First Year

Concept: **Relationships and Variables I**

Exploring patterns and relationships through Number; including additive and multiplicative relationships and the properties of Number

Student Context: First Year Students

Learning Outcomes: N2(c), N4, AF1 (a), (b), (c), AF4 (a), AF7

Learning outcomes from the Unifying strand are decided by the class teacher

Key Learning:

- Students should understand and be able to distinguish between additive, multiplicative and proportional relationships (including rational numbers)

- Students should be able to distinguish between relative and absolute comparisons

- Students analyse and interpret problems involving patterns, including being able to:
  o extend and manipulate a pattern to expose and identify its key features

- Students use tables, graphs and words as mathematical tools to represent a pattern, problem or relationship in different ways and understand that:
  o each representation may expose features of a problem, pattern or relationship that the others do not
  o different representations may be used in conjunction with each other

- Students should learn about inverse operations, and commutative, distributive and associative properties in Number

- Students develop their understanding of a variable by using letters as unknowns in a variety of problem contexts including some real-world contexts

Ongoing Assessment
- Can students solve problems using appropriate/multiple representations where required?
- Can students use the properties of Number to manipulate and solve number problems?
- Can students distinguish between relative and absolute comparisons?
- Can students identify patterns in the context of a problem (including real-life) and identify what is fixed and what is varying?

Learning Experiences
- Unifix Cubes
- Sunflower Problem (www.projectmaths.ie – Teacher Resource Booklet Workshop 4)

Notes/Reflection

Units are in development and are subject to change based on ongoing departmental consultation, collaboration and feedback.