

Geography: Key Stage 1

Teachers Professional Development Programme

Enquiry 6: How does the Geography of Kampong Ayer compare with the Geography of where I live?



Author: David Weatherly

Connecting the curriculum through enquiry based learning

Key Question: How does the geography of Kampong Ayer compare with the geography of where I live?

Learning objectives

During the enquiry pupils will have opportunities through the application and analysis of a wide range of geographical skills and resources to:

- **Identify** and **describe** the location of where they live in the UK, within Europe and the world and in relation to the Equator and north and south poles;
- **Compare** their own location with the location of Kampong Ayer in the country of Brunei within Asia and also both locations in relation to the Equator and the north and south poles;
- Using maps at various scales and online websites, **identify** time differences and **estimate** distances between the UK and Brunei and between the UK, Brunei and other locations in the world;
- **Identify, describe** and **observe** the types of traditional homes found in Kampong Ayer and **compare and contrast** these with their own homes and through fieldwork **record** and **categorise** types of homes found in the locality of their school;
- **Identify** the key features of a traditional home in Kampong Ayer on a simple scale plan and construct a similar scale plan of their own home, offering reasons for any similarities or differences **observed**;

Purpose of the enquiry

The core aim of this investigation is to support children, through a range of learning activities, to make comparisons between their lives and those of people in a small diverse community in the country of Brunei on the tropical island of Borneo in southeast Asia. As they do so the children develop core knowledge and understanding of the fundamental geographical concepts of *place; location; space; distribution; resources; settlement; natural and human environments* and *environmental interaction and interdependence* through the application of a wide range of skills. Children are supported to consider the similarities and differences that exist between their own local area and *Kampong Ayer*, both in ways of life and of the geographic processes that have given rise to the physical and human patterns that characterise these places.

The study of an overseas locality at Key Stage 1 should always look initially to identify similarities rather than differences. It is important for children to understand that their lives and the lives of children overseas, do in fact, have more similarities than differences. For example, all children wherever they are in the world, have the same basic needs of food and water; homes; families; clothes; education and leisure. These needs may not always be fully met but they are nevertheless important pillars upon which to build an overseas locality enquiry.

Context

In this enquiry children begin by establishing their own location in the world in relation to their immediate local area, region, the United Kingdom and the continent of Europe. Although not essential, it will be advantageous for them to have completed the enquiry: *What is the physical and human geography of my local area like?* prior to this investigation. Progression then occurs by extending the enquiry to the location of Kampong Ayer in Brunei in Asia with the children thinking through both the implications of distance and time zones for places elsewhere in the world. Kampong Ayer is a small village settlement located mostly on the Brunei River in central Bandar Seri Begawan, the capital city of the small country of Brunei on the island of Borneo in southeast Asia. Brunei is about the same size area as the county of Devon and the same population as the city of Bristol in the United Kingdom. The children will be able to identify many similarities in Kampong Ayer with where they live, both in terms of physical and human geography. It will quickly become clear that there are also significant differences in terms of the infrastructure of the settlement together with its weather and climate and surrounding natural environment – the tropical rainforest biome. This article traces the significance of Kampong Ayer in Brunei's history www.bt.com.bn/golden-legacy/2011/04/25/tracing-history-todays-kampong-ayer

National Curriculum coverage Geography

Locational knowledge

- Name and locate the world's seven continents and five oceans.
- Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas.

Place knowledge

- Understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country.

Human and physical geography

- Identify daily and seasonal weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the north and south poles.
- Use basic geographical vocabulary to refer to key physical and human geographical features.

Geographical skills and fieldwork

- Use world maps, atlases and globes to identify the United Kingdom and its countries as well as the countries, continents and oceans studied at this key stage.
- Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features.
- Use simple observational skills to study key human and physical features of environments.

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- **Identify** and describe the main elements which make up the weather and **understand** that weather conditions change from one moment to the next;
- **Observe** how, generally, temperature decreases towards the north and south poles and increases towards the Equator and suggest **reasons** for this pattern;
- **Describe** the weather conditions experienced on one day in Bandar Seri Begawan using online BBC weather forecast webpages;
- **Identify** and describe appropriate forms of transport for particular journeys made and **explain** why boats and water taxis are used by almost everyone in Kampong Ayer;
- **Understand** in very basic terms why boat building by people such as Syarikat at Kampong Ayer is an economic activity;
- **Recognise**, describe and suggest **reasons** for the similarities between a school/ school life in one school in Kampong Ayer and their own school;
- **Identify** and describe the structure of typical tropical rainforest in Brunei;
- **Describe**, offer **reasons** and **explain** how living things in tropical rainforests are adapted to cope in extreme heat and rain;
- Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.

Connections to the subject content of other curriculum areas

English

Teachers should develop pupils' spoken language, reading, writing and vocabulary as integral aspects of the teaching of every subject. English is both a subject in its own right and the medium for teaching; for pupils, understanding the language provides access to the whole curriculum. Fluency in the English language is an essential foundation for success in all subjects.

Spoken language

Pupils should be taught to speak clearly and convey ideas confidently using Standard English. They should learn to justify ideas with reasons; ask questions to check understanding; develop vocabulary and build knowledge; negotiate; evaluate and build on the ideas of others; and select the appropriate register for effective communication. They should be taught to give well-structured descriptions and explanations and develop their understanding through speculating, hypothesising and exploring ideas. This will enable them to clarify their thinking as well as organise their ideas for writing.

Reading and writing

Teachers should develop pupils' reading and writing in all subjects to support their acquisition of knowledge. Pupils should be taught to read fluently, understand extended prose (both fiction and non-fiction) and be encouraged to read for pleasure. Schools should do everything to promote wider reading. They should provide library facilities and set ambitious expectations for reading at home.

Pupils should develop the stamina and skills to write at length, with accurate spelling and punctuation. They should be taught the correct use of grammar. They should build on what they have been taught to expand the range of their writing and the variety of the grammar they use. The writing they do should include narratives, explanations, descriptions, comparisons, summaries and evaluations: such writing supports them in rehearsing, understanding and consolidating what they have heard or read.

Numeracy and Mathematics

Teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in numeracy and other mathematical skills is a precondition of success across the national curriculum.

Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and sense check their work.

Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

Science

Animals including humans

Pupils should be taught to:

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Notice that animals, including humans, have offspring which grow into adults.
- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).

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- Compare and contrast the structure of a tropical rainforest with a wood in the local area;
- Use *Google Earth* to identify, locate and begin to explain the distribution of the human and physical geographical features of Kampong Ayer and compare these with the local area.

Key Subject Vocabulary

Location; Settlement;
Country; Nation; Village;
Town; City; Europe; World;
Continent; Ocean; Capital;
Globe; Map; Sea; United Kingdom; England; Scotland; Wales; Northern Ireland; Great Britain; Northern Hemisphere; Southern Hemisphere; Tropic of Capricorn; Tropic of Cancer; Equator; Asia; Brunei; Borneo; Population; Scale; Italy; Canada; Zambia; Antarctica; Chile; New Zealand; Day; Night; Rain; Wind; Cloud; Temperature; Arctic Circle; Antarctic Circle; Climate; Polar; Temperate; Tropical; Transport; River; Commute; Economic activity; Boat; Profit; Religion; Muslims; Christians; Islam; Christianity; Imam; Vicar; Priest; Community; Tropical rainforest; Wood; Environment; Habitat; Adaptation; Satellite; Physical; Human.

Seasonal changes

Pupils should be taught to:

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

Living things and their habitats

Pupils should be taught to:

- Explore and compare the differences between things that are living, dead, and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Design and Technology

When designing and making, pupils should be taught to:

Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

- Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing).
- Select from and use a wide range of materials and components, including construction materials.
- Select textiles and ingredients, according to their characteristics.

Evaluate

- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.

Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable.

Computing

Pupils should be taught to:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information technology beyond school.
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Music

Pupils should be taught to:

- Listen with concentration and understanding to a range of high-quality live and recorded music.
- Experiment with, create, select and combine sounds using the inter-related dimensions of music.

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Ancillary Question 1: How does the location of Kampong Ayer compare with where I live?

Write the word *location* on the board or flip chart. Ask the children to think of what the word might mean? Location means the position of something in the world e.g. the position of a landform (like a mountain) or a **settlement** – a place where people live such as a **village**, **town** or **city**. What is the name of the place or settlement in which the children live? In which **country** is it located? Project the satellite photograph in **Resource 1**. This is a photograph from space of the country in which we are currently living. What is our country called? The children may respond with several answers such as **England** or **Britain**. At this point ask the children whether any of them have a passport. Which country is their passport for? What is the purpose of a passport?

Resources 2 and **3** show the front cover and inside page of a UK passport. Due to copyright restrictions you should show a passport data page by showing this image online <https://upload.wikimedia.org/wikipedia/en/7/71/Gibraltarpassportdatapage.png> or use the illustration supplied in **Resource 3**. Both the front cover and inside page of the passport shows the country to be the **United Kingdom**, in fact its full name of: **The United Kingdom of Great Britain and Northern Ireland**. Some of the children may have suggested **England** as their country. England is not, in fact, a country but rather a **nation** which is best defined as a body of people united by common descent, history, culture or language inhabiting a particular state or territory. It cannot be considered a country because it is not a sovereign state with a centralised tax-raising government that is not dependent on or subject to any other power or state. So the country is the United Kingdom made up of four nations.

An activity here is to support the children to make a personal passport of their own. If some children are citizens of other countries then the activity is equally applicable to them. Instructions:

- Fold a piece of A4 paper in half from top to bottom and cut it apart with scissors along the fold.
- Fold the two separate pieces in half again, from left to right.
- Staple the centre fold of the two pieces together, giving the child a passport book with six inside pages, plus the back and the front covers of the book.
- Give the children a copy of the front cover of a UK passport (**Resource 2**) or of the country of which they are citizens, to stick on the front cover.
- Take a photograph of each child and cut out their face into a square, passport-sized photo.
- Using **Resource 3** as a guide the children can begin to create a double page spread of information about themselves to include their surname; given name; nationality; date of birth; place of birth; sex; the date of issue (the date when they complete it) and the expiry date (10 years in the future for adults, 5 years for children). The children can make up their own passport number. Glue in the photograph onto the left hand page next to all of their personal details.
- The children can also add additional personal details about themselves such as names and types of pet; favourite colour; football team; pop group; television programme etc.
- Divide the other interior pages into four or six sections with a marker or pen. These will allow spaces for different 'country stamps' or identification tags. Using the wall map of the world, children can be allocated two or three countries each that they are going to 'visit'. Tell the children that they are going to visit the capital city of the countries they are travelling to. For each country the children will create their own 'stamp' to go in the spaces which needs to include the flag of each of their countries together with the name of the capital city and the date of entry and exit. All of the flags of the countries in the world can be found in alphabetical order at <http://www.sciencekids.co.nz/pictures/flags.html> and the names of capital cities can be obtained from a wall world map or atlas.

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Using a large wall map of the United Kingdom ask the children to come out and point to the location of where they live. In which of the four nations of the United Kingdom are they? Can they find the actual name of their settlement on the map? If not, which of the larger towns and cities shown is nearest to where they live? Using a printout of the outline map in **Resource 4** the children can now use an atlas or wall map to:

- Write in the names of the four nations: England; Scotland; Wales and Northern Ireland.
- Locate and write in the names of the four capitals: London; Edinburgh; Cardiff and Belfast.
- In their correct positions on the map, write in the North Atlantic Ocean; North Sea; English Channel and Irish Sea.
- Colour in appropriately!

Pass a globe around amongst the children and encourage them to spin it around. What does the blue show? If the blue represents water (seas and oceans) then what is the rest of the world made of? How much of the world do they think is water as opposed to land – less than half or more than half? Nearly three quarters of the world is made up of seas and oceans compared with just a quarter that is land. Refer also here to the wall map of the world and emphasise the same proportions.

Now distribute or project **Resource 5**, which shows how the land of the world is divided up into seven large chunks or areas called **continents**. What are the names of the continents? In which continent is the United Kingdom? The children can now study **Resource 6**, which shows the location of the UK in Europe. A very wide range of activities are possible here to familiarise the children with the countries of Europe such as:

- Which three countries are closest to/furthest away from to the UK?
- Can you find three countries larger/smaller than the UK?
- Can you name two countries to the south of the UK?
- Can you find a country to the north of the UK?
- Can you find two counties to the east of the UK?
- Can you find one country to the west of the UK?
- Using a large wall map of Europe and copies of the passport photographs of the children; create a display called: *How we are connected to Europe?* Each child is to come up with one way in which they are connected with another country in Europe. This may be a holiday they have been on; a place where a family friend or relative lives; the location of the head office of the company that makes their family car; the nationality of the people who run their favourite restaurant or the origin of their favourite meal; a European footballer in a team a child supports etc. Attach one end of a piece of string or tape to the relevant country whilst the other end is then connected to a photograph of the child around the outside of the map with a caption such as “*Tracy has been on holiday to Spain; Ben’s Gran and Grandad live in Turkey; Molly’s family car is a Renault*” etc.

Now that they know more about the location of where they live in the UK and the location of the UK in Europe, tell the children that it is time to find out similar information about Kampong Ayer. Project the photograph in **Resource 7** of a house in Kampong Ayer. What can the children see? The most obvious thing is the satellite dish. What is a satellite dish for? In what direction is the satellite dish pointing – straight up into the air? This is a big clue to where in the world Kampong Ayer is located. If the satellite dish is pointing straight upwards then Kampong Ayer must be located on or very close to the **Equator**. Does anyone know what the Equator is?

Using both the globe and the wall map of the world, explain that the Equator is an imaginary line drawn around the centre of the Earth which divides the world into two halves – the **northern hemisphere** and the **southern hemisphere**. **Resource 8** is a good map to use when explaining this. Give the children a copy of this map and ask them to write the name ‘Equator’ along the line and also ‘northern hemisphere’ in the area above the line and ‘southern hemisphere’ below the line. Using a political map of the world in an

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atlas or a large wall map of the world, the children can now find out how many countries in the world the Equator passes through and produce a list. Remind them that the settlement of Kampong Ayer is very close to this line. Which country do they think it is in? If Kampong Ayer is very close to the Equator it can only be in one of three continents. Which three are they?

Tell the children that Kampong Ayer is in the continent of Asia. Which country does this narrow its location down to? Now show the location maps in **Resource 9** and **Resource 10**. Kampong Ayer is located in the small country of **Brunei** (with the same land area as Devon and the same population as the city of Bristol in the United Kingdom) which is situated on the island of **Borneo**. Part of the neighbouring countries of **Malaysia** and **Indonesia** are also located on the island of Borneo.

Children can use <https://www.freemaptools.com/how-far-is-it-between.htm> to calculate the distance in kilometres or miles, between the United Kingdom and Brunei and use the map that is generated to scroll between the two countries. They can then compare this to distances between the United Kingdom and one country in each of the six other continents – Italy; Canada; Zambia; Chile; New Zealand and Antarctica (not a country of course but worthwhile talking to the children about how Antarctica is the only continent without any countries in it).

Finally, the children can investigate differences in time between the UK and Brunei. Ask the children if it's the same time everywhere in the world right at this moment? Take time to discuss this. Have any children been abroad and needed to change the time on their watches or mobile phones? Why is this? Demonstrate the rotation of the Earth using a torch shining on a globe. What happens every 24 hours as the Earth rotates? Everywhere gets a day of light and night of darkness.

So what would happen if everywhere in the world had the same time as the UK – just one time zone for the whole world? If that were the case, then noon would be the middle of the day in the UK, the evening in other places, and the middle of the night somewhere else. In some places, the Sun would set at 7 p.m., but at that same hour, on the opposite side of the world, the Sun would be rising. Instead, as the Earth rotates once every 24 hours, we divide the world up into 24 time zones.

The children can now use www.timeanddate.com/ to calculate the time in Brunei. Click on 'World Clock' from top tool bar and enter city name Bandar Sri Begawan and click 'go'. This will present the children with the time in Brunei. What is the time difference in hours and is it forward or backwards from the present UK time? The children can then be given a range of other countries to find out their current times and by how much they differ from the UK. Give some extreme examples which could involve a time which is already in the next day or still in the previous day e.g. Christchurch in New Zealand or Honolulu in Hawaii. Also select places which, although being a long way away, will still be in the same time zone as the UK e.g. Iceland and The Gambia. The world map of time zones in **Resource 11** can be displayed so that children can see how different time zones are represented using a key on a map.

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Ancillary Question 2: How do people's homes at Kampong Ayer compare with mine?

Tell the children that you want them to draw a picture for you. It's going to be a very special picture because it will be of a place they have never seen before. The place is called *Kampong Ayer*. It's not in England, Scotland, Wales or Northern Ireland – not anywhere in the United Kingdom. What they are going to do is to draw a picture once they have listened to the following description of Kampong Ayer which you are going to read to them:

Kampong Ayer is a 'water village' built in the middle of a wide river. In fact it is the largest water village in the world. Approximately 30 000 people live there in about 4000 dwellings. Because Kampong Ayer is near the sea the river in which it has been built is affected by tides. At high tide the river can be three metres higher than at low tide when a lot of mud is uncovered. Strong winds can quite often cause large waves on the river. Very heavy rain storms are another problem that Kampong Ayer has to cope with.

Provide the children with a piece of A3 plain paper and encourage them to draw what they think the homes at Kampong Ayer look like based on the description you have read. Encourage discussion and provide prompts that will help without giving too much away e.g. *how will people travel to and from their homes;* and *how will they prevent water flooding their homes?* Encourage the children to present their drawings to the rest of the group and to explain their rationale for what they have drawn. Prompt the children to explain their reasoning. What similarities and differences are there in what the children have envisaged about the settlement?

Next, distribute or project the photographs of Kampong Ayer in **Resource 12**. Encourage the children to comment on what they got 'right' and 'wrong'. What do the photographs show? Support the children to identify, recognise and describe what they can see and challenge them to reason and begin to explain their observations e.g. *Why will they need boats? Why are the houses on stilts? What connects one house with another? What do many of the houses have at the front? What are the roofs and walls made of? Why is each home only one storey – like a bungalow – with no upstairs? What things do they recognise as being something they would see on or around their own homes? What is missing and why might this be?* It might be useful at some stage to make two summary lists – *similar to our homes* and *a little different to our homes*. Take time to have a thorough discussion and encourage the children to *describe; observe and reason*.

The inside layout of the traditional homes of Kampong Ayer will be different to that of the homes of most children in the United Kingdom, in that they are single storey and reminiscent of a Malay 'long house' design. The inside, therefore, is often one very long and wide reception room which stretches from the entrance porch and a sitting area to a kitchen, bathroom and toilet at the rear. This distance from front to back can be as much as 20 m. On both sides of the long room there are often display cabinets; book cases; photographs on the walls; free standing clothes racks; cupboards with cutlery and crockery etc. At Kampong Ayer the long rooms are boarded with wooden planks and rugs or rattan mats frequently lain on top. The bedrooms are positioned on both sides of the long room and accessed by doors from it.

Divide the children into pairs and have them very carefully observe the photographs in **Resource 13**, which are of the inside of Mohammed's home. What do they recognise? What things are similar to items found in their own homes or the homes of family members? What things do they not recognise or surprise them? What benefits do they think there are to having a long single storey home such as Mohammed's?

Resource 14 is a simple scale plan of Mohammed's home. Take time to explain the principle of plans such as this – particularly that the plan is clearly smaller than Mohammed's actual house because it would be useless if it wasn't! What would be the point of having a plan or map of the same size as the thing or place it was trying to show? Explain that maps are always smaller but accurate representations of places.

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Draw the children's attention to a world wall map and highlight key countries such as the United Kingdom. This would be a good opportunity also, to discuss with children which countries around the world they have visited, lived in and were perhaps born in. The important concept here is that of **scale**. Every plan and map has a scale that we can use to calculate real distances and sizes. Draw the children's attention to the scale line on the plan of Mohammed's house and support them to work out the length, breadth and area of rooms and the house in general.

A possible extension now could be for the children to draw a simple scale plan of their homes using squared paper, with which to compare the size and layout of Mohammed's home. A scale will need to be agreed in advance for all the children to use to enable comparisons to be made. It would be interesting in advance of this activity to ascertain how many of the children live in single storey homes compared with those who will have the additional challenge of how to show the ground and upper floors of their homes next to each other on the paper.

A local fieldwork opportunity could be to support the children to explore the local area of the school with the objective of investigating the range of homes that exist in comparison with those at Kampong Ayr. This could involve:

- Undertaking a tally count of different types of homes and houses, entering the data into a simple database and then producing charts and graphs – *terraced houses*; *semi-detached houses*; *detached houses*; *bungalows*; *maisonettes*; *flats*; *sheltered accommodation* etc. Alternatively the children could design their own symbols for the different categories of houses and homes and add them to the map with an appropriate key.
- Presenting the data collected onto a simple street map of the local area as categories of residential land use using a colour key. The base map can be hand drawn or sourced from *Google Maps* or <http://digimapforschools.edina.ac.uk>

Whilst undertaking their fieldwork the children can take photographs of the different kinds of homes and houses they see and then upload them at <http://www.geograph.org.uk/>. The *Geograph Project* aims to collect geographically representative photographs and information for every square kilometre of Great Britain and Ireland.

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Ancillary Question 3: How does the weather at Kampong Ayer compare with the weather where I live?

Either project or distribute hard copies of the photographs in **Resource 15**. All of these images depict people around the world being influenced by the weather. Working in pairs, support the pupils to describe the weather conditions in each photograph and to explain how people are being affected by the weather. Listen for and record key vocabulary e.g. **wind, fog, snow** etc.

Ask the pupils to contemplate if the weather during the day so far has stayed the same? How has the weather changed since they got up to come to school? Is the weather exactly the same as it was yesterday? How is it different today? Is the weather likely to be identical tomorrow? What things might change e.g. the temperature might be hotter or cooler, it might rain or there might be more sunshine. The important thing here is for the pupils to be supported to see that the weather is transitory and very changeable from one moment to the next, let alone one hour or day to the next.

Show the children the photographs in **Resource 16**. What do the photographs suggest to us about the weather in Kampong Ayer? Four of the photographs show umbrellas being used but what for? To protect people from the rain and also from the sun! The weather in Kampong Ayer is **hot and wet all year round**. The average daily temperature is 26 °C (79 °F) with an average of 10 mm of rain a day. This contrasts with Britain, which has an average daily temperature of just 15 °C and an average daily rainfall of only 1.5 mm (despite the fact that we think it's always wet!).

Give the children a copy of **Resource 8** and explain, using a globe to exemplify, that the **Equator** is an imaginary line drawn around the middle of the Earth. Tell the children to write the name on the line on their map. Now show them the photograph in **Resource 17**. Using the globe once more, ask the children whereabouts in the world this place could be? Is it likely to be close to the Equator line or further away? Show the globe to the children and ask them why the far north and south areas are shaded white? Try to channel thinking towards the children identifying the **North Pole** and **South Pole**. Why is the photograph in **Resource 17** likely to be at the North Pole or South Pole? This is because these areas are where the coldest places in the world are found, whereas around the Equator the hottest places are found. Illustrate this using the globe. Now the children can add the labels **North Pole 90 °N** and **South Pole 90 °S** to their map. The distance of a place north (N) or south (S) from the Equator is measured in degrees (°). The further you travel from the Equator, the higher the number of degrees. The imaginary lines connecting points with the same number of degrees north or south are called lines of **latitude** and are labelled °N or °S.

Resource 18 shows all of the countries through which the Equator passes. The children can now be supported to use a world atlas or large world wall map to name them. How close to the Equator is Brunei? Very close. It is just 4 °N of the Equator whereas the United Kingdom is between 52 °N and 54 °N. Have the children colour in the UK on their maps and label it. Do the same thing for Brunei. Because Brunei is much closer to the Equator than the UK it is a lot hotter than the UK.

Introduce **Resource 19** to the children and tell them that as well as the Equator there are four more very important imaginary lines drawn around the world. Each of these lines of latitude also has a name. The line just above the Equator is called the **Tropic of Cancer 23.5 °N** and the line just below is called the **Tropic of Capricorn 23.5 °S**. The children can write the names on their copies of the map. The line furthest above the Equator is called the **Arctic Circle 66.5 °N** and the line furthest below is called the **Antarctic Circle 66.5 °S**. The children can label their maps.

All the land in the world between the Arctic Circle and the North Pole and the Antarctic Circle and the South Pole has a **polar climate**, which means it is **very cold and dry** such as in the photograph in **Resource 17** (which is of Antarctica). Similarly all the countries of the world between the Tropic of Cancer and the Tropic of Capricorn have a **tropical climate**, which means it is normally **hot and wet**. The remaining areas between the Tropic

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of Cancer and the Arctic Circle and the Tropic of Capricorn and the Antarctic Circle have a **temperate climate**, which means these places are mostly **mild and damp**. Using **Resource 20** the children can now fill the labels **tropical**, **temperate** and **polar** in their correct positions. An important concept to reinforce at this point, before moving on is: *the closer to the Equator a country is, the hotter it will be. As you travel from the Equator northwards towards the North Pole and southwards towards the South Pole then the colder it will become.*

As a summative piece for this enquiry the children can be supported to access the BBC weather forecast site at www.bbc.co.uk/weather Firstly they can search for *Bandar Seri Begawan* (capital city of Brunei). This will present a five-day forecast. The children can record on the first column of the table in **Resource 21**, details of the weather being experienced today in Bandar Seri Begawan, i.e. symbols showing prevailing weather conditions, temperature, wind speed and wind direction. They can repeat the search for a nearby town or city to where they live and record the same data in the central column. Finally they can search for Anchorage in Alaska (USA) and complete the third column. This exercise will highlight the major differences between the three climate zones of the world – polar, temperate and tropical. Encourage discussion about the information that they have gathered: What is the weather like today in Bandar Seri Begawan compared with home and Anchorage? In particular how does the temperature vary – hottest closest to the Equator and coldest closer to the North Pole?

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Ancillary Question 4: How do people in Kampong Ayer travel around compared with how people travel around where I live?

Show the children all of the images in **Resource 22** and ask them to consider what they have in common? The key concept here is **transport**, i.e. they are all means by which we can move around from one place to another. Ask the children to consider how many of these forms of transport they have used in their lifetime? Which ones haven't they used? Why is that? Which form of transport would they use for the shortest journey and which for the longest? During a typical week how many of these modes of transport would children use to get around? Discuss with the children which type of transport they and their families would typically use for: *Travelling to school; going to the local shops; visiting a friend who lives close by; going for tea with an aunt living a mile away; going shopping in a large town or city; travelling on holiday to Florida etc.*

Ask the children to look again at all the types of transport in **Resource 22**. Knowing what they now do about the village of Kampong Ayer (i.e. it is a village of mostly wooden buildings on stilts above a river and joined by boardwalks) which of the forms of transport do they think would be realistic for people to use to get around? Now ask the children to watch the film at www.youtube.com/watch?v=fi6CP-v7Jlo. How many forms of transport are people using to get around the village? There are only three possibilities – walking or cycling along the boardwalks or travelling by boat from a pier in one part of the village to a pier in another part – see images in **Resource 23**.

Show the children the film at www.youtube.com/watch?v=yG2LQ4ogeZc. It illustrates how important travelling by boat is if you live in Kampong Ayer. It also shows several other things which the children have learned about and can be revisited at this time – the types of houses and construction materials; the boardwalks underneath which the boat travels; inside of the homes (what can the children see in this home which is the same or very similar to their own home?). If you don't own your own boat then a water taxi is vital for travelling from Kampong Ayer across the Brunei River to the city of Bandar Seri Begawan? Water taxis operate in exactly the same way as car taxis on land – you pay a fare to the boat or car owner to take you to where you need to go.

Show the children the aerial photograph in **Resource 24** and point out the short distance across the river from Kampong Ayer (at the bottom of the photograph) to the city of Bandar Seri Begawan (at the top of the photograph). It is only a short distance across the river to the city and the water taxis travel very fast! The noise of outboard engines is constant as they travel backwards and forwards from Kampong Ayer to the city. People arrive and depart from the main pier all day, as can be seen in **Resource 25**. Are there any clues in the photographs in **Resource 26** to suggest why people travel from Kampong Ayer to Bandar Seri Begawan? Encourage discussion. Why do we and members of our families travel every day? Children go to school. What do adults do? Many will go to work in other places. Others may go shopping, visit friends or work out at the gym. Some will have appointments with the doctor or dentist etc. And so it is exactly the same with the people who live at Kampong Ayer. The set of images in **Resource 26** will help to consolidate this.

Ask the children to consider what they can see in the photographs of Bandar Seri Begawan and how these things might explain why so many people travel backwards and forwards to the city from Kampong Ayer every day. The important concept here is that whilst Kampong Ayer has many services such as supermarkets, primary schools, police and fire brigade it does not have everything that the people need. In particular, it doesn't have places for everyone to work (e.g. at company offices) or larger shops (for bigger items such as furniture and televisions) or additional larger services such as banks or sports centres. Just like us people have to travel to where their work is or where the larger shops and services are. None of us have everything on the doorstep.

Show the children the photograph of Syarikat in **Resource 27**. Explain that Syarikat is feeling very pleased with himself. Why might that be? Are there any clues in the photograph? Now show the photographs in **Resource 28**. What does Syarikat do?

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He owns a boat building company in Kampong Ayer and he is happy because his order book is full. He can build two boats at a time in his yard and is currently building two boats. **Resource 29** shows the range of five boats he can build and the price of each. Ask the children to try to work out a translation from the Malay to English of each line. What do they think the words might mean. Encourage thinking here. Obviously one of the words must mean 'boat' and the number must mean how many people can fit into the boat or how long it is. If the number is the length of the boat then what does *kaki* mean? Meanings of the words:

- *perahu* = boat
- *tambang* = hire
- *panjang* = long
- *kaki* = length in feet

So the first line says *18-foot long ferryboat* and each of the subsequent lines are the same except for the length of the boat. A *nelayan* is a fishing boat. The price is quoted in Brunei dollars \$ and \$1 is worth US\$ 0.75. How much will each of the boats cost to have built in US dollars? A photograph of an 18-foot boat being made in the yard is in **Resource 30** together with a photograph of a finished boat of the same size on the river. Similarly, the largest boat that Syarikat builds at 30–35 feet (a *temuai* is specific style of boat) can be seen under construction and on the river as a water taxi in **Resource 31**.

Each of the many water taxi owners in Kampong Ayer take great care to customise their boats to ensure that they are recognisable from all of the others operating. This is both for personal pride and because many water taxis have regular passengers who prefer to travel with them and look out for their particular boats in the river when they are waiting at the piers. Some examples of this are in **Resource 32**.

As a final activity to this key question the children can imagine that they are a water taxi driver at Kampong Ayer and have just taken delivery of a new boat. They need to design what the exterior of the hull is going to look like. How will they personalise their boat? The design must include a memorable name and other images and designs that will make their boat stand out. Encourage the children to also think about aspects of their own lives that they might want to include in the design such as a particular place name, pictures of their own local area and flags etc.

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Ancillary Question 5: How does going to school in Kampong Ayer compare with my school?

Show the children the set of images in **Resource 33** and ask them to describe what they see happening? What is going on? What are the children in Kampong Ayer doing? What do they recognise? What are they not sure about? All of the images are of primary aged children travelling to school in the morning. Possible discussion points:

- There are several primary schools in Kampong Ayer and each has a different school uniform. Do the children at your school in the UK also wear uniform? If so how does it compare? What are the boys and girls in the photographs wearing? In Brunei, school uniforms are based on traditional Malay dress for boys and girls. Boys wear **baju melayu**. This consists of four parts. Firstly there is the **baju**, which is a long sleeved shirt with a raised stiff collar. This is worn with trousers and both parts are made of the same fabric – usually cotton or a mixture of polyester and cotton. Thirdly a sarong called a **sampan** is worn around the hips and a jet-black or dark-coloured hat called a **songkok** finishes the outfit. Girls wear **banjo kurung**, which consists of a knee-length shirt or blouse worn over the top of a long skirt or trousers with a headscarf.
- Secondary aged children have to catch a water taxi to the city of Bandar Seri Begawan where their school is located. Where will your children go to secondary school? How far away is it and how will they travel there?
- What are the children buying from the shops on the way to school? The children in Kampong Ayer buy small quantities of drinks such as cola or sometimes soup, which they carry to school in plastic bags and drink during the course of the day. They also buy small portions of rice or noodles and vegetable pasties as well as ice pops and ice creams. What do the UK children buy on the way to school? How does it compare?
- Another interesting observation could be that in Kampong Ayer all children walk to primary school. How many of your children walk to school? What is the most common form of transport to get to school in the UK?

The photographs in **Resource 34** show the outside of several primary schools at Kampong Ayer. What do they all have in common? Apart from being raised up on stilts, the interior of school buildings are very similar to UK schools, with an assembly hall, kitchen, classrooms, staff room (with teachers preparing and marking!) etc. The children and some of the teachers who live at Kampong Ayer walk to school whilst other teachers, who live on the mainland will be picked up by the school's own water taxi and carried across the river to the school where the boat ties up. Ask the children to look at the photographs in **Resource 34** and **Resource 35** together. What is the main thing they can identify as being different compared with most UK schools – where is the playground and outside space such as sports fields? Where do the children in Kampong Ayer play sports and run around?

Resource 36 shows the Head Teacher, (on the left with a gold head scarf) with some of the very youngest children in the Reception class at *Sekolah (School) Rendah Sungai Kebun* at Kampong Ayer. Most days the Reception children learn English as well as Malay and that is what they can be seen doing with their teacher in **Resource 37**. How does this classroom compare with the children's own classroom in the UK? Are the displays similar or different? Do they learn a foreign language yet? Can anyone speak an additional language? Do some children in the group have another language other than English as their 'mother tongue'? If so can they teach the other children some words and phrases?

Explain to the children that there are two ways that primary schools at Kampong Ayer are very different from most primary schools in the UK. Firstly, the school day is a very long one, beginning at 7:30 a.m. with lunch for an hour at 12:30 p.m. and finishing as late as 5:30 p.m. depending on the age of the children. Secondly, the day is split between **Morning school (Resources 35 and 37)** and **Religious School (Resource 38)**. Morning school takes place between 7:30 a.m. and 12:30 p.m. during which the children are taught subjects such as Maths, Malay, History, Geography etc. in a very similar way as in the UK with one set of teachers and Head Teacher. Then Religious School, in the afternoon is

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with a different set of teachers and a different Head Teacher. Sometimes this occurs at a purpose built religious school to which the children travel but in the case of *Rendah Sungai Kebun* it occurs at the same school. The very youngest children in Years 1 and 2 attend between 1:30 and 3:30 p.m., Year 3 between 3:30 and 5:30 p.m. and the oldest children between 1:30 and 5:30 p.m.

This could be an appropriate opportunity, if so desired, to explore with the children a little more about Muslims and the religion of Islam and its teachings. In particular the Qur'an (which the children in Kampong Ayer can be seen reading and learning in **Resource 38**), the holy month of Ramadan, daily prayers, the importance of Friday as a holy day and of the mosque to the life of a Muslim community such as that at Kampong Ayer. Kampong Ayer has several mosques. The Imam (a man who leads Islamic prayer, takes other services such as weddings and funerals and provides community support and spiritual guidance) and people from Kampong Ayer at prayer at: *Masjid Al-Muhtadee Billah*. The meanings from the Arabic are:

- *Masjid* – a mosque
- *Al-Muhtadee* – son and heir to the present Sultan of Brunei
- *Billah* – an Arabic phrase meaning *with God* or *through God*

As a culmination to this enquiry the children could be supported to undertake a number of investigations to compare their local community with what they have learned about schools and Islam in Kampong Ayer. For example:

- The children could visit a local sacred place or place of worship e.g. churches (Roman Catholic, Church of England, Methodist, Baptist, Pentecostal), synagogues (Orthodox, Reform, Liberal), mosques, mandirs, gurdwaras and viharas. Most local authority websites or local SACRE (Standing Advisory Council on Religious Education) websites will include addresses and contact details. Visits further afield might include cathedrals, monasteries (Christian and Buddhist), abbeys and places of pilgrimage. There is a wide range of suggested learning activities for Key Stage 1 children at places of worship at www.reonline.org.uk/specials/places-of-worship/res_key1.htm
- The children could prepare a presentation focusing on *a day in the life of our school* to send to the children at *Rendah Sungai Kebun* School at Kampong Ayer or to children at a school with which they are linked. This could involve a range of media including video clips, photographs, interviews, PowerPoints etc. The UK children could be supported to emphasise both similarities and differences. What would the children at Kampong Ayer be most interested in knowing? If we were to prepare an enquiry for children at Kampong Ayer called *how do schools at (name of place) compare with mine* then what would we include? What do the UK children feel is most important for children at Kampong Ayer to know about their school?

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Ancillary Question 6: How does the natural environment around Kampong Ayer compare with the natural environment around where I live?

Tell the children that you are going to play them a recording of different sounds at www.youtube.com/watch?v=67QtXZsA2ME and they need to listen to very carefully with their eyes shut and really concentrating. Just play the sounds rather than allowing the children to see the pictures as well. What sounds can they identify? Where might this recording have been made? What kind of place do they think it is? Why? Encourage discussion and thinking. What are the clues? Some children may mention 'jungle' or 'forest'. Where might they have heard sounds like this before?

Next show the children the satellite photograph of Kampong Ayer in **Resource 39**. Point out the village in the river and then the areas of green to the south and east of the village. What are these areas? How do they link to the sounds that the children have just listened to? This is forest, but not just ordinary forest. Now project the series of photographs in **Resource 40**. This is what most of the country of Brunei (in which Kampong Ayer is situated) is like – covered with **tropical rainforest**. Encourage the children to come up with as many adjectives as possible, for what they have seen and heard so far, which describe tropical rainforests. Why is the forest in Brunei called **tropical rainforest**? Take time to explore these two important geographical terms. Show the children the film at www.youtube.com/watch?v=OS2VrgRFCzc How much rain falls in tropical rainforests in a year? What is the average temperature each day? Tropical rainforest grows in Brunei because it is always hot and wet as places situated close to the Equator usually are.

It would be worthwhile revisiting **Ancillary Question 3** here and especially the following key points. All the countries in the world between the Arctic Circle and the North Pole and the Antarctic Circle and the South Pole have a **polar climate**, which means it is **very cold and dry**. Similarly, all the countries of the world between the Tropic of Cancer and the Tropic of Capricorn have a **tropical climate**, which means it is normally **hot and wet**. The remaining areas between the Tropic of Cancer and the Arctic Circle and the Tropic of Capricorn and the Antarctic Circle have a **temperate climate**, which means these places are mostly **mild and damp**. The children can refer to the annotated map of the world they produced with the labels **tropical**, **temperate** and **polar** in their correct positions.

Explain to the children, using a simple sketch diagram on the board, that in a tropical rainforest you will find four layers:

- **Emergents** – the tops of the very tallest trees, which are much higher than the average trees and stick up above the canopy trees below.
- **Canopy** – the upper parts of most of the trees (about 20–40 m tall). This leafy environment is full of life including insects, many birds and some animals.
- **Forest floor** – the ground – it is teeming with animal life, especially insects and arachnids, plus large animals.
- **Understory** – a dark, cool environment that is under the leaves but over the ground. Most of the understory of a rainforest has so little light that plant growth is limited. There are short, leafy, mostly non-flowering shrubs, small trees, ferns and vines (lianas) that have adapted to filtered light and poor soil.

The children can label and colour the diagrams in **Resource 41** and then work in pairs to sort the 31 photographs in **Resource 42** into four sets – **emergent**, **canopy**, **forest floor** and **understory**. There are six in the emergent set, eight in the canopy set, 10 in the understory set and seven in the forest floor set.

Explain to the children that a tropical rainforest such as in Brunei is a **habitat** – where a collection of plants and animals live and which provides them with food and shelter. Animals and plants are **adapted** to their habitats. This means that they have special features that help them to survive. Show the children the photographs of the trees in **Resource 43**. Can they identify the special feature that helps very tall trees in the forest survive in soils that are shallow and in conditions that can sometimes be very windy? The base of the tall tree trunk spreads outwards to add stability and lower its centre of gravity –

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referred to as 'buttress roots'. Why not chalk a line in the playground and get the children to walk along it without losing their balance? They will instinctively spread out their arms to either side of their body as they walk the line – just like the buttress roots at the bottom of a tall tree! What about the leaves of the trees in **Resource 44**? How are they especially suited to living where there is a lot of heavy rain? Many plants and trees have leaves with 'drip tips' that enable the water to run off the leaf very quickly and not weigh it down or break it.

Another plant which is adapted to living in the forest where there are lots of insects (butterflies, bees, beetles, small birds etc.) is shown in **Resource 45**. Tell the children that this is a meat eating plant called a 'Pitcher Plant'. How do the children think that it feeds? The Pitcher Plant gets its name from the fact that to an insect they look like a pitcher of nectar. In Borneo the Pitcher Plant has a brightly coloured rim and an enticing half closed lid. Curious insects are tempted to come close and take a sip, then slide down the slippery slope to their deaths. Hair-like growths along the pitcher walls ensure that nothing can scramble out and the digestive enzymes can get to work. A tiny insect called a midge might be digested in a few hours, but a fly takes a couple of days. Some of these pitchers are large enough to hold 7.5 litres. Carnivorous plants only eat people in science fiction movies, but once in a while a small lizard, rodent, or bird will discover that a pitcher plant isn't a good place to get a drink. The film at www.youtube.com/watch?v=trWzDIRvv1M shows how this occurs.

Then there are the jungle animals in **Resource 46**. Encourage the children to look at each of the four animals in the photographs and to explain what it is about them that makes them well suited (adapted) to living in the jungle of Borneo? The Proboscis has a long prehensile tail which it can wrap around branches for balance as it swings from tree to tree. The Pied Hornbill has a huge and powerful bill that can break open large nuts and fruits which grow in the canopy of the trees. The Clouded Leopard has short muscular legs for creeping through the understory as well as large padded paws for silent movement and fur of brown and black spots and squares which makes it almost invisible amongst the dead leaves and plants of the dim forest floor. Finally, the Triorbis Moth is almost exactly the same colour as the tree on which it lives for most of its life.

Distribute copies of the hand print at www.primateeducationnetwork.org/wp-content/uploads/2014/11/Orangutan-Handprint-Orangutan-Foundation.jpg for the children to look at and to fit their hand to. Explain to them that in the depths of the forests of Borneo their lives a very rare creature that the locals refer to as the 'man of the forest'. There are only 60 000 of these creatures left in the wild and almost all of them are found in Borneo. Judging by the hand print what do the children think this creature looks like? They can draw what they imagine. What size will it be? What will it eat? Where will it live? Will it have any ways in which it is especially suited to living in the forest? What colour will it be? Encourage discussion and speculation.

Now project the photograph in **Resource 47**. The 'man of the forest' is an **orang-utan**. In the Malay language *orang* means 'person' or 'man' and *utan* means 'forest' – so *orang-utan* literally means 'man of the forest'. Orang-utans are not monkeys but rather Great Apes which can live for 45 years in the wild. They eat fruit and each night they sleep in nests of branches and leaves in the canopy of the trees of the forest, which they make anew every day. They very rarely come down to the ground. The male lives a solitary life and the female lives with her young but only gives birth to one baby every six or seven years.

Read the story of Indah the young Orang-utan in **Resource 48** with the children. Now they can imagine what might happen if the next day, whilst her mother is collecting fruit, the branch that Indah sits on is not strong enough to take her weight and she falls through the branches and leaves of the trees to the dark and damp world of the understory. Imagine what she will see, smell and hear down there. This will be a very strange world for Indah – somewhere she has never been. What creatures will she meet? What danger might she be in? How will her mother find her in the darkness? The children can work in pairs or in small groups to act out the story to each other. Will it all end happily with Indah back in the

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canopy safe and sound? The work on orang-utans can be concluded by showing the children the film at www.youtube.com/watch?v=IFACrIx5SZ0 which demonstrates how intelligent orang-utans can be and how closely related they are to human beings with 96 per cent of their DNA being identical to that of humans. In addition further learning and teaching ideas focusing on orang-utans can be found at http://www.orangutan.org.uk/downloads/Teaching_resources.pdf (you may have to access the pdf by pasting the link into your browser). Founded in 1990, the Orang-utan Foundation is the foremost orang-utan conservation organisation working actively across the range of both orang-utan species to save orang-utans by protecting their tropical forest habitat, working with local communities and promoting research and education. Their approach goes beyond that of purely protecting orang-utans. It recognises that orang-utans are essential to their habitat, which is unique in its rich biodiversity and is crucial for local communities, who are as dependent on the forest as the orang-utans.

In the British Isles temperate woods and forests will be made up of predominantly deciduous trees or a mixture of deciduous and evergreen trees – **deciduous** and **coniferous**. All deciduous woodlands display a vertical layering of the vegetation in a similar way to tropical forests with a canopy; understory and ground layer. This is something the children can be supported to identify in a local forest as well as the differences between any coniferous and deciduous trees present. Point out the canopy to the pupils. What trees make up the canopy? Now divide the pupils into pairs and send them off into the woodland to do some investigating. What can they find growing in the understory and ground layers? It's important here not to remove anything that is growing! With digital cameras the pupils can record what they see or draw the attention of adults to what they have found. Allow plenty of time for exploration. Once back together take the children's feedback. What did they discover?

A trip to the local wood or forest also provides a great opportunity to investigate, in basic terms, the nutrient cycle within the ground layer. Take time to consider with the children the main aspects of the nutrient cycle and what is happening in terms of vegetation decay and the release of carbon and nitrogen on the floor of the woodland. An introductory activity is the free downloadable resource from the Eden Project at <https://www.edenproject.com/learn/schools/lesson-plans/minibeast-trackers> Children can undertake their own minibeast survey of the leaf litter and decaying wood using the free downloadable pictorial key from CONE at www.workingwithwildlife.co.uk

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Ancillary Question 7: How does Geographic Information System (GIS) imagery of Kampong Ayer compare with GIS imagery of where I live?

Prior to beginning this investigation it is worth spending time becoming familiar with some of the features of *Google Earth*. It is a free and invaluable geographical information programme and can be downloaded here: www.google.com/earth/

Resource 49 contains four help files to assist you in learning some of the features of this **Geographical Information System (GIS)**. Watch these in order and you will quickly be able to zoom, tilt and fly to locations around the world with three-dimensional cities and landscapes, ultra-high resolution photos and street views. You can switch on layers of information, measure straight lines and paths in different units and turn back time! It is a very powerful free tool for teachers and children.

Once you are confident in its use, introduce the children to *Google Earth* by opening the programme and searching for your school. Zoom in on your school building and ask the children what they can recognise. You could ask them when the image was taken. Was it a school day or the weekend? What time of year could it be (look at the trees for clues)? Zoom back out slowly to show where the school is located at different scales. Ensure you refer to important locations that the children will be familiar with. Once you have zoomed out far enough to see the UK, search for *Brunei* in the search box. Once entered the world will begin to rotate and focus in on Brunei. This is an excellent way of reinforcing the concept of the Earth being round – well, spherical (as a globe) as opposed to being flat (as a wall map or atlas page). Explain also that all of the *Google Earth* pictures are taken either from satellites in space or from aeroplanes high up in the sky.

In the **Resource 49** folder, there is a file called Kampong Ayer, Brunei.kmz. With *Google Earth* already open, double click on this file. It will cause *Google Earth* to zoom into Kampong Ayer and a large number of photos will appear –geotagged to the location each was taken at. These are the photographs that appear in the resources for this enquiry. Use the photographs in the layer to support the children at appropriate times throughout this enquiry. You can return to this layer at any time to view the location of the photographs. You can also email the file to people and open it on multiple computers at once. Children could be allowed to explore the photographs themselves.

In **Resource 49** the view of Kampong Ayer is at its centre. What can the children identify? Emphasise that this is a ‘bird’s eye view’ looking directly down from above so we are only seeing the very top of things. What can the children see? For example:

- What do the buildings look like?
- Are the buildings the same size?
- What might the larger buildings be?
- What is the shape of the river?
- Where are the forests of trees?

Spend some time here on the shape of the river. Encourage the children to see that the river is not straight at this point but bends or loops around. Kampong Ayer is actually situated on a **meander** (loop or bend) of the Brunei River. Go back to the photographs in **Resource 12** and show these to the children again. How come that although there are lots of photographs of the river here in **Resource 12**, we did not see the shape of the river very clearly? Encourage the children to understand that one set of photographs has been taken at ground level and one from above (an aerial photograph). Aerial photographs allow us to see the shape of the land and features such as rivers that photographs taken on the ground do not. Why is this?

Resource 50 is a larger scale aerial photograph of part of Kampong Ayer. After first projecting it for the whole group to see, print off an A4 copy for each child and have them stick it into the centre of an A3 piece of plain paper. Demonstrate to the children how to **annotate**, i.e. drawing straight lines in from the outside of the aerial photograph to specific points and then naming the features with a label e.g. *Brunei River*. Support the children to

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identify and annotate with a label each of the following:

- Primary school – long building (far left of the photograph)
- Mosque – the building with a small dome (low centre of photograph)
- Fire station – the building between the mosque and primary school
- Police station – larger building (centre right of photograph)
- Boardwalks
- Houses
- Brunei River

As a conclusion to this investigation prepare some *Google Earth* images of your school and surrounding local area. Repeat the exercise of printing off an A4 copy and annotating it with human and physical geographical features of the locality. Are there things we can identify immediately? Are there things we are not sure about? The children can walk around the locality of the school with their aerial photograph to identify all of the features shown. How do the features on the ground compare with the aerial photographs? What does the aerial photograph not show? The children can return to class and complete their annotation.

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Assessment

This enquiry presents several opportunities, at different stages, to evaluate how the pupils are progressing in geography through the mastery of key geographical skills and outcomes. It is not necessarily intended that all of the following learning activities should be assessed. Rather that the list is used as a guide for selecting one or two assessment opportunities relevant to individual pupils, rather than on a whole group basis.

Ancillary Question	Learning Activity	Possible source of evidence of achievement
1	Identify and describe the location of where they live in the UK, within Europe and the world and in relation to the Equator and north and south poles	Map Oral
1	Compare their own location with the location of Kampong Ayer in the country of Brunei within Asia and also both locations in relation to the Equator and the north and south poles	Map Oral
1	Using maps at various scales and online websites, identify time differences and estimate distances between the UK, Brunei and other locations in the world	Calculations Oral Maps with distance labels
2	Identify, describe and observe the types of traditional homes that are found in Kampong Ayer and compare and contrast these with their own homes and through fieldwork record and categorise types of homes found in the locality of their school	'Drawing from memory' with labels Oral Simple graphs and charts Photographs
2	Identify the key features of a traditional home in Kampong Ayer on a simple scale plan and construct a similar scale plan of their own home, offering reasons for any similarities or differences observed	Scale plan with labels Oral
3	Identify and describe the main elements which make up the weather and understand that weather conditions change from one moment to the next	Recording temperature, rainfall, cloud cover, wind strength and direction in school grounds.
3	Observe how, generally, temperature decreases towards the north and south poles and increases towards the Equator and suggest reasons for this pattern	Map of world showing hot and cold areas with directional arrow labels
3	Describe the weather conditions experienced on one day in Bandar Seri Begawan using online BBC weather forecast webpages	Weather forecast presented to group using data from BBC weather forecast webpages
4	Identify and describe appropriate forms of transport for particular journeys made and explain why boats and water taxis are used by almost everyone in Kampong Ayer	Labelled poster
4	Understand in very basic terms why boat building by people such as Syarikat at Kampong Ayer is an economic activity	Calculating the cost of buying three types of boat from Syarikat
5	Recognise, describe and suggest reasons for the similarities between a school/school life in a school in Kampong Ayer and their own school	Presentation – a day in the life of our school

Key Question: How does the geography of Kampong Ayer compare with the geography of where I live?

NOTES

Ancillary Question	Learning Activity	Possible source of evidence of achievement
6	Identify and describe the structure of typical Tropical Rainforest in Brunei	Labelled drawing
6	Describe , offer reasons and explain how living things in Tropical Rainforests are adapted to cope in extreme heat and rain	Oral PowerPoint
6	Compare and contrast the structure of a Tropical Rainforest with a wood in the local area	Fieldwork
7	Use <i>Google Earth</i> to identify , locate and begin to explain the distribution of the human and physical geographical features of Kampong Ayer and compare these with the local area	Annotated aerial photograph Venn diagram

Homework possibilities

Several of the ancillary questions within this enquiry have learning activities which can be initiated or extended at home. The most popular traditional children's game in Kampong Ayer is *Congkak* (pronounced Chong-kak.). It is played on a wooden boat-shaped block with two rows of seven circular holes and two large holes – one at each end called 'home' (see photographs in [Resource 51](#)). The game begins with seven game pieces (shells, marbles, pebbles or seeds) in each hole except 'homes' which remain empty. Each of the two players controls the seven holes on his or her side of the board and owns the 'home' to his or her left. The goal is to accumulate as many pieces in your own 'home'.

Initial position: 7 pieces in each hole
aside from 'homes' which are empty

Home	7	7	7	7	7	7	7	Home
(empty)	7	7	7	7	7	7	7	(empty)

On a turn, a player removes all pieces from one of the seven holes on his side. He then distributes them clockwise – one in each hole to the left of his or her hole – in a process called 'sowing'. Sowing skips an opponent's 'home' but not a player's own 'home'. If the last piece falls into an occupied hole then all the pieces are removed from that hole, and are sown in the same way (clockwise from that hole) in another round. This player's (current) turn ends when the last piece falls into an empty hole on the opponent's side. If the last piece sown falls into a player's own 'home' then the player earns another turn, which can begin at any of the seven holes on his side. If the last piece sown falls into an empty hole on his side then the player captures all the pieces in the hole directly across from this one, on the opponent's side and puts them (plus the last piece sown) in his own 'home'. If the opposing hole is empty, no pieces are captured.

The other player chooses which hole he or she wishes to start from, removes the pieces and sows them - one in each hole, clockwise from that chosen hole. If a player has no pieces on his side of the board when it is his turn, then he must pass. The game ends when no pieces are left in any hole on both sides of the board and the player with the highest number of pieces in their own 'home' has won. Adapted from:

www.vtaide.com/ASEAN/Malaysia/congkak.html where further information is available.

www.youtube.com/watch?v=P_kw8U25irs is an instructional film of how to play *Congkak* presented by two Malaysian children. The pupils can now watch this film several times, if needed, until they feel confident enough to play it themselves.

Key Question: How does the geography of Kampong Ayer compare with the geography of where I live?

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The children can now be set the challenge of designing and making a board game version of *Congkak*. To do this they can be taken through a simple design brief process:

Researching: This is the first stage and will involve children in investigating the features of existing board games, which they can be invited to bring in to school. Lay the board games out around the classroom and encourage the children to analyse them with key questions in mind such as:

- *What design features work best?* For example the children may be drawn to the use of particular colours, drawings, logos, three-dimensional effects etc.
- *How is the game laid out?* How has the journey around the board been designed? Circular? Square? Rectangle? What are the advantages and disadvantages of each?
- *What materials have been used to make the board games?* Is the same material used for each? If so, why might this be e.g. the need to fold the board up?
- *What additional things are there* e.g. separate sets of cards and counters? What do they add to the board game?
- *What do the designs of the board games have in common?*

Testing: Encourage the children to think about the materials they have available to make their board game version of *Congkak*. *What are the advantages of each? Which will wear easily? Which is the most practical for young children? Is the board going to need to fold up?*

Generating a design brief: On paper draft a design of the board game being sure to include the chosen layout and any patterns, colours, particular shapes and materials to be used to make it etc.

Making and evaluation: Using available materials such as A3 card, thin plywood or thicker cardboard, the children can make their board game and present it to the rest of the class. They can be encouraged to explain why they designed it the way they have. *What things about their board game are the children most pleased with? Did they make any changes from their original design? How would they now make it better?*

Play the game with a friend – several times!

Key Question: How does the geography of Kampong Ayer compare with the geography of where I live?

Further reading

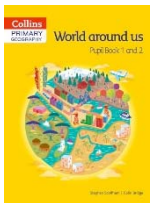


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