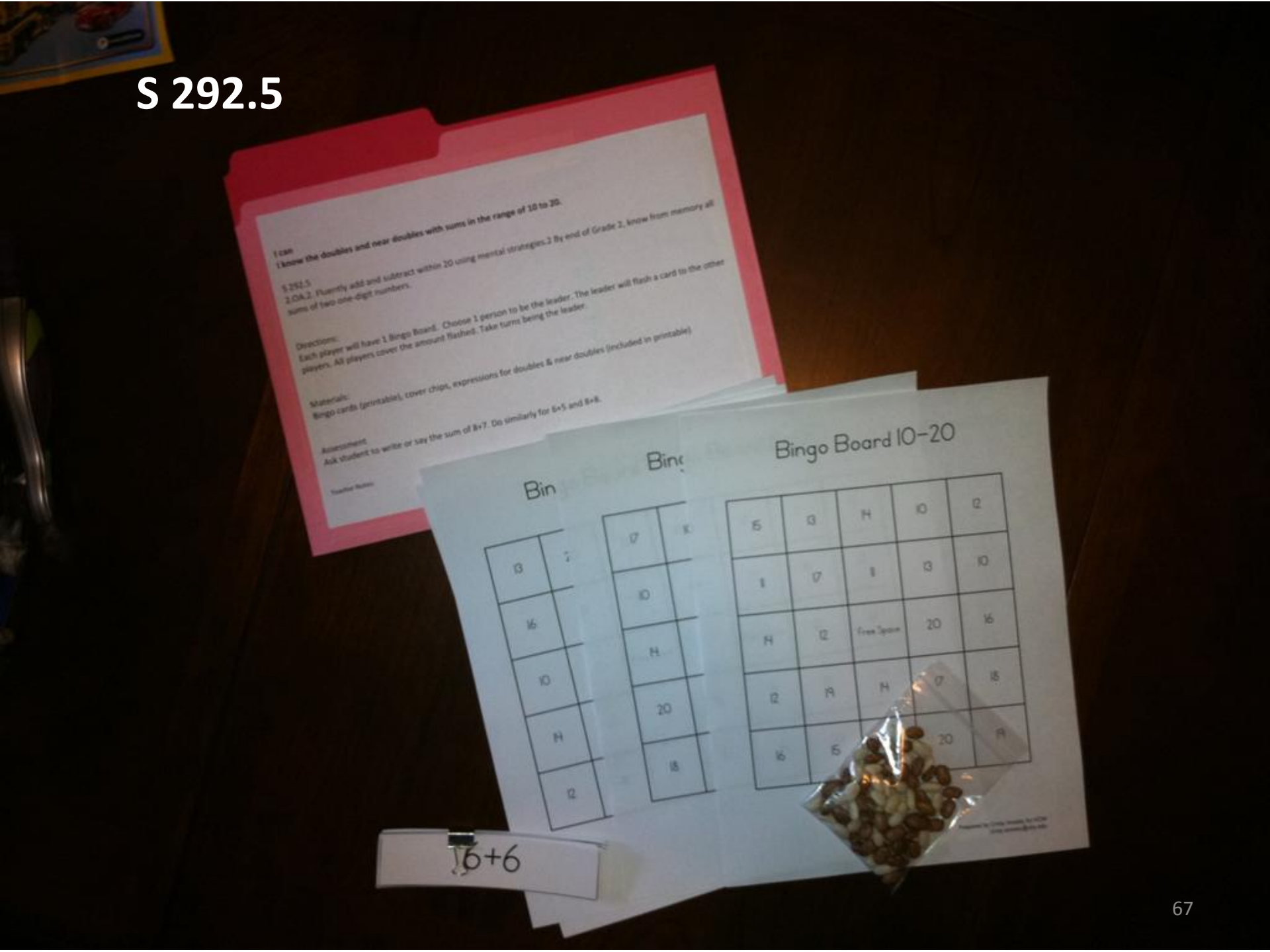
S 292.3


I can
— quickly determine the double of 1 through 5 without counting and without materials
S 292.3
K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g.,
drawings to represent the problem.
Directions:
Each player will have 1 Bingo Board. Take turns throwing the cube. The person throwi
double of the amount rolled. All players will cover that number on their boards. The
Materials:
Bingo Cards (printable), chips for covering, number cube with sides "0,1,2,3,4,5"
Assessment
Ask student to write or say the double of 4.
Teacher Notes:
Doubles Bingo
10 10 2 8 8
2 0 8 2 8
4 6 Free Space 6
4 0 2 4
10 0 6

S 292.4


I can
___ recognize amounts flashed on a 20 frame
S 292.4
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a
representing a count of no objects).
Directions:
players. All players cover the amount flashed. Take turns being the lead
Materials:
Assessment
Bingo Board 10-20
10 20 18 13 10
12 15 11 17 16
16 17 Free Space 11 15
13 19 14 12 18
19 14 14 12 20

S 292.5


I can
I know the doubles and near doubles with sums in the range of 10 to 20.
S 292.5
2.OA.2. Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.
Directions:
Each player will have 1 Bingo Board. Choose 1 person to be the leader. The leader will flash a card to the other players. All players cover the amount flashed. Take turns being the leader.
Materials:
Bingo cards (printable), cover chips, expressions for doubles & near doubles (included in printable)
Assessment
Ask student to write or say the sum of 8+7. Do similarly for 6+5 and 8+8.
Bingo Board 10-20
6+6

Delving into Differentiation


The Kentucky
Numeracy
Project
4) CLOSING
3) PRACTICAL APPLICATIONS
2) INTERVENTION GUIDE
1) INTRODUCTION

Reflection Questions

1) On what do you base your instructional decisions regarding the development of number sense?
2) How might you use the KNP Intervention Guide for assessing and guiding student numeracy development?
3) How might you contribute to changes in your school that would allow you to more effectively develop foundational number sense in all students?

KENTUCKY CENTER FOR MATHEMATICS

Upcoming KNP Sessions, 3:30 to 4:30 p.m. CT

- January 20 – Number Words and Numerals
- February 3 – Structuring to Five and Ten
- March 3 – Addition and Subtraction
- March 17 – Structuring to Twenty
- April 14 – Advanced Addition and Subtraction
- May 5 – Multiplication and Division
- May 19 – Tens and Ones

http://kymath.org/intervention/iKNP.asp

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