Focus on the Fundamentals: Get set for your 2014 Maths Curriculum take the multisensory approach with



# NEW NUMBER SMART Maths Teaching Progression & Planner

Number & Place Value

Effective Calculation

**Problem Solving** 

Linked to 2014 Maths Curriculum objectives and EYFS Outcomes

**Ideal for SEN** 

**NUMBER SMART**) aims to provide a progressive series of handson resources and games to rapidly master underpinning maths concepts of: number, place value, effective calculation and problem solving brought together within phased Teaching Ideas Manuals and kits. **NUMBER SMART**) teaching ideas and activities focus around giving learners multisensory opportunities, through flexible resources, in a systematic, colour-coded progression, with key learning objectives and instructions listed on the activity boxes for quick access.

The following pages show a handy curriculum progression chart of fundamental 2014 maths objectives that Number Smart is designed to help achieve, with at least one resource linked to each objective - saving hours of staff preparation time. To really understand an important maths concept/term (that has been invented/discovered in the first place by someone other than themselves) a learner must be able to come to terms with/discover the concept using their own knowledge base, learning styles and life experiences. This enables them to put the concept or mathematics term into their own context to understand it, remember it and apply it effectively.



# NUMBER SMART PURPLE Phase Suitable for: Foundation/KS1/SEN

Resources to help:





Teach/Investigate/Explore - Verbalise & Visualise - Practise - Apply & Communicate - Assess for learning

All resources available as classroom kit NS100

www.smartkids.co.uk



All resources available as classroom kit NS101

www.smartkids.co.uk

Suitable for: Year 1/KS1/SEN

### Maths Curriculum (2014) Learning Objective (Year 1): taught Number and Place Value:

- Count to and across 100, forwards and backwards, beginning
- Identify and represent numbers using objects and pictorial
- representations including the number line, and use the language
- Count, read and write numbers to 100 in numerals

to 20 in numerals and words

# Addition and Subtraction:

 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs Represent and use number bonds and related subtraction facts

Add and subtract one-digit and two-digit numbers to 20,

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9

# Multiplication & Division:

- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher
- Recognise, find and name a half as one of two equal parts
- Recognise, find and name a quarter as one of four equal parts

# Apply Knowledge & Problem Solve:

- Solve one-step/simple word problems within 20 using addition, subtraction (answers within 20) and multiplication & division 2s,
- Begin to apply different mental and written calculation strategies



# NUMBER SMART Resources to he

secure





ts of Fruit	Maths Curriculum (2014) Learning Objective (Year 2):	taught	secure
mka 🚱	Number and Place Value:		
9	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward		
es Puzzies	or backward		
In the second second	Recognise the place value of each digit in a two-digit number (tens, ones)		
··· 🕑   🚯 -	Identify, represent and estimate numbers using different representations, including		
9 9 9 39cm	the number line		
	Compare and order numbers from 0 up to 100; use <, > and = signs		
	Read and write numbers to at least 100 in numerals and in words		
	Addition and Subtraction:		
	Recall and use addition and subtraction facts to 20 fluently, and derive and use		
	related facts up to 100		
C S	Add and subtract numbers using concrete objects, pictorial representations, and		
70	mentally, including:		
nks	a two-digit number and ones		
	a two-digit number and tens		
	• two two-digit numbers		
	• adding three one-digit numbers		
	Recognise and use the inverse relationship between addition and subtraction		
7 _ 1 5	use this to check calculations and missing number problems		
/ = 13	Snow that addition of two numbers can be done in any order (commutative) and subtraction of one number from another connect.		
	subtraction of one number from another cannot		
Aountains	Multiplication & Division:		
1	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication		
	tables, including recognising odd and even numbers		
	<ul> <li>Calculate mathematical statements for multiplication and division within the</li> </ul>		
	multiplication tables and write them using the multiplication (x), division $(\div)$ and		
	equals (=) signs		
40 ÷ 10 = 5	Show that multiplication of two numbers can be done in any order (commutative)		
	and division of one number by another cannot		
ctions 💮	Eractions		
	Fractions:		
	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape,		
	set of objects or quantity		
-	Write simple fractions e.g. $1/2$ of $6 = 3$ and recognise the equivalence of $2/4$ and $1/2$		
2	Apply Knowledge & Problem Solve:		
Problems	Use place value and number facts to solve problems		
52 20	Solve problems with addition and subtraction:		
809	using concrete objects and pictorial representations, including those involving		
10	numbers, quantities and measures		
	applying their increasing knowledge of mental and written methods		
y Problems	<ul> <li>solve problems involving multiplication and division, using materials, arrays,</li> <li>repeated addition, mental matheda, and multiplication, and division fortage</li> </ul>		
	including problems in contexts		
	Solve simple problems in a practical context involving addition and subtraction		
	of money of the same unit including giving change		
		E	2
ources avai	able	_18	1

All reso as classroom kit NS102

KIDS

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The teaching and learning methodology of NUMBER SMART) is simple and supports a continual assessment for learning approach to secure and refresh key maths concepts:



We are learning to...

# Teach/Investigate/Explore

introduce, model and interact with a new concept, skill, knowledge area or objective.

### 

Verbalise & Visualise

to make sense of concepts/knowledge/ skills, so that learners can put them into a context they understand.



- concrete, pictorial,
- symbolic,
- abstract images

to progress to mental fluency

## Practise

to secure and become fluent with concepts, knowledge and skills.

Talk and discuss to make sense of ideas and take on peer-point-of-view to further understanding and thinking

# **Apply & Communicate**

to ensure that concept/knowledge has been understood correctly and can be applied flexibly and findings/ideas are represented and communicated effectively.

The Number Smart Phases are designed to be flexible i.e. resources from earlier phases can be used to revisit and practise key knowledge, concepts and skills to secure or refresh as required.

Self-assess Peer-assess

2 + 2 = 4

# Assess/Revisit & Revise

all the time to ensure key objectives are secure and elements revisited if necessary



I found that..

because...

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