



## THE ENGLISH MODERN SCHOOL ALWAKRA CAMPUS

*Our mission is to provide a challenging, internationally based education that nurtures lifelong learners in a multi-cultural setting.*

*Our vision is for all our students to reach their full potential and positively impact their world.*

### YEAR 4 CURRICULUM GUIDE

#### **Curriculum Frameworks**

The following curriculum frameworks provide a set of progressive learning objectives for Mathematics, English and Science, taken directly from the Cambridge Curriculum Frameworks. The objectives detail what the learner should know or what they should be able to do by the end of that year in Primary. The learning objectives provide a structure for teaching and learning and a reference against which a learners' ability and understanding can be checked. These are the three core Cambridge Primary Curriculum subjects, other subjects such as Social Studies are taught following standards from the UK National Curriculum.

#### **EMSW Primary Teaching Philosophy**

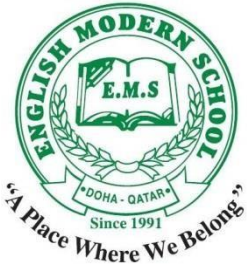
The English Modern School strengthens the curriculum with research-based best practice using instructional and assessment methodologies. The Primary division use an inquiry-based approach where children are encouraged to think critically to investigate the world around them, often with different subject areas integrated together. Connections of ideas across different subjects help students to consolidate their learning by being able to make strong and relevant connections. EMS provides students with learning experiences through inquiry that are engaging, relevant, challenging and significant, in learning environments that are stimulating and provocative. Students are supported in their journey towards mastery and control on their journey to become independent, autonomous inquirers. In the Primary school teachers use continuous, on-going assessments of and for learning throughout the year.

The assessments are varied and provide multiple opportunities for students to demonstrate learning. Together this information is used to support the child's learning, inform teachers of next learning steps and is also used to make a judgement on an overall grade for reporting three times a year.

#### **Expected School-Wide Learning Results**

It is the consensus of the EMS community that the following are school-wide learning results for every EMS graduate:





# PRIMARY- YEAR 4

## Academic Information

### CAMBRIDGE ENGLISH STANDARDS

#### **Reading:**

##### **Students are learning to:**

Extend the range of reading and read further stories or poems by a favourite writer, and compare them.

Use knowledge of punctuation and grammar to read with fluency, understanding and expression. Identify all the punctuation marks and respond to them when reading.

Apply phonic/spelling, graphic, grammatical and contextual knowledge in reading unfamiliar words.

Read and perform playscripts, exploring how scenes are built up.

Express a personal response to a text, and link characters and settings to personal experience.

Retell or paraphrase events from the text in response to questions.

Note key words and phrases to identify the main points in a passage and distinguish between fact and opinion.

Investigate how settings and characters are built up from details and identify key words and phrases.

Explore implicit meanings in a text.

Recognise meaning in figurative language and understand how expressive and descriptive language creates mood.

Understand the impact of imagery and figurative language in poetry, including alliteration and simile, e.g. as ... as a ...

Identify adverbs and their impact on meaning.

Understand the use of connectives to structure an argument, e.g. if, although.

Understand how points are ordered to make a coherent argument and how persuasive writing is used to convince a reader.

Understand the main stages in a story from introduction to resolution.

Explore narrative order and the focus on significant events and understand how paragraphs and chapters are used to organise ideas.

Compare and contrast poems and investigate poetic features.

Investigate the grammar of different sentences: statements, questions and orders.

Identify different types of non-fiction text and their known key features and read newspaper reports and consider how they engage the reader.

#### **Writing**

##### **Students are learning to:**

Explore the layout and presentation of writing, in the context of helping it to fit its purpose.

Look for alternatives for overused words and expressions and use powerful verbs, e.g. rushed instead of went.

Make short notes from a text and use these to aid writing.

Collect and present information from non-fiction texts and elaborate on basic information with some detail.

Write character profiles, using detail to capture the reader's imagination.  
Adopt a viewpoint as a writer, expressing opinions and show awareness of the reader by adopting an appropriate style or viewpoint.  
Choose and compare words to strengthen the impact of writing, including some powerful verbs.  
Explore degrees of intensity in adjectives, e.g. cold, tepid, warm, hot.  
Write newspaper-style reports, instructions and non-chronological reports and present an explanation or point of view in points, e.g. in a letter.  
Summarise a sentence or a paragraph in a limited number of words.  
Explore different ways of planning stories, and write longer stories from plans and explore alternative openings and endings for stories.  
Begin to use paragraphs more consistently to organise and sequence ideas  
Use a wider variety of connectives in an increasing range of sentences.  
Use commas to mark meaning within sentences.  
Experiment with varying tenses in texts, e.g. in dialogue and understand past and present tenses and future forms of verbs.  
Understand all parts of the verb to be and know when to use each one.  
Use a range of end-of-sentence punctuation with accuracy and use speech marks and begin to use other associated punctuation.  
Learn the use of the apostrophe to show possession, e.g. girl's, girls'.  
Extend knowledge and use spelling patterns, e.g. vowel phonemes, double consonants, silent letters, prefixes and suffixes.  
Spell words with common letter strings but different pronunciations, e.g. tough, through, trough, plough.  
Revise rules for spelling words with common inflections, e.g. -ing, -ed, -s and identify syllabic patterns in multisyllabic words.  
Match spelling to meaning when words sound the same (homophones), e.g. to/two/too, right/write.  
Use all the letters in sequence for alphabetical ordering.  
Build words from words with similar meanings, e.g. medical, medicine and collect and classify words with common roots, e.g. invent, prevent.

## **Speaking and Listening**

### **Students are learning to:**

Organise ideas in a longer speaking turn to help the listener and vary use of vocabulary and level of detail.  
Understand the gist of an account or the significant points and respond to main ideas with relevant suggestions and comments.  
Listen carefully in discussion, contributing comments and questions and deal politely with opposing points of view.  
Adapt the pace and loudness of speaking when performing or reading aloud and adapt speech and gesture to create a character in drama.  
Comment on different ways that meaning can be expressed in own and others' talk.

## CAMBRIDGE SCIENCE STANDARDS

### Scientific Enquiry

#### Students are learning to:

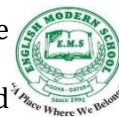
Test an idea or prediction based on scientific knowledge and understanding and suggest questions that can be tested and make predictions; communicate these.

Design a fair test and plan how to collect sufficient evidence and choose apparatus and decide what to measure. Make relevant observations and comparisons in a variety of contexts.

Measure temperature, time, force and length and think about a need for repeated measurements, e.g. length. Present results in drawings, bar charts and tables.

Identify simple trends and patterns in results and suggest explanations for some of these.

Explain what the evidence shows and whether it supports predictions. Communicate this clearly to others. Link evidence to scientific knowledge and understanding in some contexts



### Biology

#### Students are learning to:

Know that humans (and some animals) have bony skeletons inside their bodies.

Know how skeletons grow as humans grow, support and protect the body.

Know that animals with skeletons have muscles attached to the bones.

Know how a muscle has to contract (shorten) to make a bone move and muscles act in pairs.

Explain the role of drugs as medicines.

Investigate how different animals are found in different habitats and are suited to the environment in which they are found.

Recognise ways that human activity affects the environment e.g. river pollution, recycling waste.

### Chemistry

#### Students are learning to:

Know that matter can be solid, liquid or gas.

Investigate how materials change when they are heated and cooled.

Know that melting is when a solid turns into a liquid and is the reverse of freezing.

Observe how water turns into steam when it is heated but on cooling the steam turns back into water.

### Physics

#### Students are learning to:

Explore how sounds are made when objects, materials or air vibrate and learn to measure the volume of sound in decibels with a sound level meter.

Investigate how sound travels through different materials to the ear.

Investigate how some materials are effective in preventing sound from travelling through them.

Investigate the way pitch describes how high or low a sound is and that high and low sounds can be loud or soft. Secondary sources can be used.

Explore how pitch can be changed in musical instruments in a range of ways.

Construct complete circuits using switch, cell (battery), wire and lamps.

Explore how an electrical device will not work if there is a break in the circuit.

Know that electrical current flows and that models can describe this flow, e.g. particles travelling around a circuit.

Explore the forces between magnets and know that magnets can attract or repel each other.

Know that magnets attract some metals but not others.

## CAMBRIDGE MATHEMATICS STANDARDS

### Number

#### Students are learning to:

Read and write numbers up to 10 000.

Count on/back in ones, tens, hundreds and thousands from four-digit numbers.

Understand what each digit represents in a three- or four-digit number and partition into thousands, hundreds, tens and units.

Use decimal notation and place value for tenths and hundredths in context, e.g. order amounts of money; convert a sum of money such as \$13.25 to cents, or a length such as 125 cm to metres; round a sum of money to the nearest pound.

Understand decimal notation for tenths and hundredths in context, e.g. length.

Round three- and four-digit numbers to the nearest 10 or 100.

Position accurately numbers up to 1000 on an empty number line or line marked off in multiples of 10 or 100.

Estimate where 3- and 4-digit numbers lie on empty 0–1000 or 0–10 000 lines.

Compare pairs of three-digit or four-digit numbers, using the  $>$  and  $<$  signs, and find a number in between each pair.

Use negative numbers in context, e.g. temperature.

Recognise and extend number sequences formed by counting in steps of constant size, extending beyond zero when counting back.

Recognise odd and even numbers and make general statements about the sums and differences of odd and even numbers.

Order and compare two or more fractions with the same denominator (halves, quarters, thirds, fifths, eighths or tenths).

Recognise equivalence between:  $\frac{1}{2}$ ,  $\frac{4}{8}$  and  $\frac{5}{10}$ ;  $\frac{1}{4}$  and  $\frac{2}{8}$ ;  $\frac{1}{5}$  and  $\frac{2}{10}$ .

Use equivalence to help order fractions, e.g.  $\frac{7}{10}$  and  $\frac{3}{4}$ .

Understand the equivalence between one-place decimals and fractions in tenths.

Understand that  $\frac{1}{2}$  is equivalent to 0.5 and also to  $\frac{5}{10}$ .

Recognise the equivalence between the decimal fraction and vulgar fraction forms of halves, quarters, tenths and hundredths.

Recognise mixed numbers, e.g.  $5\frac{3}{3}$ , and order these on a number line.

Relate finding fractions to division.

Find halves, quarters, thirds, fifths, eighths and tenths of shapes and numbers.

Identify simple fractions with a total of 1, e.g.  $\frac{4}{1} + \frac{1}{1} = 1$ .

Add any pair of two-digit numbers, choosing an appropriate strategy.

Find a difference between near multiples of 100, e.g.  $304 - 296$ .

Decide whether to round up or down after division to give an answer to a problem.

Begin to understand simple ideas of ratio and proportion, e.g. a picture is one fifth the size of the real dog. It is 25 cm long in the picture, so it is  $5 \times 25$  cm long in real life.

### Multiplication and Division

#### Students are learning to:

Double any two-digit number.

Multiply multiples of 10 to 90 by a single-digit number.

Multiply any pair of single-digit numbers together.

Multiply a two-digit number by a single-digit number.

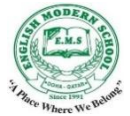
Divide two-digit numbers by single digit-numbers (answers no greater than 20).

Understand that multiplication and division are the inverse function of each other.

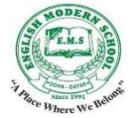
Understand the effect of multiplying and dividing three- digit numbers by 10.

Find multiples of 10, 100, 1000 more/less than numbers of up to four digits, e.g.  $3407 + 20 = 3427$ .

Multiply and divide three-digit numbers by 10 (whole number answers) and understand the effect; begin to multiply numbers by 100 and perform related divisions.



Recognise multiples of 5, 10 and 100 up to 1000.  
Know multiplication for  $2\times$ ,  $3\times$ ,  $4\times$ ,  $5\times$ ,  $6\times$ ,  $9\times$  and  $10\times$  tables and derive division facts.  
Recognise and begin to know multiples of 2, 3, 4, 5 and 10, up to the tenth multiple.  
Use knowledge of commutativity to find the easier way to multiply.  
Derive quickly doubles of all whole numbers to 50, doubles of multiples of 10 to 500, doubles of multiples of 100 to 5000, and corresponding halves.



## **Addition and Subtraction**

### **Students are learning to:**

Add pairs of three-digit numbers.  
Subtract a two-digit number from a three-digit number.  
Subtract pairs of three-digit numbers.  
Derive quickly pairs of two-digit numbers with a total of 100, e.g.  $72 + \_ = 100$ .  
Add three or four small numbers, finding pairs that equal 10 or 20.  
Add three two-digit multiples of 10, e.g.  $40 + 70 + 50$ .  
Add and subtract near multiples of 10 or 100 to or from three-digit numbers, e.g.  $367 - 198$  or  $278 + 49$ .  
Derive quickly pairs of multiples of 50 with a total of 1000, e.g.  $850 + \_ = 1000$ .  
Subtract a small number crossing 100, e.g.  $304 - 8$ .  
Subtract any pair of two-digit numbers, choosing an appropriate strategy.

## **Geometry**

### **Students are learning to:**

Identify, describe, visualise, draw and make a wider range of 2D and 3D shapes including a range of quadrilaterals, the heptagon and tetrahedron; use pinboards to create a range of polygons.  
Use spotty paper to record results.  
Classify polygons (including a range of quadrilaterals) using criteria such as the number of right angles, whether or not they are regular and their symmetrical properties.  
Identify and sketch lines of symmetry in 2D shapes and patterns.  
Visualise 3D objects from 2D nets and drawings and make nets of common solids.  
Find examples of shapes and symmetry in the environment and in art.  
Describe and identify the position of a square on a grid of squares where rows and columns are numbered and/or lettered.  
Know that angles are measured in degrees and that one whole turn is  $360^\circ$  or four right angles; compare and order angles less than  $180^\circ$ .  
Devise the directions to give to follow a given path.

## **Measurement**

### **Students are learning to:**

Choose and use standard metric units and their abbreviations (km, m, cm, mm, kg, g, l and ml) when estimating, measuring and recording length, weight and capacity.  
Know and use the relationships between familiar units of length, mass and capacity; know the meaning of 'kilo', 'centi' and 'milli'.  
Where appropriate, use decimal notation to record measurements, e.g. 1.3 m, 0.6 kg, 1.2 l.  
Interpret intervals/divisions on partially numbered scales and record readings accurately.  
Read and tell the time to nearest minute on 12-hour digital and analogue clocks.



Use am, pm and 12-hour digital clock notation.  
Read simple timetables and use a calendar.  
Choose units of time to measure time intervals.  
Draw rectangles, and measure and calculate their perimeters.  
Understand that area is measured in square units, e.g. cm<sup>2</sup>.  
Find the area of rectilinear shapes drawn on a square grid by counting squares.

## **Data Handling**

### **Students are learning to:**

Answer a question by collecting and recording data in lists and tables, and representing it as block graphs and pictograms to show results.

Use Carroll and Venn diagrams to sort numbers or objects using one criterion; begin to sort numbers and objects using two criteria; explain choices using appropriate language,

## **21<sup>st</sup> Century Learning at home and in the classroom!**

This is our second year of using online resources for homework support and our Character Education program.



Show My Homework: Each student has a personal login that gives access to the homework that has been assigned each week. Using Show My Homework has supported our development of 21<sup>st</sup> Century Learning by using online assignments to support student learning.



Mathletics: Mathletics is an online resource, used mostly for homework, that uses games and friendly competition to strengthen students' Maths skills. This year, we will be using it with Years 3-6.



secondSTEP is part of our Character Education program. Teachers use online and printed materials to teach and strengthen important social skills such as Learning to Focus and Listen, Learning to Stay Calm and Problem Solve, as well as Learning to develop Empathy (recognizing and feeling emotions that others feel).

**In an effort to help you provide extension for your children at home, we are giving few websites which can work through with your children.**

## **SCIENCE**

BiteSize Science Activities: <http://www.bbc.co.uk/bitesize/ks2/science/>  
BiteSize Review: <http://www.bbc.co.uk/education/subjects/z2pfb9q>  
CrickWeb Review Activities: <http://www.crickweb.co.uk/ks2science.html>  
Science Kids Activities: <http://www.sciencekids.co.nz/gamesactivities.html>  
Interactive Sites For Education (Science): <http://interactivesites.weebly.com/science.html>  
National Geographic Kids: <http://kids.nationalgeographic.com>  
KidsTryScience Experiments: <http://www.teacherstryscience.org/kids-experiments>  
PBSKids Science Activities: <http://pbskids.org/games/science/>

## **MATH**

<http://www.sheppardsoftware.com/math.htm>  
<https://www.topmarks.co.uk/maths-games/7-11-years/ordering-and-sequencing-numbers>  
Numbers/Shapes/Measurement/Data <http://www.bbc.co.uk/bitesize/ks2/maths/>  
<http://www.mathplayground.com>  
<http://www.crickweb.co.uk/ks2numeracy.html>  
<http://interactivesites.weebly.com/math.html>  
<https://www.education.com/games/second-grade/math/>  
<http://www.math-play.com/place-value-games.html>  
<http://www.math4children.com/Grade2/index.html>  
[http://www.abcya.com/second\\_grade\\_computers.htm#numbers-cat](http://www.abcya.com/second_grade_computers.htm#numbers-cat)  
PBS Kids Math:  
<http://pbskids.org/games/math/>  
<http://pbskids.org/games/problem-solving/>  
<http://pbskids.org/games/measurement/>  
<http://pbskids.org/games/shapes/>  
<http://pbskids.org/games/123/>  
<https://nz.ixl.com/math/year-3/>

## **Reading**

Storynory: <http://www.storynory.com>  
Read To Me: <http://www.readtomeintl.org/resources/>  
Starfall: <http://www.starfall.com>  
ABCYa: <http://www.abcya.com>  
Oxford Owl: <https://www.oxfordowl.co.uk>  
Short Stories For Kids: <https://www.turtlediary.com/kids-stories.html>

## **General:**

<http://www.bbc.co.uk/bitesize/ks2/english/>  
<http://www.crickweb.co.uk/ks2literacy.html/>