Compare and contrast: Content descriptions

http://topdrawer.aamt.edu.au/Reasoning/Big-ideas/Same-and-different

Year	Number and Algebra	Measurement and Geometry	Statistics and Probability
F–2	Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001) *Focus on number names and place value.* Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289) Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005) Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012) Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016) Investigate and describe number patterns formed	Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language (ACMMG006) Connect days of the week to familiar events and actions (ACMMG008) Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019) Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022) Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037) Compare masses of objects using balance scales (ACMMG038) Use a calendar to identify the date and determine the number of	Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263) Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048) Collect, check and classify data (ACMSP049) Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)

Year	Number and Algebra	Measurement and Geometry	Statistics and Probability
	by skip counting and patterns with objects (ACMNA018)	days in each month (ACMMG041) Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042) Describe the features of three-dimensional objects (ACMMG043) Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)	
3–4	Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051) Recognise and explain the connection between addition and subtraction (ACMNA054) Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056) Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058) Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059) Describe, continue and create number patterns resulting from performing addition or subtraction (ACMNA060)	Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061) Tell time to the minute and investigate the relationship between units of time (ACMMG062) Make models of three-dimensional objects and describe key features (ACMMG063) Identify symmetry in the environment (ACMMG066) Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064) Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084) Compare objects using familiar metric units of area and volume (ACMMG290) Compare the areas of regular and irregular	Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067) Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068) Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies (ACMSP069) Interpret and compare data displays (ACMSP070) Identify everyday events where one cannot happen if the other happens (ACMSP093) Evaluate the effectiveness of different displays in illustrating data features including variability (ACMSP097)

Year	Number and Algebra	Measurement and Geometry	Statistics and Probability
	Investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9 (ACMNA074) Investigate equivalent fractions used in contexts (ACMNA077) Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)	shapes by informal means (ACMMG087) Compare and describe two-dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088) Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091) Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)	
5–6	Compare, order and represent decimals (ACMNA105) Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107) Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122) Multiply and divide decimals by powers of 10 (ACMNA130) Make connections between equivalent fractions, decimals and percentages (ACMNA131) Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence	Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111) Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114) Apply the enlargement transformation to familiar two-dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115) Estimate, measure and compare angles using degrees. Construct angles using a protractor (ACMMG112) Construct simple prisms and pyramids (ACMMG140) Investigate combinations of	Describe and interpret different data sets in context (ACMSP120) Compare observed frequencies across experiments with expected frequencies (ACMSP146) Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)

Year	Number and Algebra	Measurement and Geometry	Statistics and Probability
	(ACMNA133) Explore the use of brackets and order of operations to write number sentences (ACMNA134)	translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)	
7–8	Compare, order, add and subtract integers (ACMNA280) Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177) Investigate, interpret and analyse graphs from authentic data (ACMNA180)	Draw different views of prisms and solids formed from combinations of prisms (ACMMG161) Describe translations, reflections in an axis, and rotations of multiples of 90° on the Cartesian plane using coordinates. Identify line and rotational symmetries (ACMMG181) Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166) Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165) Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198) Define congruence of plane shapes using transformations (ACMMG200) Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)	Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170) Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293) Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207)

Year	Number and Algebra	Measurement and Geometry	Statistics and Probability
9–10	Solve problems involving direct proportion. Explore the relationship between graphs and equations corresponding to simple rate problems (ACMNA208) Apply the distributive law to the expansion of algebraic expressions, including binomials, and collect like terms where appropriate (ACMNA213) Solve linear simultaneous equations, using algebraic and graphical techniques including using digital technology (ACMNA237)	Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220) Use similarity to investigate the constancy of the sine, cosine and tangent ratios for a given angle in right-angled triangles (ACMMG223) Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (ACMMG244)	Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread (ACMSP283) Compare shapes of box plots to corresponding histograms and dot plots (ACMSP250) Use scatter plots to investigate and comment on relationships between two numerical variables (ACMSP251) Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data (ACMSP253)

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA)