2014 NC maths geometry objectives as ‘I can’ statements for KS1 and lower KS2

# Year 1 Geometry

## Position and transformation

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| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “recognise and name common 2-D and 3-D shapes” | I can recognise and name 2D shapes |  |
| I can recognise and name 3D shapes |  |
| I can describe features of 2D and 3D shapes |  |
| I can use 2D and 3D shapes to make patterns |  |
| “describe position, directions and movements, including half, quarter and three-quarter turn” | I can identify objects that rotate including ¼, ½ and ¾ turns |  |
| I can describe position of objects |  |
| I can describe direction and distance of moving objects. |  |

## Measure

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| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “Compare, describe, measure and begin to record and solve practical problems for length/height/capacity/time” | I can compare different lengths/heights and put them in order |  |
| I can measure length/height in non standard units |  |
|  I can estimate length/height in non standard units |  |
| I can measure length/height in standard units |  |
| I can estimate length/height in standard units |  |
| I can compare different weights and put them in order |  |
| I can measure weights in non standard units |  |
|  I can estimate weights in non standard units |  |
| I can measure weights in standard units |  |
| I can estimate weights in standard units |  |
| I can compare different capacities and put them in order |  |
| I can measure capacities in non standard units |  |
|  I can estimate capacities in non standard units |  |
| I can measure capacities in standard units |  |
| I can estimate capacities in standard units |  |
| I can compare different times and put them in order |  |
| I can measure times in non standard units |  |
|  I can estimate times in non standard units |  |
| I can measure times in standard units |  |
| I can estimate times in standard units |  |
| I can choose and use appropriate units of length |  |
| I can choose and use appropriate units of weight |  |
| I can choose and use appropriate units of capacity |  |
| I can choose and use appropriate units of time |  |
| “recognise and use language relating to dates, including days of the week, weeks, months and years” | I can list the days of the week |  |
| I can list the months of the year |  |
| I know what year it is and what year I was born |  |
| “tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.” | I can read a clock to tell the time to an hour and half past the hour |  |
| I can draw the time on a clock to show o’clock and half past |  |

There is no statistics (Data handling) work included in the 2014 NC programme of study

# Year 2 Geometry

## Position and transformation

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| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “identify 2-D shapes on the surface of 3-D shapes” | I can name 2D shapes and 3D shapes and identify them from pictures (including in different orientations) |  |
| I can identify 2D shapes on the surface of 3D shapes |  |
| I can make 3D shapes |  |
| “compare and sort common 2-D and 3-D shapes and everyday objects.” | I can compare and sort common 2-D and 3-D shapes and everyday objects. |  |
|  “describe the properties of 2-D shapes, including the number of sides”; | I can describe the properties of 2D shapes |  |
| “describe the properties of 3-D shapes, including the number of edges, vertices and faces” | I can describe the properties of 3D shapes |  |
| “describe the properties of 2-D shapes, including … symmetry in a vertical line” | I can draw vertical lines of symmetry on 2D shapes |  |
| I can make a symmetrical pattern |  |
| “use mathematical vocabulary to describe position, direction and movement” | I can give and follow instructions to describe position, direction and movement. |  |
| “distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)” | I can identify clockwise and anticlockwise rotations |  |
| I can identify ¼, ½, ¾ and whole turns and relate them to right angles. |  |

## Measure

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| --- | --- | --- |
| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml)” | I can choose and use appropriate standard units and measuring instruments to measure length/height (cm/m) in any direction. |  |
| I can choose and use appropriate standard units and measuring instruments to measure mass (kg/g) |  |
| I can choose and use appropriate standard units and measuring instruments to measure Temperature (oC) |  |
| I can choose and use appropriate standard units and measuring instruments to measure capacity (litres/ ml) |  |
| “to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels”” | I can read the numbered divisions on a scale |  |
| I can interpret the divisions between the numbers on a scale |  |
| I can use a ruler to draw lines to the nearest cm |  |
| “compare and sequence intervals of time “ | I can compare and order intervals of time (sec, min, hour, day, month, and year) from shortest to longestusing >, < and =. |  |
| I can describe the relationship between sec, min, hour, day, month, and year. |  |
| “tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times” | I can tell the time to o’clock, half past, quarter past and quarter to the hour |  |
| I can draw the hands on a clock to show the time to o’clock, half past, quarter past and quarter to the hour |  |
| I can tell the time to five minutes  |  |
| I can draw the hands on a clock to show the time to five minutes |  |
| “compare and order [measurements] using >, < and =”; | I can compare and order measurements using <,> and = |  |
| “recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value”;  | I can combine different coins and notes to make a particular value |  |
| “ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change” | I can work out the total cost of different prices (in £ **or** p) |  |
| I can work out how much change should be given |  |

## Data Handling

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| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “ interpret and construct simple pictograms, tally charts, block diagrams and simple tables” | I can record data in a tally chart |  |
| I can represent data as a block graph |  |
| I can represent data as a pictogram |  |
| I can use ICT to organise and present data |  |
| “ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity” | I can use tally charts to answer simple questions.  |  |
| I can use block graphs to answer simple questions. |  |
| I can use pictograms to answer simple questions. |  |

# Year 3 Geometry

## Position and transformation

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| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “draw 2-D shapes and make 3-D shapes usingmodelling materials; recognise 3-D shapes in differentorientations and describe them” | I can recognise and classify 2D and 3D shapes in different orientations |  |
| I can describe 2D and 3D shapes |  |
| I can draw 2D and 3D shapes |  |
| I can make 3D shapes using modelling materials |  |
| “identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle” | I can recognise right angles |  |
| I can show that that two right angles make a half-turn, three make three quarters of a turn and four a complete turn |  |
| I can identify whether angles are greater than (obtuse) or less than (acute) a right angle |  |
| identify horizontal and vertical lines and pairs ofperpendicular and parallel lines” | I can identify horizontal and vertical lines |  |
| I can identify pairs of parallel lines |  |
| I can identify pairs of perpendicular lines |  |

## Measure

|  |  |  |
| --- | --- | --- |
| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| Students measure, compare, add & subtract using commonmetric measures | I can measure and compare length using commonmetric measures |  |
| I can measure and compare weight using commonmetric measures |  |
| I can measure and compare temperature using commonmetric measures |  |
| I can measure and compare capacity using commonmetric measures |  |
| I can add and subtract using cm and m |  |
| I can add and subtract using g and kg |  |
| I can add and subtract using l and ml |  |
| I can add and subtract using oC |  |
| Y3 must tell time to nearest minute and usespecific vocab, inc. seconds, a.m., p.m., etc. Students must also use Roman numerals and 24-hour clock. | I can tell the time to the nearest minute on an analogue clock |  |
| I can tell the time to the nearest minute on a 24 hour digital clock |  |
| I can use Roman numerals |  |
| “know the number of seconds in a minute and thenumber of days in each month, year and leap year” | I can state the number of seconds in a minute and the number of minutes in an hour.  |  |
| I can state the number of days in each month, year and leap year |  |

## Data handling

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| --- | --- | --- |
| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “solve one-step and two-step usinginformation presented in scaled bar charts and pictograms andtables” | I can solve one step problems using bar charts |  |
| I can solve one step problems using tables |  |
| I can solve one step problems using pictograms |  |
| I can solve two step problems using bar charts |  |
| I can solve two step problems using tables |  |
| I can solve two step problems using pictograms |  |
| NO LONGER EXPLICIT ANYWHERE IN PROGRAMME OF STUDY | I can use Venn diagrams to sort data and objects using more than one criterion |  |
| I use Carroll diagrams to sort data and objects using more than one criterion |  |

# Year 4 Geometry

## Position & Transformation

|  |  |  |
| --- | --- | --- |
| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes” | I can draw polygons |  |
| I can identifying the properties of polygons  |  |
| I can classify polygons using their properties and sizes |  |
| NO LONGER REQUIRED IN PROGRAMME OF STUDY | I can make nets of common solids |  |
| I can recognise 3D objects from 2D representations |  |
| “describe positions on a 2-D grid as coordinates in the first quadrant” | I can use the 8 compass points to describe direction |  |
| I can identify the position of a square on a grid of squares |  |
| “describe movements as translations” | I can describe movements as translations |  |
| “plot points and draw sides to complete a given polygon” | I can plot points to draw a given polygon |  |
| “identify acute and obtuse angles and compare and order angles up to two right angles by size” | I can identify obtuse and acute angles |  |
| I can order angles by size |  |

## Measure

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| --- | --- | --- |
| **2014 NC objective** | **Learning objective for lesson** | **Covered?**  |
| “estimate, compare and calculate different measures, including money in pounds and pence” | I can estimate , compare and calculate using standard measures of length |  |
| I can estimate, compare and calculate using standard measures of weight |  |
| I can estimate, compare and calculate using standard measures of capacity |  |
|  | I can estimate, compare and calculate using standard measures of temperature |  |
|  | I can estimate, compare and calculate using £ and p |  |
| “convert between different units of measure (e.g. kilometre to metre; hour to minute)” | I can convert between cm and m  |  |
| I can convert between g and kg |  |
| I can convert between l and ml |  |
| I can convert between £ and p |  |
| Scale-reading begins in Y2; there are no further specific mentions | I can read a scale including spaces between marked values up to 1/10th of a unit |  |
| “measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres” and “find the area of rectilinear shapes by counting squares” | I can find the perimeter of a square or a rectangle in cm and in m |  |
| I can find the area of a square or rectangle by counting squares |  |
| “read, write and convert time between analogue and digital 12 and 24-hour clocks”; | I can read and write the time on analogue and digital clocks |  |
| I can convert between digital and analogue clocks including am and pm |  |
| “solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days” | I can convert minutes to hours and vice versa and use this to solve problems |  |
| I can convert seconds to minutes and vice versa and use this to solve problems |  |
| I can convert hours to days and vice versa and use this to solve problems |  |
| I can convert weeks to days and years to months and vice versa and use this to solve problems |  |
| “interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs”  | I can work out what data is needed to answer a specific question |  |
| I can organise and present data in tables, tally charts, bar charts and pictograms |  |
| I can interpret data from tables, tally charts, bar charts and pictograms |  |
| I can use ICT to produce tables, tally charts, bar charts and pictograms |  |
| I can understand why different scales are used for impact |  |