


| Essential Knowledges | Learning | Matheeeds Lessons <br> GRADE 2 | Mathseeds Lesson \# |  |  | Addifional Mathseeds Resources |  |
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|  |  |  | Knowledge and Skills | Assessment | Higher Order Thinking Skills | Fluency | Assessment |
|  |  | Strategy | Online Lesson and Printable Resources | End-of-lesson Quiz | Critical Thinking and Problem Solving Worksheets | Driving Tests (DT) Mental Minute (MM) | Printable Achievement Standards Assessment |
| Arithmetic: Understanding and writing numbers | Natural numbers | natural numbers less than 1000 (units, tens, hundreds), reading, writing, digit, number, counting, one-to-one correspondence, representation, comparison, classification, order, equivalent expressions, writing numbers in expanded form, patterns, properties (even numbers, odd numbers), number line, approximation | 101, 105, 106, 108, 117, 122, 129 |  |  | DT Grade 2 Number 1-24 DT Grade 2 Operations 3 | Grade 2 Number and Algebra: Numbers to 1000 <br> Tests 1-8 |
|  | Fractions | fractions related to the student's everyday life | 132,138 |  |  | DT Grade 2 Patterns and Fractions 5, 11, 12, 14-17 | Grade 2 Number and Algebra: Fractions and Money Tests 1-3 |
| Arithmetic: Meaning of operations involving numbers | Natural numbers | operation, operation sense: addition, sum, subtraction, difference, term, missing term, number line, multiplication and division | 110, 111, 113, 115, 120, 130, 131, 136, 141 |  |  | DT Grade 2 Operations 6, 8-12, 19 | Grade 2 Number and Algebra: Equal Groups Tests 1-5 |
|  |  | choice of operation: addition, subtraction | 118, 139 |  |  |  |  |
|  |  | meaning of an equality relation (equation), meaning of an equivalence relation | 125 |  |  |  |  |
|  |  | relationships between the operations | 131, 141, 142 |  |  | DT Grade 2 Operations 20, 26 |  |
|  |  | property of operations: commutative law | 142 |  |  |  |  |
| Arithmetic: Operations involving numbers | Natural numbers | own processes for mental computation: addition, subbraction; operations to be memorized: additions $(0+0$ to $10+10)$ related to the corresponding subtractions; own processes for written computation: addition, subtraction | 103, 110, 118, 120, 131, 139, 141, 142, 144, 146, 147, 148, 150 |  |  | $\begin{aligned} & \text { DT Grade } 2 \text { Operations } 1,2,4,5,7,13, \\ & 14,15,21,22,24,27,28 \\ & \text { MM Addition Sprints } \\ & \text { MM Subtraction Sprints } \end{aligned}$ | Grade 2 Number and Algebra: Addition and Subtraction Tests 1-9 |
|  |  | conventional processes for written computation: adding two four-digit numbers; subtracting a four-digit number from a four-digit number such that the difference is greater than 0 | 124, 128, 134, 144, 146, 150 |  |  | DT Grade 2 Operations 16, 17, 18, 23, 25 |  |
|  |  | patterns: series of numbers, family of operations | 117, 133, 142 |  |  | DT Grade 2 Patterns and Fractions 1-4, 6-10, 13 | Grade 2 Number and Algebra: Number Patterns Tests 1-7 |
| Geometry: Geometric figures and spatial sense | Solids | comparing prisms, pyramids, spheres, cylinders, cones; comparing objects in the environment with solids; altributes (number of faces, base): prisms, pyramids | 121 |  |  | DT Grade 2 Geometry 3, 5, 6, 7 | Grade 2 Geometry: Shape Tests 3, 4, 5 |
|  | Plane figures | comparing and constructing figures made with closed curved lines or closed straight lines; identifying a square, rectangle, triangle, circle and rhombus; describing a square, rectangle, triangle and rhombus | 119, 145 |  |  | DT Grade 2 Geometry 4, 6, 7, 10 | Grade 2 Geometry: Shape <br> Tests 1, 2, 5 |
|  | Frieze patterns and tessellations | observing and producing patterns using geometric figures; congruent figures | 102 |  |  | DT Grade 2 Geometry 1, 9, 11, 12 |  |
| Measurement: Estimating and measuring | Lengths | dimensions of an object; conventional units ( $\mathrm{m}, \mathrm{cm}$ ) | 104, 126, 143 |  |  | DT Grade 2 Measurement 6, 9, 11, 13, 15, 19, 21-24 | Grade 2 Measurement: Length Tests 1-8 |
|  | Surface areas | unconventional units | 112,149 |  |  | DT Grade 2 Measurement 6 |  |
|  | Volumes | unconventional units | 116 |  |  | DT Grade 2 Measurement 8 |  |
|  | Masses | unconventional units | 135 |  |  | DT Grade 2 Measurement 17, 18 |  |
|  | Time | conventional units, duration (day, hour, minute, second, daily cycle, weekly cycle, yearly cycle) | 109, 114, 123, 127 |  |  | DT Grade 2 Measurement 1-5, 7, 10, 14, 16, 20 | Grade 2 Measurement: Time Tests 1-7 |
| Statistics and Probability | Statistics | formulating questions for a survey; collecting, describing and organizing data using tables; interpreting data using a bar graph, a pictograph and a data table; displaying data using a bar graph, a pictograph and a data table | 135, 137, 143 |  |  | DT Data and Chance 1, 4, 5, 7-14 | Grade 2 Statistics: Data Tests 1-4 |
|  | Probability | experimentation with activities involving chance; predicting the likelihood of an event (certainty, possibility or impossibility); enumerating the possible outcomes of a simple random experiment | 107 |  |  | DT Data and Chance 2, 3, 6 |  |


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|  |  |  | Mathseeds Lesson \# |  |  | Addifional Mathseeds Resources |
|  |  |  | Knowledge and Skills | Assessment | Higher Order Thinking Skills | Fluency |
|  |  | Strategy | Online Lesson and Printable Resources | End-of-lesson Quiz | Critical Thinking and Problem Solving Worksheets | Mental Minute (MM) |
| Arithmetic: Understanding and writing numbers | Natural numbers | reading, writing, representation, comparison, classification, order, equivalent expressions, writing numbers in expanded form, patterns, properties, number line, approximation | 151, 156, 161, 166, 194 |  |  |  |
|  | Fractions | fractions based on a whole or a collection of objects: reading, writing, numerator, denominator, various representations (using objects or pictures), equivalent parts, comparison with $0,1 / 2$ and 1 | 160, 175, 180, 191, 197 |  |  |  |
| Arithmetic: Meaning of operations involving numbers | Natural numbers | operation sense: multiplication, product, division, quotient, properties of divisibility | 155,165 |  |  |  |
|  |  | choice of operation: multiplication, division | 188 |  |  |  |
|  |  | meaning of an equality relation (equation), meaning of an equivalence relation | 159,163 |  |  |  |
|  |  | relationships between the operations | 163,181,190 |  |  |  |
|  |  | property of operations: associative law | 171 |  |  |  |
| Arithmetic: Operations involving numbers | Natural numbers | own processes for mental computation: addition, subtraction, multiplication, division; operations to be memorized: multiplications $(0 \times 0$ to $10 \times 10)$ related to the corresponding divisions | 155, 158, 165, 168, 171, 173, 176, 181, 183, 188, 190, 193, 196, 199 |  |  | MM Addition Sprints MM Subtraction Sprints MM Multiplication Sprints MM Division Sprints |
|  |  | own processes for written computation: multiplying a three-digit number by a one-digit number | 186 |  |  |  |
|  |  | conventional processes for written computation: adding two four-digit numbers, subtracting a four-digit number from a four-digit number such that the difference is greater than 0 | 170, 178 |  |  |  |
|  |  | patterns: series of numbers, family of operations | 153,163,181, 195 |  |  |  |
| Geometry: Geometric figures and spatial sense | Space | locating objects on an axis; locating objects in a plane; locating objects in a Cartesian plane | 164 |  |  |  |
|  | Solids | describing prisms and pyramids in terms of faces, vertices and edges; nets for prisms and pyramids; classification of prisms and pyramids | 169 |  |  |  |
|  | Plane figures | describing quadrilaterals, including trapezoids and parallelograms; classifying quadrilaterals | 184 |  |  |  |
| Measurement: Estimating and measuring | Lengths | conventional units ( $\mathrm{m}, \mathrm{cm}, \mathrm{mm}$ ); relationships between units of measure | 182, 198 |  |  |  |
|  |  | perimeter, calculating the perimeter | 192 |  |  |  |
|  | Angles | comparing angles | 177 |  |  |  |
|  | Surface areas | unconventional units; conventional units ( $\mathrm{m}^{2}$ ) | 157, 200 |  |  |  |
|  | Capacities | unconventional units, conventional units ( $\mathrm{L}, \mathrm{mL}$, relationships between the units of measure | 154 |  |  |  |
|  | Masses | unconventional units; conventional units ( $\mathrm{kg}, \mathrm{g}$, relationships between the units of measure | 172 |  |  |  |
|  | Time | conventional units, duration (day, hour, minute, second, daily cycle, weekly cycle, yearly cycle) | 162,179,185,189 |  |  |  |
| Statistics and Probability | Statistics | formulating questions for a survey; collecting, describing and organizing data using tables; interpreting data using a bar graph, a pictograph and a data table; displaying data using a bar graph, a pictograph and a data table | $174,187,198$167 |  |  |  |
|  | Probability | experimentation with activities involving chance; predicting the likelihood of an event (certainty, possibility or impossibility); probability that a simple event will occur (more likely, just as likely, less likely); enumerating the possible outcomes of a random experiment using a table; doing simulations with or without a computer |  |  |  |  |

