

# ONE IS A SNAIL: Sequence Overview

## Summary of learning goals

This sequence is designed for students towards the end of their Foundation year. It has the potential to develop counting-on strategies and teach early addition skills and facts. The sequence begins with a focus on developing students' counting skills to work with numbers beyond 10, then continues on to build early place value understanding as students investigate 'teen' numbers. The key idea of 'unitising' is explored as students use a group of ten and some more ones to represent numbers eleven to nineteen.

### Australian Curriculum: Mathematics (Foundation)

**ACMNA001:** Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point.

**ACMNA002:** Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond.

## Summary of lessons

### Who is this Sequence for?

This sequence is for students who have developed one-to-one correspondence with numbers up to at least 20. Students must be very familiar with numbers from 1 to 10. The students will need to have an understanding of the composition of numbers, e.g. 7 can be made by combining 1 and 6. This unit also relies on students unitising ten as a group. For this purpose it would be helpful for students to have used 10 as a group previously, such as participating in tasks that use models such as tens frames.

This task requires students to keep count with static objects, which can be more complex than keeping track of the count using manipulatives.

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We value your feedback after these lessons via <link to be advised>

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## Lesson 1: One is a Snail, Ten is a Crab

This task uses the book *One is a Snail, Ten is a Crab* to explore numbers up to 20. Students represent numbers using the animals in the book and look at how one number can be represented in multiple ways. Students also explore the concept of efficiency when comparing various representations.

## Lesson 2: One Crab + Some More

This task continues to use the book *One is a Snail, Ten is a Crab*. It introduces students to the patterns of our place value system and the significance of ten. The key understanding of unitising is introduced by asking students to represent teen numbers using one crab, which is the same as using one ten. In doing so, students move from using 10 ones to 1 ten.

## Reflection on this sequence

### Rationale

Teen numbers are a challenging group of numbers for students to understand. They are often considered ‘back-to-front’ numbers as their names state the units *before* the group of ten, which is the reverse of how they are written. Consider thirteen, or 13: thir- represents the 3 while -teen represents the 10. This is different to all other numbers in our base-10 system where the tens are stated before the ones in the name, e.g. twenty-two, forty-five. This poses a challenge to students in understanding our place value system, especially considering the teen numbers are the first two-digit numbers in our counting sequence. This sequence focuses on developing students understanding of teen numbers as ‘ten and some more’.

### reSolve Mathematics is Purposeful

This sequence provides strong connections between the picture book *One is a Snail, Ten is a Crab* and mathematical counting concepts. This grounding gives students strong motivation to explore mathematical problems. It encourages students to explore a creative variety of solutions in a vivid real-world context. The lessons also give a meaningful introduction to place value.

### reSolve Tasks are Challenging Yet Accessible

The sequence begins with the shared experience of reading a picture book as a class. The sequence provides for a wide range of student ability: the low floor allows for students to experiment with concrete materials to find several solutions to the set task, while the high ceiling encourages students to use more conceptual thinking to find a large number of solutions and to find a way to prove they have all possible solutions.

### reSolve Classrooms Have a Knowledge Building Culture

Students share solutions and strategies with one another, and naturally gravitate to working together in groups to achieve common goals. There are a variety of ways to achieve the aims of the lessons and students are encouraged to explain their thinking and trial each-other’s approaches to solve their own tasks.

## Acknowledgements

Sayre, A. P., Sayre, J. & Cecil, R. (2003). *One is a Snail, Ten is a Crab: A Counting by Feet Book*. London: Walker.