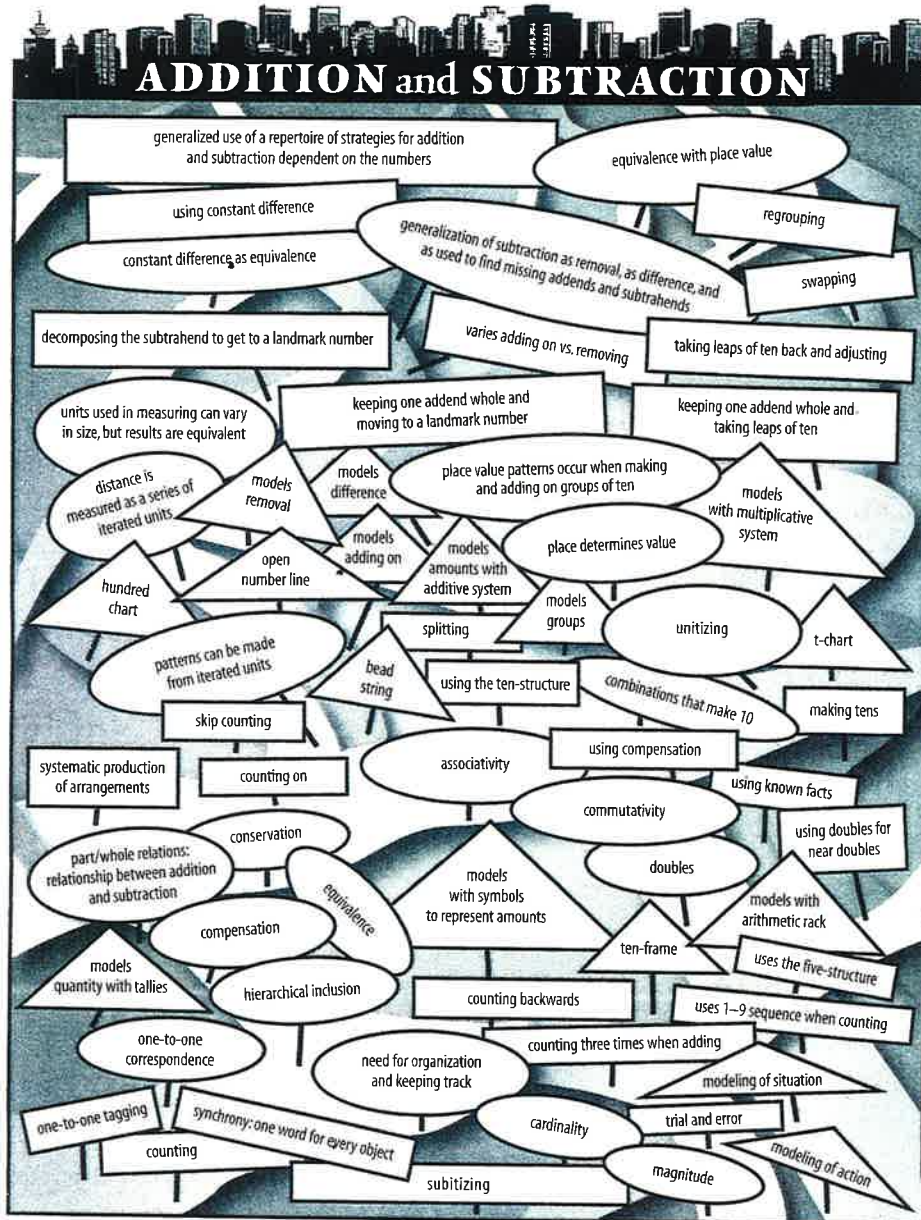


# Landscape of Learning

excerpt from Catherine Twomey Fosnot



This picture shows the landscape for early number sense, addition and subtraction. The horizon at the top represents a deep understanding of these topics. The bottom represents the beginning of the journey. Along the way are many developmental landmarks: strategies, big ideas, and ways of modeling that as a teacher you will want to notice, support the development of, challenge learners to construct, and celebrate.

Teaching mathematics is about facilitating mathematical development. *This means that we cannot get all learners to the same landmarks at the same time, in the same way, any more than we can get all toddlers to walk at the same time, in the same way.* Learning is developmental and progressive, but we cannot depict it in discrete stages or represent it as a list of skills and concepts on a line. Deep, powerful learning is just too complex. It results from cognitive reordering as learners reflect and converse about their ideas and as we work with them in their zone of proximal development, celebrating and challenging.

**Mathematics is not a careful march down a well-cleared highway, but a journey.**  
-W.S. Anglin