



# East-West International School

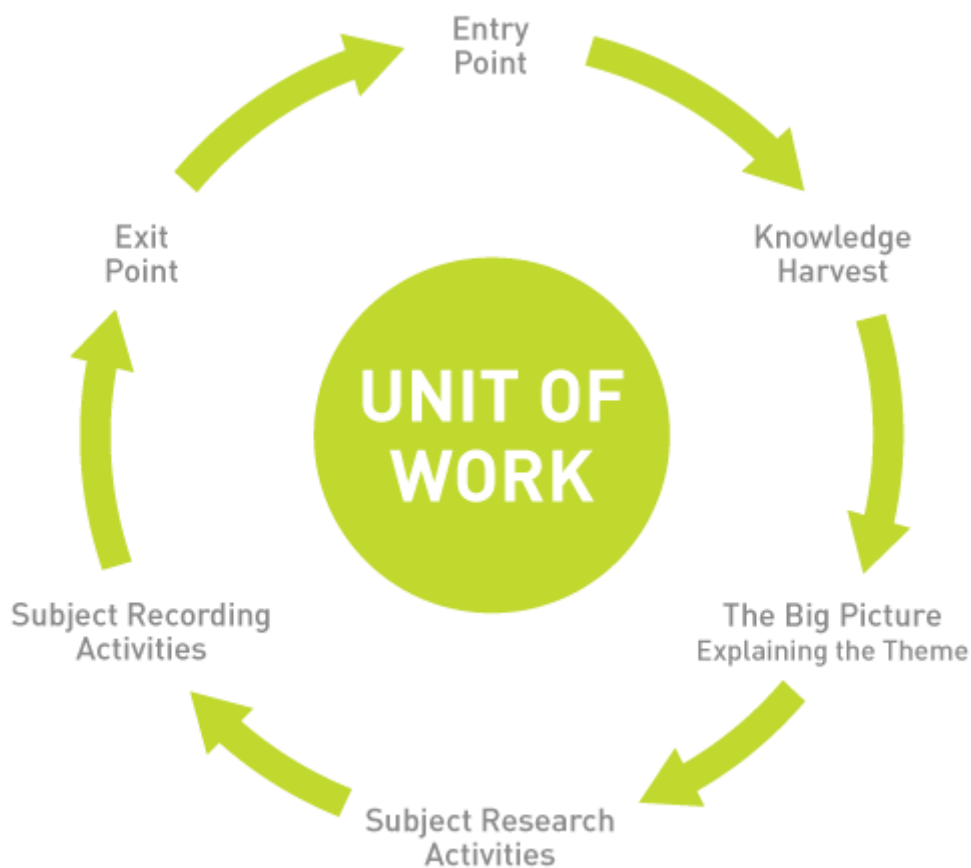
## International Primary Curriculum



The International Primary Curriculum (IPC) is a comprehensive curriculum with a clear process of learning and with specific learning goals for every subject, for personal learning and for international mindedness. The IPC is now the curriculum choice of international and national schools in over 1,800 schools in over 90 countries around the world.

At East-West International School we use both English and Khmer languages when teaching the IPC, helping children to learn content vocabulary in both languages. The IPC curriculum has three levels. At East-West we teach Milepost 1 units in Kindergarten and Grade 1, Milepost 2 units in Grades 2 and 3, and Milepost 3 units in Grades 4 and 5.

Each unit follows the same process of learning.



More detailed information on the International Primary Curriculum can be found at <http://www.greatlearning.com/ipc/>.

Following is a description of the units taught at East-West International School in 2017-2018.

These are not in the order of teaching. Teachers will tell you when they are about to start a new unit.

<b>Kindergarten</b>	
<b>Brainwave</b>	<p><b>The Big Idea:</b> Our brain is special because it does lots of amazing things. Once we understand how our brain works and what we can do to make it work even better, then we can improve the way that we learn.</p> <p><b>In this unit, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• How the brain works</li><li>• About the personal goals that help us to become better learners</li><li>• How to find out facts to prepare for a special challenge</li><li>• How to learn and practise skills for a special challenge</li><li>• How to record how well we are learning</li><li>• How to use what we have learned to create our own special challenge</li><li>• How to wake up our brain</li><li>• How to look after our brain</li><li>• How to design a classroom for learning</li></ul>
<b>A day in the life</b>	<p><b>The Big Idea:</b> It can be fun to imagine what we want to do when we grow up. The world is full of lots of different and exciting jobs. But we should remember to celebrate the things we can do now - the hobbies and interests that we enjoy, and the learning we do at school to help us achieve our goals.</p> <p><b>In Society, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• About the jobs people do in our school</li><li>• About the jobs that our parents and family do</li><li>• About the people who help us</li><li>• How a service works and the jobs that it creates</li><li>• How to create an imaginary family for our soap opera/show</li></ul> <p><b>In Art, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• How to create a portrait of ourselves to show the things that we do</li><li>• How to create a style sheet for one of our characters, exploring their clothes, hobbies and interests</li></ul> <p><b>In Geography, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• About the services and buildings in the local area</li><li>• How to create our own street map</li></ul> <p><b>In History, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• About the jobs people used to do in the past</li><li>• What our local area might have looked like a 100 years ago</li></ul> <p><b>In Music, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• How to create theme music for one of our characters</li><li>• How to sing and perform the main theme music for our soap opera/show</li></ul> <p><b>In Technology, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• How to make vehicles for our street map</li><li>• How to make a uniform for one of our characters</li></ul> <p><b>In International, we'll be finding out:</b></p> <ul style="list-style-type: none"><li>• How to provide a welcome party for a family from another country</li></ul>

# Kindergarten

## We are what we eat

**The Big Idea:** Food plays a vital role in history and culture throughout the world because food is essential to life. By learning about the different types and amounts of food our bodies need, we can plan healthier diets and enjoy longer lives.

**In Science, we'll be finding out:**

- Why we need to eat food and what the best foods are
- How some of our food grows
- How to carry out science investigations
- About our sense of taste

**In Geography, we'll be finding out:**

- Where our food comes from
- What food is eaten in our home and host country
- Why different foods grow and are eaten in different countries

**In History, we'll be finding out:**

- About the food that our parents and grandparents ate when they were young
- How and why the choice of food in our shops has changed
- What our ancient ancestors ate

**In Art, we'll be finding out:**

- About artists that use food for their ideas
- How to draw and paint fruit and vegetables
- How artists are involved in things we see around us, including advertising

**In Technology, we'll be finding out:**

- How to plan, make and evaluate a healthy pizza
- How to make a box for a pizza

**In Society, we'll be finding out:**

- How food plays a role in celebrations and festivals
- About our favourite family recipes

**In International, we'll be finding out:**

- About famine and drought around the world
- Where drinking water comes from

## Look and listen

**The Big Idea:** Have you ever wondered how you can hear and how you can see? You can hear a dog barking and you can see it wag its tail. You can hear me talking and you can see me smiling at you.

What makes hearing and seeing possible? Let's find out!

**In Science, we'll be finding out:**

- Where sound and light come from
- How we can make sounds with our body
- What sounds we can make with objects
- What happens when sounds enter our ears
- How animals use their sense of sight and sound
- How we can change sounds

**In Technology, we'll be finding out:**

- How to design and make a drum

**In Music, we'll be finding out:**

- How to play a drum rhythm

**In International, we'll be finding out:**

- How languages are made up of different sounds
- How bright lights affect people and animals

# Kindergarten

## Flowers and insects

**The Big Idea:** Have you seen any flowers today? Where did you see them? Have you seen any insects? Where did you see them? Flowers and insects need each other. Without insects there would be no flowers. And without flowers insects would go hungry.

**In Science, we'll be finding out:**

- Where flowers and insects prefer to live and grow
- How and where seeds grow
- How to set up tests to discover how plants use water
- How to grow lots of different things
- How beans grow
- About the life cycles of insects
- About ants and bees

**In Geography, we'll be finding out:**

- About honey and silk production
- About the migration of the Monarch butterfly

**In Art, we'll be finding out:**

- About paintings of flowers and insects
- How to make paintings and models of flowers and insects
- How to use symmetry to make paintings of insects
- How to create a garden in the classroom

**In Music, we'll be finding out:**

- About the music of the famous composer, Rimsky-Korsakov
- How to create our own music

**In Society, we'll be finding out:**

- About keeping stick insects as pets
- About people who help us

**In International, we'll be finding out:**

- About flowers and insects from the host and home countries
- About how climate and weather patterns affect life around the world
- About flowers as emblems for different countries

## Water world

**The Big Idea:** Water is important to all living things - without water there would be no life on Earth. We use water every day. We depend on water to stay clean and healthy, just like the many plants and animals we share our world with. Not everyone in the world has clean, fresh water - but we can help to change that, because water is for everyone.

**In Geography, we'll be finding out:**

- How much of our planet is water and how much is land
- How water can provide a habitat for different living things
- What it might be like to live somewhere where there is not much water

**In Science, we'll be finding out:**

- How water helps plants to grow
- How water can change, from a solid to a liquid to a gas
- How much water we need to drink to stay fit and healthy
- Why it is important to wash our hands to keep them clean

**In International, we'll be finding out:**

- How some people around the world do not have access to clean water
- How we can help to improve the lives of people in poorer countries

# Kindergarten

**Hooray, let's go on holiday**

## **The Big Idea**

Holidays are special days when we take a rest from school and work. Our holidays in the past were very different from holidays today. Now that we can travel to all parts of the world and even space, who knows where we will go for our holidays in the future?

### **In Geography, we'll be finding out:**

- About the places people go to on holiday
- How they get to their holiday destination
- Some of the things people do on holiday
- What people wear on holiday
- How tourism can spoil holiday places

### **In History, we'll be finding out:**

- About the holidays that we have had in our own past
- About the holidays that our families and other people have had in the past
- What is the same and what is different between holidays in the past and today
- About some of the wonders of the world

### **In Art, we'll be finding out:**

- How to create a sand art sculpture
- About some of the pictures that are used to record holidays
- How we can record our holidays
- About the designs of some holiday souvenirs

### **In ICT & Computing, we'll be finding out:**

- How to use mapping software

### **In Society, we'll be finding out:**

- How to stay safe on holiday
- What a pilgrimage is

### **In International, we'll be finding out:**

- What is the same and what is different between the lives and home countries of the different children in our class
- How to greet people in different languages
- About future holidays in space

# Grade 1

## Brainwave

**The Big Idea:** Our brain is special because it does lots of amazing things. Once we understand how our brain works and what we can do to make it work even better, then we can improve the way that we learn.

**In this unit, we'll be finding out:**

- How the brain works
- About the personal goals that help us to become better learners
- How to find out facts to prepare for a special challenge
- How to learn and practise skills for a special challenge
- How to record how well we are learning
- How to use what we have learned to create our own special challenge
- How to wake up our brain
- How to look after our brain
- How to design a classroom for learning

## How are you?

**The Big Idea:** We are very lucky in this class because we are all healthy. What things make us healthy? We are going to find out because we want to do everything we can to stay healthy.

**In Science, we'll be finding out:**

- About eating the right foods
- About getting enough exercise
- Why our bodies need sleep
- What happens when we are ill
- How germs get inside our bodies
- How to protect our bodies
- About our senses

**In History, we'll be finding out:**

- About the doctors who discovered medicines
- About diseases from the past

**In Physical Education, we'll be finding out:**

- How exercise keeps our body healthy
- What activities we can do to stay fit

**In International, we'll be finding out:**

- Why some people don't have drinking water
- What hospitals are like

# Grade 1

## Push me, pull you

**The Big Idea:** Every move we make is a result of a force. We can call these forces 'pushes' or 'pulls'. You can pull yourself up from your seat and you can push yourself down again. You can make lots of other push and pull movements. Let's find out about them.

**In Science, we'll be finding out:**

- About pushes and pulls
- How to change the speed of a moving object
- How we use our muscles to push and pull
- How water is a force that can move things
- How we can use air to push and pull objects
- How a magnetic force can push and pull

**In Technology, we'll be finding out:**

- How to design a toy that uses pushes and pulls

**In International, we'll be finding out:**

- About children's games from around the world that use pushes and pulls
- How we can help disadvantaged children in the world who don't have toys

## Green fingers

**The Big Idea:** Plants are living things - they grow when we give them enough sunlight, food and water. Plants give us food to eat, clean air to breathe and materials to build our houses and furniture. We can use plants to make clothes and medicines, and to decorate our gardens.

Over the next few weeks, we are going to find out how to look after plants. We will even be growing our own plants for a Flower Show at our school!

**In Science, we'll be finding out:**

- About plants that grow in our local area
- About the different parts of a plant
- What plants need in order to grow
- How to care for a plant

**In Technology, we'll be finding out:**

- How to make a watering device

**In Geography, we'll be finding out:**

- About plants that grow in other countries

**In International, we'll be finding out:**

- How people in different countries use plants
- If eating more plants could make a difference to the world

# Grade 1

## It's shocking

**The Big Idea:** Electricity can work lights, computers, mobile phones, cars, and lots of other things that we use every day - it can even make our hair stand on end! But what is electricity?

**In Science, we'll be finding out:**

- About static electricity
- How we can use static electricity
- What battery-operated toys can do
- How to make our own electrical circuit
- Electricity at home and in the classroom
- About the dangers of electricity

**In Technology, we'll be finding out:**

- How to design and make a torch

**In History, we'll be finding out:**

- What we did before electricity

**In International, we'll be finding out:**

- How people in different countries use electricity
- What we can do to save electricity

## The stories people tell

**The Big Idea:** Many of the stories that we enjoy today are influenced by the stories that have been passed down through the ages. By studying older stories, such as myths and legends, we can become storytellers too, writing and performing our own stories to entertain people today.

**In History, we'll be finding out:**

- About myths and legends from different times in the past
- How to create our own legend about someone we know
- About the gods that people used to worship in the past

**In Art, we'll be finding out:**

- How people in the past have represented stories and characters
- How we can use art to tell a creation story
- How to create our own Greek masks
- How to design and make our own dream catcher

**In Physical Education, we'll be finding out:**

- About fables and the lessons that they teach us
- How we can use dance and movement to tell a story

**In Music, we'll be finding out:**

- About songs and music that tell a story
- How we can make our own music to tell a story

**In Geography, we'll be finding out:**

- About stories from different countries and cultures
- How we can remember an important journey
- How we can make a map of our own imaginary land

**In Society, we'll be finding out:**

- About fairytales and the lessons that they teach us
- How we can make a modern version of a fairytale
- About who we think of as 'heroes' today

**In International, we'll be finding out:**

- About legendary and mythological characters from our different home countries



# Grade 1

## Sensational senses

**The Big Idea:** Like all living things, we use our senses to experience the world around us.

**In Art, we'll be finding out:**

- About different artists and how their work appeals to our senses
- How colour, pattern and shape can be used to appeal to the senses
- How we can create our own art to show what we have learnt about the senses

**In Music, we'll be finding out:**

- How we can create and remember a sequence of sounds
- How composers have used music to represent characters and places
- How we can create our own music to represent a character and a place

**In Science, we'll be finding out:**

- About our senses and how we use them
- What happens when we are deprived of our senses
- How sound travels and how our senses of taste and smell are connected
- About the sensory qualities of different materials

**In Technology, we'll be finding out:**

- How to make a fruit salad by exploring taste, colour and texture

**In International, we'll be finding out:**

- How we experience and remember places through our sense of smell, taste, touch, hearing and sight

## Let's celebrate

**The Big Idea:** Celebrations are an important part of human life. They are one of the things that make us uniquely human. All peoples and cultures, from every part of the world, take part in and hold celebrations to mark special events and special times in someone's life.

**In History, we'll be finding out:**

- How people in our families celebrated in the recent past
- How particular past events are still celebrated

**In Technology, we'll be finding out:**

- How to plan for a celebration
- How to design and make a product for a celebration

**In Art, we'll be finding out:**

- How decoration is used in celebrations
- How the work of artists is used in celebrations
- How to make artefacts and images that could be used in celebrations

**In Music, we'll be finding out:**

- How songs and music are used in celebrations in our own and other countries
- How to compose our own music for a celebration

**In Physical Education, we'll be finding out:**

- How to create a celebration dance
- How to improve the performance of our dance

**In Society, we'll be finding out:**

- How different groups of people celebrate different events
- How different groups of people have different rules

**In International, we'll be finding out:**

- What is the same and what is different between the celebrations in the home countries of the different children in our class
- How to work and celebrate with each other

## Grade 2

### Brainwave

**The Big Idea:** Every day we are learning lots of new and different things - gaining the knowledge, skills and understanding that we will need to become successful adults. By finding out more about how we learn, and how we can improve our learning, we will be better equipped for meeting the many challenges ahead of us.

**In this unit, we'll be finding out:**

- How different people learn
- About the importance of practice when learning a skill
- How the brain works
- How to make connections between our learning
- How we can share our learning with others
- Why it is important to learn from other children and cultures around the world
- How positive thinking can help us to succeed
- How to look after our brain
- How to design a school for learning

**When they learn children will be:**

- Investigating
- Thinking
- Reflecting
- Researching
- Teaching
- Observing
- Assessing
- Presenting

### Bright sparks

**The Big Idea:** Electricity is an energy that flows along wires in our homes, schools, offices, towns and cities to power lights, televisions, computers, cars and trains, and hundreds of other things that we use every day. Let's find out what we can do with electricity.

**In Science, we'll be finding out:**

- How to make an electrical circuit
- Which materials allow electricity to pass through them
- What happens when we change a circuit
- How to build bigger circuits
- About magnetism and electricity
- About using electricity as heat
- How to keep safe around electricity

**In Technology, we'll be finding out:**

- How to make a house with lighting and a door buzzer

**In History, we'll be finding out:**

- About the history of the electric light bulb

**In International, we'll be finding out:**

- How we produce electricity in our country
- Why saving electricity is good for the planet

## Grade 2

### Shaping up

**The Big Idea:** Your body is the most valuable thing you will ever own. It's your job to keep your body fit and healthy because it has to last you a lifetime! We are going to find out how best you can do that.

**In Science, we'll be finding out:**

- About the human skeleton, organs and muscles
- How the human heart works
- What is meant by a balanced diet
- How the digestive system works
- How to look after our teeth
- About the harmful effects of cigarettes and alcohol
- How much physical exercise we need
- About the effects of physical activity on our heart rate

**In Physical Education, we'll be finding out:**

- About the benefits of physical activity
- How different movements work different parts of the body
- How a fitness plan can improve our body's health

**In Society, we'll be finding out:**

- About germs and how they are spread
- How much sleep we should have
- How food advertising influences us
- About our food preferences

**In International, we'll be finding out:**

- How different countries keep fit
- About World Health Day

### Shake it

**The Big Idea**

We are going to find out all about solids, liquids and gases by making butter and cheese, and milkshakes.

**In Science, we'll be finding out:**

- About solids, liquids and gases
- How we can change milk into a solid
- What happens when butter is heated
- About the behaviour of gases in liquids
- Which solids will dissolve in a liquid
- About the science of making milkshakes

**In Technology, we'll be finding out:**

- How to design and make a hand whisk

**In International, we'll be finding out:**

- Why milk is scarce in some countries and what we can do to help

## Grade 2

### Footprints from the past

**The Big Idea:** Dinosaurs lived millions of years ago - long before people lived on Earth. No one has ever seen a dinosaur so how do we know anything about them? Fossil evidence and dinosaur bones provide our only clues.

Like detectives, we will try to discover what dinosaurs looked like, what they ate and what might have happened to them in the end.

**In History, we'll be finding out:**

- About the different time periods when dinosaurs lived
- How to make a time line
- About fossil hunters from around the world
- About different ideas to explain why the dinosaurs died out

**In Geography, we'll be finding out:**

- What the Earth looked like millions of years ago
- Where to look for dinosaur bones

**In Science, we'll be finding out:**

- What a fossil is and how a fossil is formed
- About different types of rock
- How to make a dinosaur fossil
- How to find out what dinosaurs looked like
- What dinosaurs ate
- How to sort and classify dinosaurs
- About the other animals and plants that lived at the same time as the dinosaurs

**In Art, we'll be finding out:**

- About how artists draw dinosaurs
- How to make a sculpture of a dinosaur
- How to make reptile-skin patterns

**In International, we'll be finding out:**

- Where dinosaurs have been found
- About the rules of exploration

## Grade 2

### Active planet

**The Big Idea:** The tectonic plates that form the Earth's crust are always moving. Even the smallest movement can cause huge earthquakes, volcanoes and tsunamis that devastate communities across wide areas. If we can understand what is happening underground we can learn to predict and protect ourselves in the future.

**In Geography, we'll be finding out:**

- About how the Earth is formed
- What a volcano island is and where they are in the world
- What causes an earthquake
- How earthquakes can be measured

**In Technology, we'll be finding out:**

- What makes buildings strong
- About protective clothing and equipment
- About how to put together a survival kit

**In Science, we'll be finding out:**

- About solids, liquids and gases in volcanoes
- What happens when a volcano erupts
- What happens when rock melts
- How volcanoes can give off poisonous gas

**In Music, we'll be finding out:**

- How to use instruments to make sound pictures
- How to compose our own piece of music

**In History, we'll be finding out:**

- About the devastation of Pompeii

**In Art, we'll be finding out:**

- About hot and cold colours
- About using different materials and techniques to represent a volcano

**In Physical Education, we'll be finding out:**

- How to use lots of different sequences of movement to show the story of volcanoes

**In Society, we'll be finding out:**

- About legends associated with volcanoes
- Why people continue to live in volcanic areas despite the dangers

**In International, we'll be finding out:**

- About international organisations that work after natural disasters
- About the knock-on effects of earthquakes and volcanic activity

## Grade 3

### Brainwave

**The Big Idea:** Every day we are learning lots of new and different things - gaining the knowledge, skills and understanding that we will need to become successful adults. By finding out more about how we learn, and how we can improve our learning, we will be better equipped for meeting the many challenges ahead of us.

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- How to look after our brain
- How to design a school for learning

**When they learn children will be:**

- Investigating
- Thinking
- Reflecting
- Researching
- Teaching
- Observing
- Assessing
- Presenting

### How Human's Work

**The Big Idea:** Your body is like an engine that never stops working. By knowing how your body works you can learn to look after it better and stay healthy.

**In Science, we'll be finding out:**

- That we need light in order to see
- How human teeth compare to animal teeth
- How our body uses food and water
- How our heart works to keep us alive
- All about skeletons and muscles
- About the human life cycle
- Why exercise is good for us
- How tobacco and alcohol harm the body
- Which foods keep us healthy and why

**In Technology, we'll be finding out:**

- How to plan and prepare a healthy meal

**In International, we'll be finding out:**

- About people's health problems
- If we can improve the health of the world's children

## Grade 3

### Time and place, Earth and space

**The Big Idea:** We know that when we look up at our sky on a clear day we will see the Sun. We know the Sun gives us light to heat the Earth and help things grow but what does the Sun have to do with our time? It's time to find out!

**In Science, we'll be finding out:**

- How the movement of the Sun and the Earth relates to time
- How shadows are formed and how we can use them to measure time

**In Geography, we'll be finding out:**

- How the movement of the Earth around the Sun creates different seasons, weather patterns and natural environments around the world
- How human activities can be affected by the different seasons around the world
- How the Earth is divided into different time zones and how this impacts on human activity and communications
- How to locate countries and places using latitude and longitude on a globe

**In Technology, we'll be finding out:**

- How we can create our own sun dial to tell the time
- How we can design and create a calendar to help someone plan their time

**In ICT & Computing, we'll be finding out:**

- How technology can help us communicate across the world
- How timetables can be used to help us plan a journey

**In Society, we'll be finding out:**

- About festivals and traditions connected with light

**In International, we'll be finding out:**

- About similarities and differences between people in different parts of the world

### Feel the force

**The Big Idea:** Without forces to push and pull us along, nothing on Earth or in the wider Universe would move. Forces are so important that it is almost impossible to imagine a world without them - and yet, they are invisible. Let's find out more...

**In Science, we'll be finding out:**

- What forces are and where they come from
- What friction is and how we use friction
- How we can reduce or increase friction
- How to measure the strength of a force
- How magnets and magnetic forces work

**In Technology, we'll be finding out:**

- How to design and make a marble run
- How to add sounds, lights and control mechanisms to a structure

**In International, we'll be finding out:**

- About extreme and dangerous forces

## Grade 3

### On tap

**The Big Idea:** We use water for many things - it is an important part of our daily lives. For most of us, clean fresh water is available 'on tap'. But not everybody in the world is as lucky.

**In Geography, we'll be finding out:**

- About the water cycle and how rain is made
- How water gets to our taps and where it goes to after we have used it
- What causes water pollution and what can be done about it

**In Science, we'll be finding out:**

- How to make our own water cycle
- How to investigate and clean different water samples

**In Society, we'll be finding out:**

- About bottled water and how it compares to tap water
- Making a hands-free washing device to help improve hygiene

**In International, we'll be finding out:**

- How some people around the world do not have access to clean water
- How we can help to improve the lives of people in poorer countries

### Land, sea, and sky

**The Big Idea:** Plants and animals can adapt to living almost anywhere on our Earth. Wherever we look on the land, in the sea and in the sky, we find living things that have evolved in unique ways just to live there.

**In Science, we'll be finding out:**

- How water plants are different from other plants
- How fish have adapted to living in water
- How birds are adapted to flying
- How to create a classification key to group animals
- About food chains in different world habitats
- About the life cycles of plants and animals

**In Technology, we'll be finding out:**

- How to set up an aquarium

**In International, we'll be finding out:**

- How environmental changes are a threat to the world's coral reefs
- About Earth Day and how we can help our planet



## Grade 3

### Material world

**The Big Idea:** Hundreds of different materials are used to make everyday objects. Some materials occur naturally, e.g. wood from trees while others are manmade in factories, e.g. plastic. Some materials are magnetic; some allow heat and electricity to pass through them. But with so many different materials to choose from, how do we decide which to use?

**In Science, we'll be finding out:**

- How and why different materials are used
- How to test the properties of a material
- About the uses for glass and plastic
- About the metals that are attracted to magnets
- Which materials allow electricity to pass through them
- Which materials allow heat to pass through them
- About solids, liquids and gases and the water cycle
- How natural and manmade materials are different

**In Technology, we'll be finding out:**

- About moving mechanisms including gears, levers and linkages
- How to design and make a product for a bicycle

**In International, we'll be finding out:**

- Where materials come from
- Why plastic waste is a global problem and what we can do about it

## Grade 4

### Brainwave

**The Big Idea**

Every day we are learning lots of new and different things - gaining the knowledge, skills and understanding that we will need to become successful adults. By finding out more about how we learn, and how we can improve our learning, we will be better equipped for meeting the many challenges ahead of us.

**We'll be finding out:**

- About different methods of teaching and how we like to learn
- About some of the different areas of the brain
- How information gets into the brain
- How relaxation can help prepare us for learning
- How we can improve our memory
- How positive thinking can help us to succeed
- How we can support each other to achieve our goals
- How we can become more active global citizens

## Grade 4

### Investigators

**The Big Idea:** These days we have lots of science knowledge at our fingertips; it can be found quickly and easily on the Internet. The science knowledge in books and websites is what other scientists have discovered in the past. To discover new things ourselves we need to be able to 'do' science not just 'know' about it.

During this unit we will learn how to 'do' science. We will learn several, important, scientific skills. These skills can be used in a whole range of scientific situations. However, we will use these skills to investigate one branch of science: materials and their properties. We will also see how these skills can be applied to one real world context - the exciting world of forensic science!

**In Science, we'll be finding out:**

- About several ways to investigate in science
- How to make sure our investigations are well designed and reliable
- Ways to: collect, record, interpret and present our findings
- About several materials and their properties

**In International, we'll be finding out:**

- About the international police organisation: Interpol

### Water for everyone

**The Big Idea:** Not everyone in the world has access to clean and safe water. We all have a role to play in helping others and safeguarding this precious resource for future generations.

**In Geography, we'll be finding out:**

- Where the water that supplies our homes comes from
- About different types of water pollution
- About how drought and flooding can affect communities around the world

**In Science, we'll be finding out:**

- About harmful microorganisms and water-borne diseases
- How to make and test a rehydration drink

**In Society, we'll be finding out:**

- About how lack of clean water can affect whole communities
- About how lack of clean water can affect different groups within a community

**In International, we'll be finding out:**

- About the sustainable technologies that are helping people to access clean water
- How we can work together to create a positive 'water wise' future

# Grade 4

## Being Human

### The Big Idea

Your body is designed to help you to breathe, move, eat, respond, reproduce and live. But how do the different parts of your body function and how are humans different from other animals? Let's find out.

### In Science, we'll be finding out:

- How humans are different from other animals
- About the brain and the nervous system
- About the bones and muscles in the body
- How the human heart works
- How we breathe and what the lungs do
- What we inherit from our parents
- How our environment affects us
- How the body uses food and water
- About the latest medical research

### In Technology, we'll be finding out:

- How to plan and prepare a healthy meal

### In International, we'll be finding out:

- About a major global health problem
- If we can improve the health of the world's children

## Time Tunnel

**The Big Idea:** Chronology involves putting things in the right order. This is very important when studying history because it helps us to see 'the big picture' - to understand the reasons why things have happened and how the present is influenced by the past.

### In History, we'll be finding out:

- How historical time can be recorded and measured
- How we can sort, sequence and order the past
- How we can interpret events to explore the attitudes of people in the past
- What happened at different times in different cultures

### In Geography, we'll be finding out:

- About the history of a location in the host country
- How the movements of people affect the physical and human features of a location
- How we can use maps to find out about the history of a location

### In Art, we'll be finding out:

- How artists from different periods have used art to record history
- How we can use art to record a historical event

### In International, we'll be finding out:

- What we can learn from the past

## Grade 4

### Existing, endangered, extinct

#### The Big Idea

From tiny tadpoles to giant squid, living things exist in an amazing variety of forms. Why is there so much variety and how do scientists sort, identify and classify the millions of species living today?

#### In Science, we'll be finding out:

- How and why living things are classified
- How a vertebrate and an invertebrate are different
- How to classify local plants and animals
- About the effects of food chains in our locality
- About friendly and unfriendly micro-organisms
- How fungi are different from plants and animals
- Why composting is good for the environment

#### In Technology, we'll be finding out:

- How to make our own compost bin

#### In International, we'll be finding out:

- How the international community can protect endangered species
- Why biodiversity is important for the well-being of the planet

### Fascinating Forces

**The Big Idea:** Forces are pushing and pulling at everything in our Universe. Even as we sit in our classroom, the walls and the ceiling are pushing and pulling at each other, while gravity and friction hold us in our seats. Let's find out more about forces!

#### In Science, we'll be finding out:

- How a ball flies through the air
- What friction is and how it helps us
- How different objects fall
- What gravity is and how it pulls on objects
- How air resistance affects moving objects
- How water pushes up on floating objects
- Why some objects float and others sink

#### In Technology, we'll be finding out:

- How to make a sailing boat or flying paper plane

#### In International, we'll be finding out:

- How countries use natural forces as energy
- How we can work together to meet our energy needs without harming our planet

## Grade 4

### Here and now, there and then

**The Big Idea:** Some of you are lucky enough to have had the chance to live in more than one country. You can talk about your 'host country' and 'home country'. You will have learned so much from this experience - let's find out what you know and what more there is to learn ...

**In Geography, we'll be finding out:**

- How to locate the host and home countries
- How these countries are connected
- What these countries are like
- How they are similar and different

**In History, we'll be finding out:**

- About the history of our host and home countries
- About history from people, photographs and maps
- About history from museums and books
- About history from buildings and architecture

**In Society, we'll be finding out:**

- If the host/home countries are in the news
- About issues that affect the host/home countries

**In International, we'll be finding out:**

- What things we have brought to the host country
- How the host and home countries have worked together

## Grade 5

### Brainwave

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- How we can become more active global citizens

## Grade 5

### Roots, shoots, and fruits

**The Big Idea:** Plants have lived on Earth for over 400 million years. Some plants in our gardens today were around at the same time as the dinosaurs. Why have plants been so successful? Let's find out...

**In Science, we'll be finding out:**

- What plants grow in our local area
- How to sort and group plants
- What the parts of a plant are
- The function of roots
- What plants need in order to grow
- How flowers attract insects
- How plants reproduce
- How seeds are spread

**In Technology, we'll be finding out:**

- How to make a seed disperser

**In Geography, we'll be finding out:**

- About the tallest plants in the world

**In International, we'll be finding out:**

- Why we need to save rainforest plants
- If eating more plants could make a difference to the world

### What a wonderful world

**The Big Idea:** Natural forces have been shaping our planet for many billions of years and these dramatic changes are still going on, right now, all around us.

Throughout this unit we will be learning more about the physical processes that shape our planet - and the vital role that we play in safeguarding our planet and its resources for future generations.

**In Geography, we'll be finding out:**

- About different regions and environments around the world
- How to use different types of map to find out information
- About the forces and processes that shape our planet
- About extreme weather events and how they affect people and localities
- About the possible causes of climate change and its effects on our planet
- How man-made changes can alter/change our local environment

**In ICT & Computing, we'll be finding out:**

- How to program an online quiz to test our knowledge of biomes

**In Science, we'll be finding out:**

- How to classify different types of rock and soil
- About the effects of weathering on different types of rock
- About the movements of the Earth, Sun and Moon and how they affect us
- About different types of cloud and how they are formed
- How we can set up a weather station and record data

**In International, we'll be finding out:**

- About local and global environmental issues
- How different international aid groups and charities are helping those affected by environmental issues

# Grade 5

## Growing up

**The Big Idea:** As we grow-up, we need to understand our bodies and the changes that will happen, both on the inside and the outside, as we prepare to enter into adulthood.

**In Science, we'll be finding out:**

- How male and female bodies grow and develop
- About the changes that take place during puberty for boys and girls
- How humans reproduce
- How a baby develops inside its mother
- About different methods of contraception
- About sexually transmitted infections

**In Society, we'll be finding out:**

- About different types of relationship
- About the personal and social factors that can influence our lifestyle decisions
- About love and what it means to different relationships

**In International, we'll be finding out:**

- About different views that some cultures and countries have about growing up

## Mission to Mars

**The Big Idea:** One day, humans may need to leave Earth and settle on another planet. Mars is our most likely destination - a world that we believe once harboured life and, with our intervention, may do so again in the future.

**In Science, we'll be finding out:**

- About the planets in our solar system
- About mass and weight, and the effects of gravity
- How to grow seeds and plants, and choose those that will be suitable for Mars
- How to identify a living organism
- About different energy sources
- About different forces and their effects
- How to choose the best energy source/s for our Mars shelter

**In Geography, we'll be finding out:**

- About the geographical features of Mars
- How we can prove that there was once water on Mars

**In Technology, we'll be finding out:**

- About the technology that has been used to explore Mars
- How to design and make a robot to explore Mars
- How to design and make a suitable shelter for living on Mars

**In History, we'll be finding out:**

- About what people in the past used to think about Mars
- About the evidence to prove and disprove intelligent life on Mars

**In Physical Education, we'll be finding out:**

- How to ensure we are fit and healthy for our space mission
- How to plan and test our own exercises suitable for space travel

**In Society, we'll be finding out:**

- How to work as a team
- How to assemble a successful team for our mission to Mars

**In International, we'll be finding out:**

- How to write our own international rules and regulations for Mars
- About the reasons why we might one day need to live on another planet

# Grade 5

## Look hear

**The Big Idea:** Whether we are driving around in our cars, working, or relaxing at home, we are turning on lights, music, TV, radio, computers and mobile phones. We are plugged in to sound and light 24 hours a day. But what is the science behind sound and light? Let's find out!

**In Science, we'll be finding out:**

- How we hear sounds and see light
- How the human ear and eye works
- How sound and light waves travel
- How a string telephone works
- How we can change the pitch of sounds
- About echoes and acoustics

**In Technology, we'll be finding out:**

- How to make an elastic-band guitar

**In Music, we'll be finding out:**

- How to play our homemade instruments

**In International, we'll be finding out:**

- About noise and light pollution

## The great, the bold and the brave

**The Big Idea:** The history of western civilisation begins with the Greeks and the Romans. Their expanding empires helped to spread ideas about architecture, food, entertainment, literature, science, medicine and politics across the globe. As their empires ended, other cultures rose to prominence, absorbing and passing on their own ideas and cultures - creating the world we know today.

**In History, we'll be finding out:**

- About the Greek city-states of Athens and Sparta
- How people voted in Athens and Sparta
- How the Persian War brought the Greek city-states together
- What the Parthenon can tell us about Athenian life
- How to perform our own Greek play
- About the life Alexander the Great and what he achieved
- Why Rome had a republic and then an emperor
- What daily life was like in Ancient Rome
- What happened when the Romans invaded another country
- Why the Roman Empire declined
- What happened when the Anglo-Saxons invaded and settled in Britain
- About the Viking invasion of Britain
- About the life and legacy of Alfred the Great
- How to use archaeological evidence to find out about the past
- About the history of Britain, from the Roman occupation to the Norman Conquest

**In Music, we'll be finding out:**

- How to write and perform our own Greek chorus

**In Art, we'll be finding out:**

- About Ancient Greek and Roman art
- How to create our own piece of art in a Greek or Roman style

**In International, we'll be finding out:**

- About the effects of invasion on countries around the world



# Grade 5

## New materials

**The Big Idea:** We are surrounded by amazing materials that can be shaped, combined, condensed, frozen, melted and burned. In this unit, we are going to experiment with different kinds of materials, and become cooks, chemists and creators of new materials.

**In Science, we'll be finding out:**

- About the chemistry of cooking
- What happens when we dissolve or melt things
- About gases and what they are
- About different materials used in the kitchen
- About conductors and insulators
- About magnetic materials and their uses
- How to separate mixtures by sieving, filtering and evaporating

**In Technology, we'll be finding out:**

- How to make our own clay
- How glass is made
- How to create a brand new material

**In History, we'll be finding out:**

- About the importance of bronze, iron and clay
- About wax, papyrus and paper

**In Art, we'll be finding out:**

- How artists use different materials in their work
- How to choose materials to express an idea

**In International, we'll be finding out:**

- How different countries work together to invent new materials