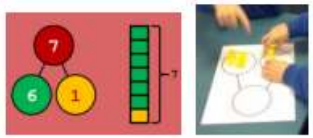
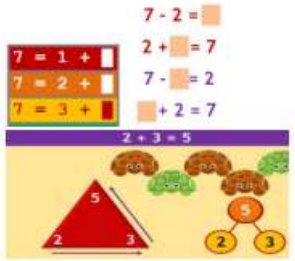
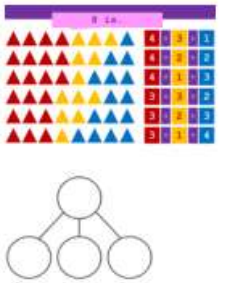
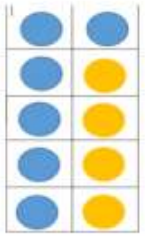
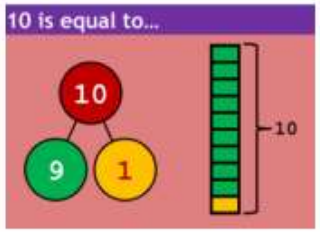
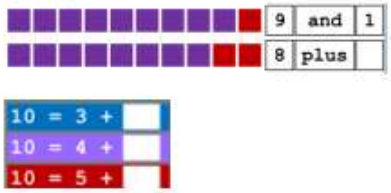
The Good Shepherd Catholic Primary School

Following Jesus,
The Good Shepherd,
in all we say and do

Year 1 Calculation Policy

OUR LADY IMMACULATE
CATHOLIC ACADEMIES TRUST

Year 1- Calculation policy

	Progression of objectives/ strategies	Representations (Concrete- Pictorial- abstract
Year 1 Addition	Addition within 10	Relate facts to number stories and represent using counters or cubes.  Represent number bonds with part-whole models and relate to addition and subtraction facts.  Addition and subtraction sentences are written in different ways, using different vocabulary, find missing numbers and find fact families.  Add and subtract 3 numbers with a total within 10, developing understanding of parts and whole 
	Bonds of 10	Represent bonds of 10 on tens frames using coloured counters.  Develop part-whole understanding relating to bonds of 10 using bar models and part-whole diagrams  Addition and subtraction sentences are written in different ways, using different vocab for addition, find missing numbers and find fact families. 

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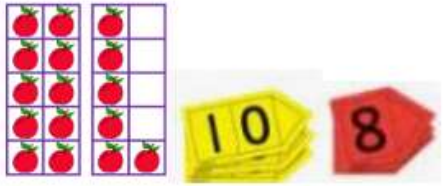
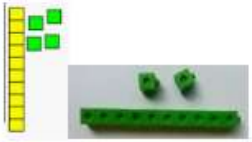
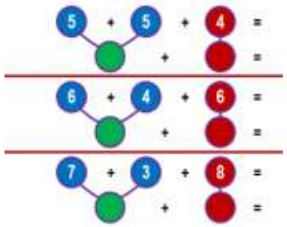
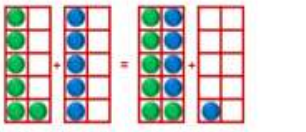
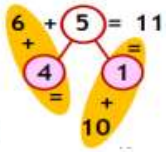
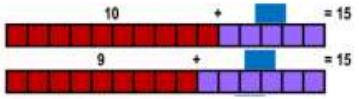
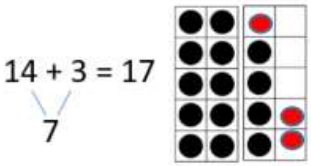
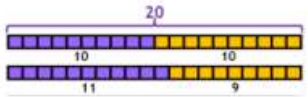
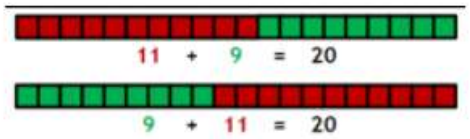
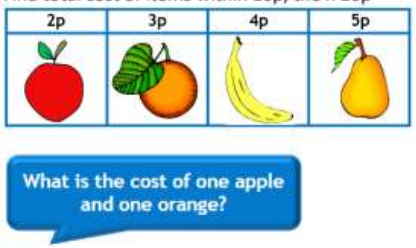
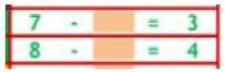
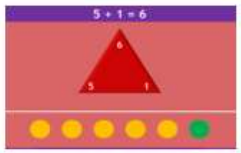
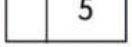
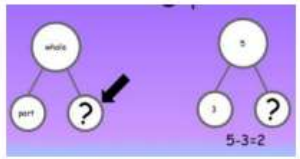
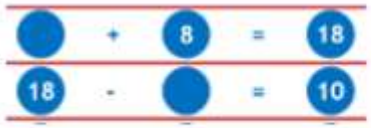
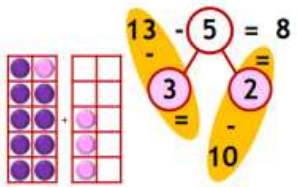
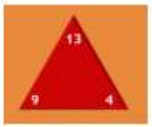
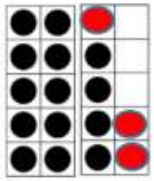
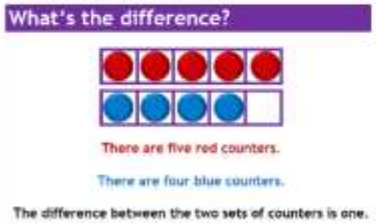
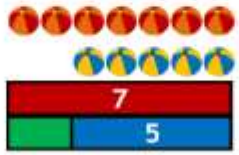
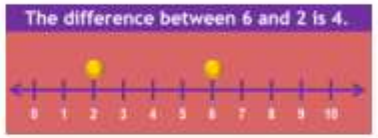
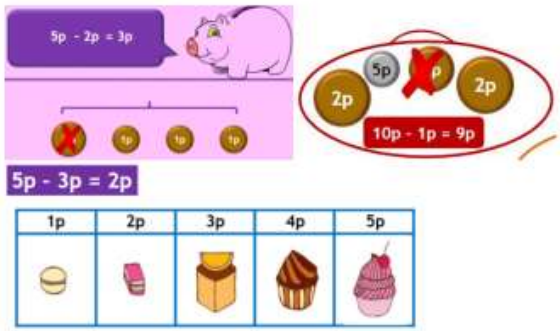
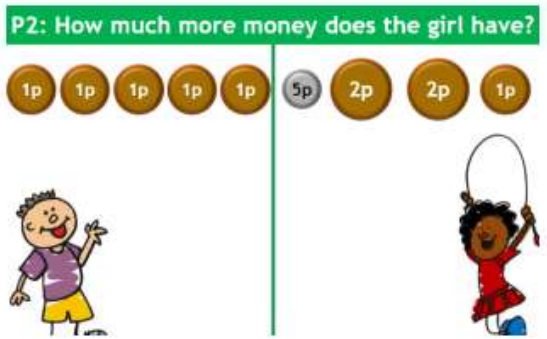
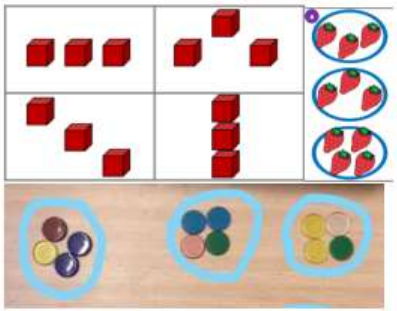
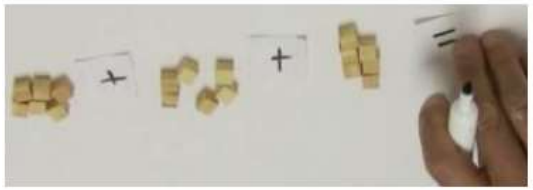
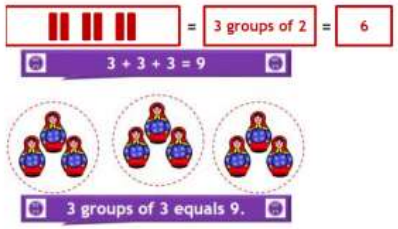
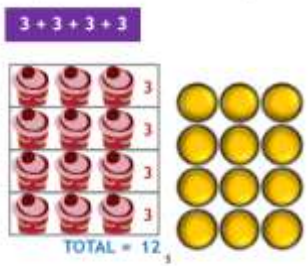
Stem Sentences: 'The whole is (_), the parts are (_) and (_)' 'We add the parts to make the whole' 'We subtract one part from the whole to leave the other part' and 'If the first addend is increased and the second addend decreased by the same amount the total remains the same'.

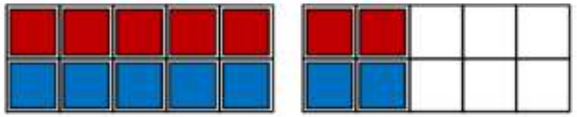
Adding on to 10	Use double tens frames alongside Place Value (arrow) cards to demonstrate how we can use place value to add on to 10.  Build on previous learning about place value, to understand that the place value system is additive, using cubes grouped into a ten and some ones, or base 10.  Use commutativity to add to 10, consistently applying understanding of place value to add. 
Adding crossing 10	Use friendly number pairs to add 3 numbers.  Use the 'make 10' strategy to bridge through 10. Represent the calculations on double tens frames and record using partitioning.   Identify relationships to key facts e.g. from 10+5=15 we can derive 9+6=15 
Adding to teens (not crossing 10s)	Use partitioning to add to teens where only the ones change. Use counters on double tens frames to illustrate that the full ten is not changing. 
Bonds of 20	Use knowledge of bonds to 10 to learn bonds to 20. Represent number bonds on double tens frames, record using partitioning  Identify relationships to key facts e.g. from 10+10=20 we can derive 11+9=20  Understand commutativity relating to bonds of 20 

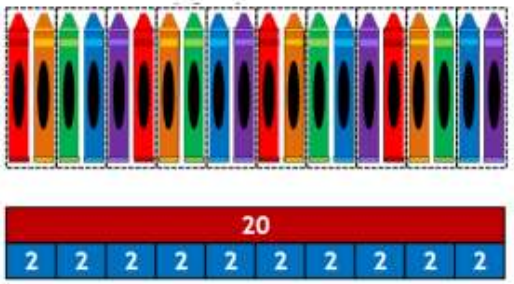
	Addition of money	Find totals of coins, with totals up to 10p, then 20p. Find different ways to make a total 	Find total cost of items within 10p, the n 20p 

	Progression of objectives/ strategies	Representations (Concrete – Pictorial – Abstract)
Year 1 Subtraction	Subtraction within 10	Understand subtraction as 'take-away' through number stories and represent using counters, cubes or crossing out of pictures  Relate subtraction facts to addition facts. Understand parts and whole with subtraction as having a missing part. Use addition facts to justify subtraction knowledge e.g. I know 5-3=2 because 2+3=5. Represent using part-whole diagrams, bar models and relationship triangles     Identify and use fact families 4 + 1 = 5 1 + 4 = 5 5 - 1 = 4 5 - 4 = 1
	Subtraction from a teen to leave 10	Use place value understanding to remove the ones to leave 10, Use addition facts to find related subtraction facts. Represent using tens frames, base 10 and place value (arrow) cards  
	Subtraction crossing 10	Bridge through ten for subtraction, using double tens frames to represent the calculation. Record using partitioning. 13 - 4 = 13 - 3 - 1 = 9  Relate subtraction to addition facts, making the connection with the 'make 10' bridging strategy for addition, and use fact families.  9 + 4 = 13 - 9 =

Stem sentences: ' If we subtract one part from the whole, it leaves the other part ' ' We add the parts to make the whole ' ' () and () make (), so () subtract () leaves ()	*Subtraction from teens not crossing 10*	Use partitioning to add to teens where only the ones change. Use counters 0n double tens frames to illustrate that the full ten is not changing. 17 – 3 = 14 
	Find the difference	Understand subtraction as 'difference'. Use cubes or counters to show the difference in the size of two sets  Build on concrete representations to develop understanding of a missing part on a bar model as 'the difference'  Find the difference between two numbers on a number line 
	Subtraction of money	Apply understanding of subtraction within 10, then within 20 to subtract amounts of money and find change from 5p, 10p or 20p  Find the difference between two amounts of money 

	Progression of objectives/ strategies	*Representations (Concrete – Pictorial – Abstract)*
Year 1 Multiplication	*Equal and unequal groups*	Identify images of equal and unequal groups and make equal groups of counters or objects.  Describe equal groups using language that identifies how many groups and how many in each group.  There are __ groups. Each group has __ strawberries.
	Repeated addition	Create, describe and write repeated addition statements about equal groups of counters or objects.  Record repeated addition statements to describe equal groups. Describe equal groups using language that identifies how many groups, how many in each group and how many altogether. 
	Arrays	Arrange counters or objects in rows to create arrays  Use repeated addition to describe arrays  Identify arrays in real life objects  Draw arrays on grid paper 

Stem sentences: ‘ there are () groups with () (objects) in each group’ ‘ There are () groups of ()’ ‘ There are () ()s’ (e.g. there are 3 fours	Doubles to 10+ 10	Identify doubles, describe using repeated addition and say the total  4 and 4 is 8 Represent doubles on tens frames Double 7 = 2 sevens Double 7 = 14 

	Progression of objectives/ strategies	Representations (Concrete – Pictorial – Abstract)
Year 1 Division	Equal and unequal groups	Use real life stories to support understanding of making equal groups. **Temi puts two cakes on each plate.** **How many plates does he need?**  Represent object with counters to carry out grouping practically. Use language associated with equal groups to describe e.g. I started with 12, I put them into groups of 4, there are 3 groups. I have made 3 groups of 4.  Draw around groups on images to represent grouping. Represent on a bar model. 
	Division as sharing	Share counters or objects equally between a number of groups. Record using drawings.  Describe sharing using precise language.  **There were 20 counters.** **The counters were shared between 2 gingerbread men.** **Each gingerbread man received 10 counters.**
	Stem sentences:	'There are () groups with () (objects) in each group' 'There are () groups of ()' ' There are () ()s' (e.g. there are 3 fours)