Taxonomy: charting *children's mathematical graphics*, (birth – 8 years)

**Meaning making in socio-cultural contexts, rich collaborative dialogue, social pretend play and imagination**

- Gestures, sounds, speech, artefacts, *graphical marks, symbols & signs*

**GRAPHICACY:** drawing, maps, writing & *Children's mathematical graphics*

**Written number and quantities**
- Early written numerals
- Numerals as labels

**Early explorations with marks: attaching mathematical meanings**
- Explorations with symbols
- Representing quantities that are counted
- Representing quantities that are not counted

**Calculations: children's own methods**
- Symbolic operations with small numbers
- Calculating with larger numbers (*sometimes supported with empty number lines*)
- Counting continuously
- Separating sets

Meaning making in socio-cultural contexts, rich collaborative dialogue, social pretend play and imagination

© Carruthers & Worthington, 2016