

Related Categories can be transformed into high-energy **Maths Scattergories** games for Senior Phase. Use the curriculum framework as a revision tool without losing the fun, competitive edge of a 5-minute energiser. Do this by taking the **Related Category** as your main theme, turn the **sub-topics** into game prompts, and use a **Maths Constraint** (a target number or a specific letter) to test deep understanding.

A comparison of the primary difference between Maths Scattergories and Related Categories.

Feature	Maths Scattergories (An interactive classroom activity)	Related Categories (A tool organising maths concepts)
What is it?	A fast-paced, competitive game.	A conceptual framework.
Primary Purpose	To energise students and test quick recall.	To map out connections between topics.
How it works	Students race to write unique answers based on a letter or target number.	Topics are grouped by shared mathematical principles (e.g., grouping <i>Ratio</i> and <i>Fractions</i>).
Output	A chaotic, fun student activity where points are gained by outsmarting peers with uncommon answers	A curriculum map that helps students see that mathematics is connected, rather than a list of isolated topics.

How to Launch This in 60 Seconds

1. Project the grid onto your classroom screen but leave the "Example Answers" column blank.
2. Tell your class the letter or target number for the activity.
3. Set the Timer (usually 3 minutes)

Grade 7 Proportional Reasoning

- The Curriculum Focus: Connecting fractions, percentages, scales, and ratios.
- The Game Constraint: The Number 25 (Every answer must involve or equal 25).

Curriculum Sub-Topic (Related Category)	The Scattergories Game Prompt	Example Answers (Worth 1 Point)	
Percentages	A fraction or decimal equivalent to 25%.	$\frac{1}{4}$ or 0,25	
Financial Maths	A real-world transaction where R25 is the result.	The item purchased for R20 is sold at a profit of 25%.	
Ratio & Sharing	Share 100 items in a ratio that yields 25.	A 1:3 ratio gives the smaller part 25.	
Number Patterns	A sequence where 25 is the next term.	5, 10, 15, 20 . . . or 1, 4, 9, 16 . . .	
Volume & Ratio	The ratio of the volumes of two prisms is 25 : 1. If one of the prisms has a capacity of 1 litre, what is the other prism's volume.	1 litre = 1 000 cm ³	
		25 : 1 = 25 000 : 1 000 V = 25 000 cm ³	25 : 1 = 1 000 : 40 V = 40 cm ³

Grade 8 Spatial Relationships & Geometry

- The Curriculum Focus: Building properties of 2D shapes, angles, and lines.
- The Game Constraint: The Letter "I" (Every answer must start with the letter I).

Curriculum Sub-Topic (Related Category)	The Scattergories Game Prompt	Example Valid Answers (Worth 1 Point)
Angles & Lines	A word describing how two lines meet or a type of angle.	Intersecting lines
Triangles & Shapes	A specific classification or attribute of a 2D shape.	Isosceles triangle
Graphs	A term related to the Cartesian plane or plotting points.	Intercept (e.g., y-intercept)
Algebraic Functions	A mathematical word meaning the starting value or variable.	Input value
Angles and polygons	The angles inside a polygon.	Interior angles

Grade 9 Algebraic Equations & Functions

- The Curriculum Focus: Moving fluidly between graphs, expressions, and exponents.
- The Game Constraint: Target $x = -2$ (The algebraic value of x must equal -2).

Curriculum Sub-Topic (Related Category)	The Scattergories Game Prompt	Example Valid Answers (Worth 1 Point)
Linear Equations	A multi-step equation where the final solution is -2 .	$3x + 6 = 0$
Exponents	An exponential expression that simplifies to -2 .	-1×2^1
Straight-Line Graphs	The coordinate point where a line crosses the x -axis at $x = -2$.	$(-2, 0)$ the x -intercept
Number Systems	A category of numbers that includes the solution -2 .	Integers
Measurement Application	A formula calculation where a negative result represents direction.	$x = -2^\circ\text{C}$ A temperature drop of 2°C

In the Senior Phase, mathematics shifts from basic computation to abstract reasoning. The "**Related Categories**" for this level, organized by the core mathematical domains are:

1. **Number Systems**

This category builds the foundation for algebraic thinking by exploring the deep properties of numbers.

- **Integers and Rational Numbers**
 - negative numbers
 - fractions
 - decimals
 - percentages
- **Exponents and Scientific Notation**
 - powers
 - laws of exponents
 - writing very large or small numbers
- **Factors and Multiples**
 - Highest Common Factor (HCF)
 - Lowest Common Multiple (LCM)
 - prime factorisation.
- **Ratio and Proportion**
 - comparing quantities
 - sharing in a given ratio
 - understanding direct and inverse proportion

2. **Algebra and Algebraic Thinking**

This is the most critical developmental leap in Grades 7 to 9, moving from concrete numbers to variables.

- **Algebraic Expressions**
 - simplifying expressions
 - expanding brackets
 - factorising basic polynomials
- **Linear Equations and Inequalities**
 - solving for an unknown variable (x)
 - graphing inequalities on a number line
- **Functions and Linear Graphs**
 - understanding input/output relationships
 - plotting straight-line graphs ($y = mx + c$) on a Cartesian plane.
- **Number Patterns and Sequences**
 - identifying constant differences
 - geometric patterns
 - finding the general rule (n^{th} term)

3. **Geometry and Spatial Relationships**

Students move from naming shapes to proving their properties using logic and measurement.

- **Geometric Properties of 2D Shapes**
 - working with angles in triangles
 - quadrilaterals
 - parallel lines
 - solving for unknown angles.
- **Congruency and Similarity**
 - proving why triangles are identical
 - proving whey triangles are scaled versions of one another
- **The Theorem of Pythagoras**
 - calculating the lengths of sides in right-angled triangles
- **Transformation Geometry**
 - translating
 - reflecting
 - rotating
 - enlarging shapes on a coordinate grid

4. **Measurement**

This category connects geometry to real-world physical dimensions and calculus foundations.

- **Perimeter and Area**
 - calculating the space inside and around 2D shapes, including circles (using π).
- **Surface Area and Volume**
 - working with 3D objects like prisms, cylinders, and pyramids.
- **Unit Conversions**
 - moving fluidly between metric units for length, area, volume, capacity, and mass

5. **Data Handling and Probability**

This focuses on interpreting information, statistics, and predicting chance.

- **Data Collection and Summaries**
 - mean
 - median
 - mode
 - range
- **Data Representation**
 - drawing and interpreting bar graphs, histograms, pie charts, and scatter plots
- **Probability**
 - Calculating theoretical and relative frequency of single and compound events.