

# Times tables and Multiplication

Parent Information Session – September 2018

# Learning Intention

- To explore expectations for multiplication, including times tables, in primary school
- To discover how multiplication fits in student development in mathematics
- To find out how multiplication is taught in the classroom

# What is multiplication?

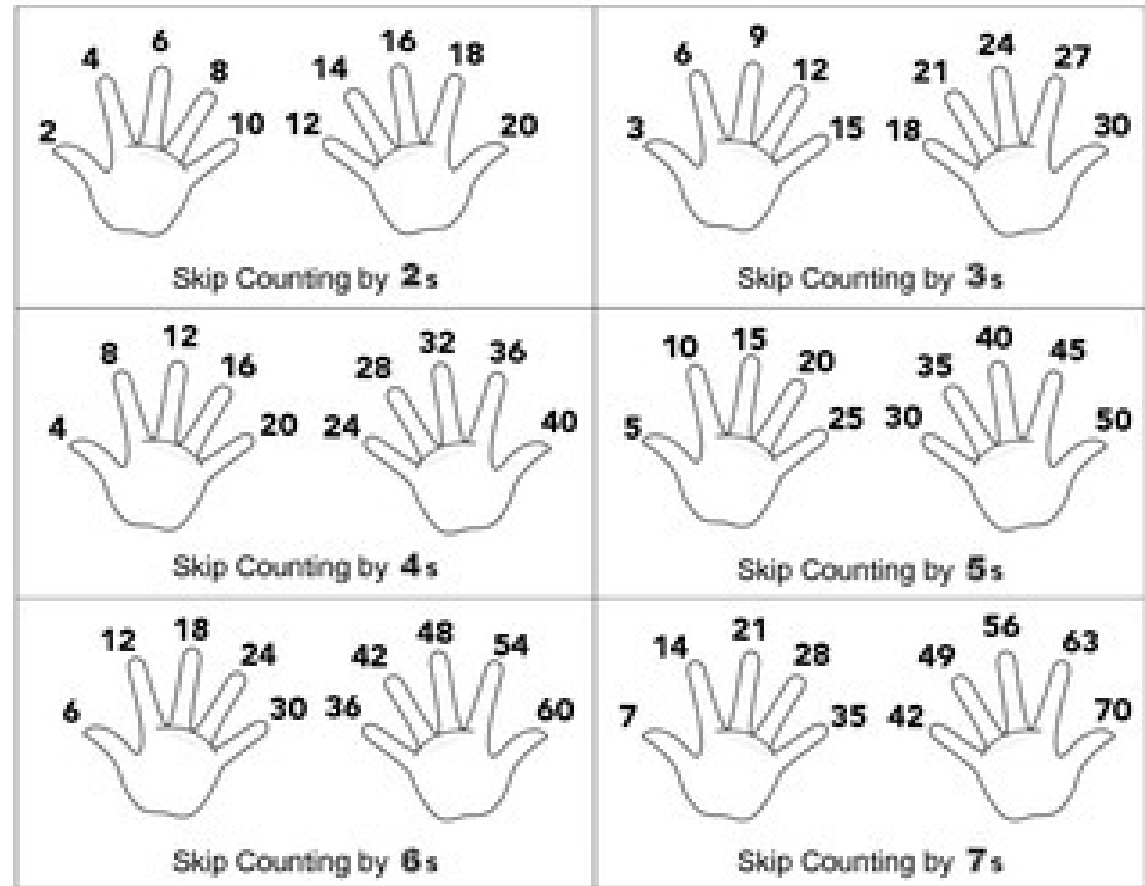
# Multiplication in primary school



Equal grouping

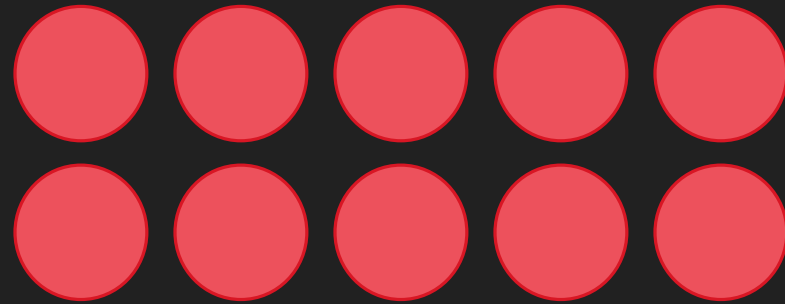
# Multiplication in primary school

Skip counting



# Multiplication in primary school

Composite units – “5 twos” or “2 fives”



# Multiplication in primary school

Inverse operations

$$9 \times 8 = 72$$

$$8 \times 9 = 72$$

$$72 \div 9 = 8$$

$$72 \div 8 = 9$$

# Flexible strategies

Use a variety of strategies to solve multiplication

- $4 \times 24 = 4 \times 12 \times 2$
- $7 \times 83 = 7 \times 80 \text{ plus } 7 \times 3$
- $327 \times 14 = 327 \times 4 \text{ plus } 327 \times 10$
- $65 \times 19 = 65 \times 20 \text{ minus } 65$



# Multiplicative Thinking

- Multiplicative thinking is not just times tables. It is also
  - Division
  - Involves larger numbers and decimals
  - Fractions
  - Percentages
  - Ratios

# Multiplicative Thinking

- The development of multiplicative thinking can be challenging for some students and is much harder than additive thinking (addition) that develops first.
- The best way to help students to develop this is to give them time to think through problems and give them more time to explore them.

# Times tables - limitations

Multiplication tables or times tables are really nothing to do with “tables”. They are simply lists of equations which count groups



Skip counting



Additive thinking NOT multiplicative thinking

# Times tables – strategies not tricks

- 2 x – think double
- 3 x – think doubles plus one more group
- 4 x – think double, double
- 5 x – count by 5s
- 6 x – think 5 x plus one more group
- 7 x – think 5x plus 2 x
- 8 x – think double, double, double
- 9 x – think 10 x less one group

# Times tables – to learn or not to learn?

Yes **BUT** ....

only after they have developed an understanding of how multiplication works, know as multiplicative thinking

# TNT = Targeted Numeracy Time

- Based on the TENS (Targeting Early Numeracy Strategies) initiative
- Specific focus on developing multiplicative thinking and strategies through games



# Let's Play

- Salute – playing cards
- Knockout – dice
- War – dominoes

