

## **Curriculum Overview for Mathematics**

## <u>Year 8</u>

Half Term 5: Percentages Declarative Knowledge:		Modelling reading of questions by the class teacher – teaching like a Mathematician Key words on ton sheet are
<ul> <li>greater than 1</li> <li>Procedural Knowledge:</li> <li>7.8 calculate a unit fraction of an amount</li> <li>7.8 calculate the whole amount when</li> <li>given a unit fraction of it</li> <li>calculate a fraction of an amount</li> </ul>		shared with children, including syllabification when they appear in the learning Expectation of Mathematical vocabulary used in lessons
<ul> <li>7.8 decrease an amount by a fraction</li> <li>7.8 increase an amount by a fraction</li> <li>8.1 equivalence of FDP, techniques to</li> <li>convert, ordering FDP</li> <li>8.2 recurring and terminating decimals</li> <li>8.3 multiple representations of % - shading</li> <li>shapes, bars</li> <li>8.4 % of an amount; percentages greater</li> <li>than 100%</li> <li>8.5 percentage of an amount with decimal</li> <li>multipliers</li> </ul>		Proper fraction, improper fraction, mixed number Simplify, cancel, lowest terms Percent, percentage Percentage change Original amount Multiplier (Simple) interest Exact Increase/ decrease
<ul> <li>8.6 expressing one number as a % of another</li> <li>8.7 percentage increase and decrease (finding the % and adding/subtracting), fraction increase and decrease</li> <li>8.8 the effect of multiplying by numbers between 0 and 1 compared with numbers greater than 1</li> <li>8.9 applications and problems, including</li> </ul>	     	End of unit exam completed in class with relearning tasks in feedback lesson. There is an expectation of revision taking place at home. Content may be included in Term 3 formal assessment.
<ul> <li>8.9 applications and problems, including interpreting pie charts and simple interest</li> <li>Conditional Knowledge: <ul> <li>calculate a unit fraction when given a fraction of an amount</li> <li>calculate the whole amount when given a fraction of it</li> <li>calculate a fraction of the amount from a different fraction</li> <li>calculate the whole amount when given 1% of it</li> <li>calculate the whole amount when given 10% of it</li> <li>calculate the whole amount when given a percentage of it</li> <li>calculate the whole amount when given the amount after it has been decreased</li> <li>calculate the whole amount when given the amount after an increase</li> </ul> </li> </ul>		Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school). Revision for end of unit exams. This will include Dr Frost Maths practise, but may also include extra revision set by the teacher, including practising past exam questions, creating revision cards, creating mindmaps, etc.



<ul> <li>Half Term 5: Introduction to Proportion</li> <li>Declarative Knowledge: <ul> <li>draw a picture to represent a fraction greater than 1</li> </ul> </li> <li>Procedural Knowledge: <ul> <li>10.1 direct and inverse proportion</li> <li>10.2 Comparing quantities (value for money, exchange rates, etc)</li> </ul> </li> </ul>	Modelling reading of questions by the class teacher – teaching like a Mathematician Key words on top sheet are shared with children, including syllabification when they appear in the learning Expectation of Mathematical vocabulary used in lessons
10.3 Scaling up/down - recipes, shapes (simple enlargements), etc 10.4 percentage increase and decrease, decimal multipliers	Direct proportion, inverse proportion, scale factor, multiplier, scale up, scale down, increase, decrease, ratio, equal to
<b>Conditional Knowledge:</b> 10.5 finding a percentage change	End of unit exam completed in class with relearning tasks in feedback lesson. There is an expectation of revision taking place at home.
	Content may be included in Term 3 formal assessment.
	Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school).
	Revision for end of unit exams. This will include Dr Frost Maths practise, but may also include extra revision set by the teacher, including practising past exam questions, creating revision cards, creating mindmaps, etc.



Half Term 6: Congruence, Similarity and Transformations         Declarative Knowledge:         Know the meaning of rotation, translation, enlargement and reflection         Know the definition of similar shapes         A.5       Knowing that enlargements produce         similar shapes         4.5       Knowledge:         4.1       Congruence - introduction         4.2       Tessellating congruent shapes to fill         the plane       4.3         4.3       Isometries: translation (as a vector),         reflection and rotation, including rotational         and reflective symmetry, combinations of         transformations, including successive         translation produce congruent shapes         4.4       Similarity of length, proving shapes are         similar, finding scale factors and writing         equivalent sides as equivalent ratios         4.5       Enlargement. Knowing that         enlargements produce similar shapes         Conditional Knowledge:         Identify invariant points         4.5       Fractional enlargement.	Modell by the like a N Key wo shared syllabif in the le Expect vocabu	ing reading of questions class teacher – teaching lathematician ords on top sheet are with children, including ication when they appear earning ation of Mathematical lary used in lessons
	Congru coordir axis Ori Reflect Transfo Congru line Veo invariar enlarge Centre Image End of class w feedba expect comple	eent, Similar, (Cartesian) nates Axis, axes, x-axis, y- igin Quadrant Translation, ion, Rotation ormation Object, Image eent, congruence Mirror ctor Centre of rotation, nt point, Enlarge, ement Scaling Scale factor of enlargement Object unit exam completed in ith relearning tasks in ck lesson. There is an ation of revision being eted at home. It may be included in Term al assessment.
	Dr Fros using D usernal provide Revisio This wil practise extra re includir questic cards, o	t Maths – practising skills prFrost.org (a unique me and password will be ed by the school). In for end of unit exams. Il include Dr Frost Maths e, but may also include evision set by the teacher, ng practising past exam ons, creating revision creating mindmaps, etc.