Money Week – Additive Reasoning Y5/6

For this week you will need:

- Coins (or pieces of paper with coin values written on them)

- Paper and pencil

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Day 1

- Sam puts 15 pennies into four bags.
- He labels each bag with the number of pennies inside.
- He can then pay any amount of money from 1p to 15p (1p, 2p, 3p etc…) without opening the bags.

  For example, he could pay for something that costs 1p with a bag containing 1p. If he had a 1p bag and a 5p bag (bag containing five 1ps) he could pay for something that costs 6p.
- How many pennies does he put into each bag?
- Record how he could make each amount.
- What do you notice?

Notes for adults working with groups of children

- Use real coins where possible. If coins are not available use 15 bits of paper with 1p written on them so that the children can physically choose coins for each bag and explore different options.
- Encourage the children to record what they try so that they can notice connections between the numbers. It might help to write down all the values from 1p to 15p so that as they arrange the coins in bags they can think about what is possible. Starting with ways to arrange the coins to make the smallest amounts might be helpful.

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Day 2

- Using only 5p, 10p, 20p, 50p and £1 coins, you have five coins in your pocket.
- How much money might you have?
- Find another possible amount…and another…and another.
- What if the five coins are all of the same value, what are the possibilities?
- What's the largest amount you could make with any combination of five coins and what is the smallest amount?

Notes for adults working with groups of children

- Use real coins where possible. If coins are not available use bits of paper with 5p, 10p, 20p, 50p and £1 written on them (five of each) so that the children can physically choose coins and explore different options.
- Encourage the children to record their thinking and to work systematically, for example starting with five 5p coins and then changing one of the coins et. There will be different ways to be systematic.

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Day 3

- Using any three of the coins above, which sums of money can you make?

  For example you can make:

  - 3p by adding three 1ps 1p + 1p + 1p = 3p
  - 9p by adding a 5p and two 2ps 5p + 2p + 2p = 9p
- What are all the possibilities?
- How do you know you've found them all?
- Which amounts can't you make? Why?

Notes for adults working with groups of children

- Use real coins where possible. If coins are not available use bits of paper with 1p, 2p, 5p, 10p and 20p written on them so that the children can physically choose coins and explore different options.
- Help the children to explore and record systematically. One way to do this would be to start with three 1ps then change one of the 1ps to each of the other coins in turn etc. There will be different ways of being systematic, the focus is on **knowing** that you have found all possibilities.

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Day 4

- Look at the table below. Every letter has been given a value.

1p	a	e	i	o	u
	l	n	r	s	t
2p	d	g			
5p	b	c	m	p	
10p	f	h	v	w	y
20p	k				
50p	j	x			
100p	q	z			

- You can use this table to find out the total value of different words. For example 'maths' is worth 18p

  m = 5p, a = 1p, t = 1p, h = 10p and s = 1p

  5p + 1p + 1p + 10p + 1p = 18p
- Work out the value of your name.
- Who in your family has the most expensive name?
- Who has the least expensive name?
- If you have a pet is their name worth more or less than yours?

Notes for adults working with groups of children

- Use real coins if necessary to help make sense of the total value of a word.

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Day 5

1p	a	e	i	o	u
	l	n	r	s	t
2p	d	g			
5p	b	c	m	p	
10p	f	h	v	w	y
20p	k				
50p	j	x			
100p	q	z			

- How many words can you make that are worth 4p?
- How many words can you make that are worth 16p?
- What's the most expensive word you can make?
- Choose your own category like countries, celebrities, pop stars, sports people etc. to explore. Compare the value of names in your chosen category; who can you find with the highest value name and who can you find with the lowest value name?

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