Rushmere Hall Primary School
Taking Pride in Our Learning

Subitising

"Subitising is a fundamental skill in the development of students' understanding of number" (Baroody 1987, 115).

Subitising is "instantly seeing how many". It comes from the Italian word *subito* meaning 'immediately'. Subitising helps with:

- Part-part whole
- Counting on
- Regrouping
- Number bonds – not just to 10!
- Addition
- Subtraction
- Missing numbers in equations – early algebra

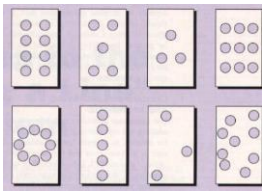
Our aim is to embed this fundamental skill into your daily practice. It may be that you use time outside of lessons – those spare 5 minutes before the end of the day – to practice subitising with the children. There is evidence that secure mental visual images of numbers will improve mathematical fluency across all year groups.

If a child says they have seen 5, ask: "How do you know?" or "What did you see that made you certain?"

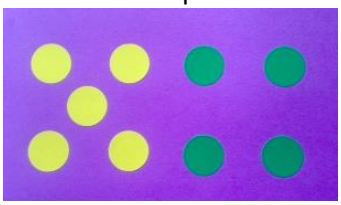
Useful resources are in the subitising folder and you may also wish to make your own resources such as subitising paper plates.

Ideas for teaching subitising:

- Have a daily 5 min IWB presentation with random dots on the side. Give children 3 seconds to see the number and show you using fingers or a number fan. Then ask the questions above.
- Teach dice dot patterns- to be able to recognise them as well as recreate these patterns from memory using equipment.
- Teach 5-Wise dots patterns to 10 – ie recognising 6,7,8,9,10 composed of the pattern of 5 and the pattern of the remaining dots.
- Teach 5 wise hand patterns for numbers 1 – 10 eg 8 is 5 fingers on one hand and 3 more fingers. Use the language of part-part whole – "I have one part of 5 (show hand) and one part of 2 (show other hand). My whole is 7." Extend this to missing number equations. "My whole is 7, I have 4 on one hand, what other part do I need?"
- Teach doubles patterns on fingers, up to double 5.
- Show children regular and irregular patterns – perhaps they could match the same numbers.
- Use flash cards or flash plates.
- Use dice to familiarise children with dice dot patterns.
- **Part-part whole** - What must you add to the pattern of 5 if you want to make 9?



If we take away the pattern of 5 from the pattern of 9, what is left?
If I have a pattern of 5 and you have a pattern of 9, how many more dots do you have than I have? I have 5 and you have 9, so how much more than me do you have? 4 and 5 more is what? 4 and what number makes 9? 4 add what is 9? Next, hide the pattern and ask the same kinds of questions.



- *"If I know this…then I also know*…."fact families eg if I know 4 + 3 = 7 then I know that 24 + 3=27. If you know 9+3=12 then you know 0.9 + 0.3 =12 tenths = 1.2. If 7 +6=13 then 70 +60 = 13 tens (130)
- Use place value counters to apply this to bigger / smaller numbers / money
- Talk about the patterns together…Which pattern looks a bit like the pattern of 4? Why? What do I need to add to the pattern of 4 to make the pattern of 5? What do I need to subtract from the pattern of 6 to make the pattern of 4?
- Create the dice dot patterns using glass floristry beads/buttons/counters etc.
- Can they create the dice dot patterns from memory? Can they draw the patterns?
- Create the Five wise domino patterns on A5 sheets with domino blanks drawn on using buttons/counters/1p coins etc.
- Extend the above activity using place value counters or money to create Five – wise patterns eg making 90 using the pattern of 5 x10p and 4x10p. or make 0.9 with place value 0.1 counters using the pattern of 5x0.1 and 4x 0.1
- Make subitising partner games – uncover a dot pattern for 3 secs and cover it up – If you recognised how many dots were there, you win the square. First to 3 in a row wins.
- Partner game: 5 dominos turned face down. Each person turns over a domino for 3 secs and then replaces it face down again. The person with the highest value wins the domino.
- Dominos face down – turn one over for 3 secs then replace. Can they say the total number of dots on the domino? You win the domino for correct total.
- Bingo – match dots/ regular and irregular to numerals.
- Apply: I went to the shop with 70p, I bought an ice cream and a bun, what could they have cost? Use the patterns that make 7 to solve.
- 8 cats – 5 are black cats, how many are not? Use a pattern of 8 to solve!
- Give each child cards with zero through ten dots in different arrangements. Have students spread the cards in front of them. Then announce a number. Students find the matching card as fast as possible and hold it up.
- Have them use different sets of cards, with different arrangements, on different days. Later, hold up a written numeral as their cue. Adapt other card games for use with these card sets (see Clements and Callahan [1986]).
- Challenge students to say the number that is one (later, two) more than the number on the quick image. They might also respond by showing a numeral card or writing the numeral. Alternatively, they can find the arrangement that matches the numeral that you show
- In some sessions, you may choose to focus on one number eg 7 and tell the children all the patterns are going to be about 7. Have them identify the different parts that make up the whole. Eg "I can see a pattern of 4 and a pattern of 3!"