

Main Criteria: Forward Education
Secondary Criteria: National Curriculum for England
Subjects: Mathematics, Science, Technology Education
Grades: 5, 6, Key Stage 2

Forward Education

How Wind Turbines Capture Kinetic Energy

National Curriculum for England
Mathematics
 Grade **Key Stage 2** - Adopted: 2014

PROGRAMME OF STUDY	UK.MA.Y3.N.	Year 3 – NUMBER
STRAND	MA.Y3.N.2.	Addition and subtraction
STATUTORY REQUIREMENT	MA.Y3.N.2.1.	Pupils should be taught to:

STATUTORY REQUIREMENT MA.Y3.N.2.1.2. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.

STATUTORY REQUIREMENT MA.Y3.N.2.1.4. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

PROGRAMME OF STUDY	UK.MA.Y4.N.	Year 4 – NUMBER
STRAND	MA.Y4.N.2.	Addition and subtraction
STATUTORY REQUIREMENT	MA.Y4.N.2.1.	Pupils should be taught to:

STATUTORY REQUIREMENT MA.Y4.N.2.1.1. Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

PROGRAMME OF STUDY	UK.MA.Y4.N.	Year 4 – NUMBER
STRAND	MA.Y4.N.4.	Fractions (including decimals)
STATUTORY REQUIREMENT	MA.Y4.N.4.1.	Pupils should be taught to:

STATUTORY REQUIREMENT MA.Y4.N.4.1.5. Recognise and write decimal equivalents of any number of tenths or hundredths.

STATUTORY REQUIREMENT MA.Y4.N.4.1.6. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

PROGRAMME OF STUDY	UK.MA.Y5.N.	Year 5 – NUMBER
STRAND	MA.Y5.N.2.	Addition and subtraction

STATUTORY REQUIREMENT	MA.Y5.N.2.1.	Pupils should be taught to:
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STATUTORY REQUIREMENT MA.Y5.N.2.1.1. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).

STATUTORY REQUIREMENT MA.Y5.N.2.1.2. Add and subtract numbers mentally with increasingly large numbers.

PROGRAMME OF STUDY	UK.MA.Y5.N.	Year 5 – NUMBER
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STRAND	MA.Y5.N.4.	Fractions (including decimals and percentages)
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STATUTORY REQUIREMENT	MA.Y5.N.4.1.	Pupils should be taught to:
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STATUTORY REQUIREMENT MA.Y5.N.4.1.6. Read and write decimal numbers as fractions [for example, $0.71 = 71/100$].

STATUTORY REQUIREMENT MA.Y5.N.4.1.12. Solve problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25.

PROGRAMME OF STUDY	UK.MA.Y6.N.	Year 6 – NUMBER
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STRAND	MA.Y6.N.3.	Fractions (including decimals and percentages)
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STATUTORY REQUIREMENT	MA.Y6.N.3.1.	Pupils should be taught to:
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STATUTORY REQUIREMENT MA.Y6.N.3.1.6. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $3/8$].

STATUTORY REQUIREMENT MA.Y6.N.3.1.11. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

National Curriculum for England

Science

Grade **Key Stage 2** - Adopted: 2014

PROGRAMME OF STUDY	UK.SC.Y3-4.WS.	YEARS 3-4 - Working scientifically
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STRAND		During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:
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STATUTORY REQUIREMENT SC.Y3-4.WS.3. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

STATUTORY REQUIREMENT SC.Y3-4.WS.9. Using straightforward scientific evidence to answer questions or to support their findings.

PROGRAMME OF STUDY	UK.SC.Y3	YEAR 3 – SCIENCE
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STRAND	SC.Y3.5.	Forces and magnets
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STATUTORY REQUIREMENT		Pupils should be taught to:
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STATUTORY REQUIREMENT SC.Y3.5.1. Compare how things move on different surfaces.

PROGRAMME OF STUDY	UK.SC.Y5-6.WS.	YEARS 5-6 - Working scientifically
STRAND		During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

STATUTORY REQUIREMENT SC.Y5-6.WS.2. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

PROGRAMME OF STUDY	UK.SC.Y5	YEAR 5 – SCIENCE
STRAND	SC.Y5.5.	Forces
STATUTORY REQUIREMENT		Pupils should be taught to:

STATUTORY REQUIREMENT SC.Y5.5.3. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

PROGRAMME OF STUDY	UK.SC.Y6	YEAR 6 – SCIENCE
STRAND	SC.Y6.5.	Electricity
STATUTORY REQUIREMENT		Pupils should be taught to:

STATUTORY REQUIREMENT SC.Y6.5.2. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.

**National Curriculum for England
Technology Education
Grade Key Stage 2 - Adopted: 2014**

PROGRAMME OF STUDY	UK.CO.	Computing
STRAND		Pupils should be taught to:

STATUTORY REQUIREMENT CO.1. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

STATUTORY REQUIREMENT CO.3. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.