Main Criteria: Forward Education
Secondary Criteria: National Curriculum for England
Subjects: Mathematics, Science, Technology Education
Grades: 7, 8, Key Stage 3

Forward Education

Smart Farming with Hydroponics & LED Grow Lights

National Curriculum for England
Mathematics
Grade **Key Stage 3** - Adopted: **2014**

PROGRAMME OF STUDY	**UK.MA.Y7-9.1.**	**Year 7-9 – Working mathematically**
STRAND		**Through the mathematics content, pupils should be taught to:**
STATUTORY REQUIREMENT	**MA.Y7-9.1.1.**	**Develop fluency**
STATUTORY REQUIREMENT	MA.Y7-9.1.1.1.	Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots.
STATUTORY REQUIREMENT	MA.Y7-9.1.1.2.	Select and use appropriate calculation strategies to solve increasingly complex problems.
STATUTORY REQUIREMENT	MA.Y7-9.1.1.4.	Substitute values in expressions, rearrange and simplify expressions, and solve equations.
STATUTORY REQUIREMENT	MA.Y7-9.1.1.6.	Develop algebraic and graphical fluency, including understanding linear and simple quadratic functions.

PROGRAMME OF STUDY	**UK.MA.Y7-9.1.**	**Year 7-9 – Working mathematically**
STRAND		**Through the mathematics content, pupils should be taught to:**
STATUTORY REQUIREMENT	**MA.Y7-9.1.2.**	**Reason mathematically**
STATUTORY REQUIREMENT	MA.Y7-9.1.2.5.	Begin to reason deductively in geometry, number and algebra, including using geometrical constructions.

PROGRAMME OF STUDY	**UK.MA.Y7-9.1.**	**Year 7-9 – Working mathematically**
STRAND		**Through the mathematics content, pupils should be taught to:**
STATUTORY REQUIREMENT	**MA.Y7-9.1.3.**	**Solve problems**
STATUTORY REQUIREMENT	MA.Y7-9.1.3.1.	Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems.
STATUTORY REQUIREMENT	MA.Y7-9.1.3.2.	Develop their use of formal mathematical knowledge to interpret and solve problems, including in financial mathematics.

STATUTORY REQUIREMENT	MA.Y7-9.1.3.3.	Begin to model situations mathematically and express the results using a range of formal mathematical representations.

PROGRAMME OF STUDY	**UK.MA.Y7-9.3.**	**Algebra**
STRAND		**Pupils should be taught to:**
STATUTORY REQUIREMENT	MA.Y7-9.3.7.	Use algebraic methods to solve linear equations in one variable (including all forms that require rearrangement).

PROGRAMME OF STUDY	**UK.MA.Y7-9.7.**	**Statistics**
STRAND		**Pupils should be taught to:**
STATUTORY REQUIREMENT	MA.Y7-9.7.2.	Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data.

National Curriculum for England

Science

Grade **Key Stage 3** - Adopted: **2014**

PROGRAMME OF STUDY	**UK.SC.Y7-9.B.**	**YEARS 7-9 - Biology**
STRAND	**SC.Y7-9.B.3.**	**Interactions and interdependencies**
STATUTORY REQUIREMENT	**SC.Y7-9.B.3.1.**	**Relationships in an ecosystem**
STATUTORY REQUIREMENT		**Pupils should be taught about:**
STATUTORY REQUIREMENT	SC.Y7-9.B.3.1.b.	The importance of plant reproduction through insect pollination in human food security.

National Curriculum for England

Technology Education

Grade **Key Stage 3** - Adopted: **2014**

PROGRAMME OF STUDY	**UK.CO.**	**Computing**
STRAND		**Pupils should be taught to:**
STATUTORY REQUIREMENT	CO.2.	Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem.
STATUTORY REQUIREMENT	CO.3.	Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions.