Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Recumbent Stone Circles

A learning resource for teachers
of Curriculum for Excellence Level 2

smarter scotland
SCOTTISH GOVERNMENT

Archaeological timeline

People have been living in Scotland since the end of the last Ice Age. As this timeline shows, transitions between different chronological periods, technologies and cultures were often gradual, such as the introduction of farming in the Neolithic. Divisions were not absolute and transition periods should be considered as blurred.

Recumbent stone circles are the oldest surviving structures in the North East and are amongst the oldest structures in Scotland. They were constructed in the earlier parts of the Bronze Age, although were often reused for burials in the Later Bronze Age. Many generations of people have since visited them and wondered at their origins.

Front cover image: Aikey Brae from the air

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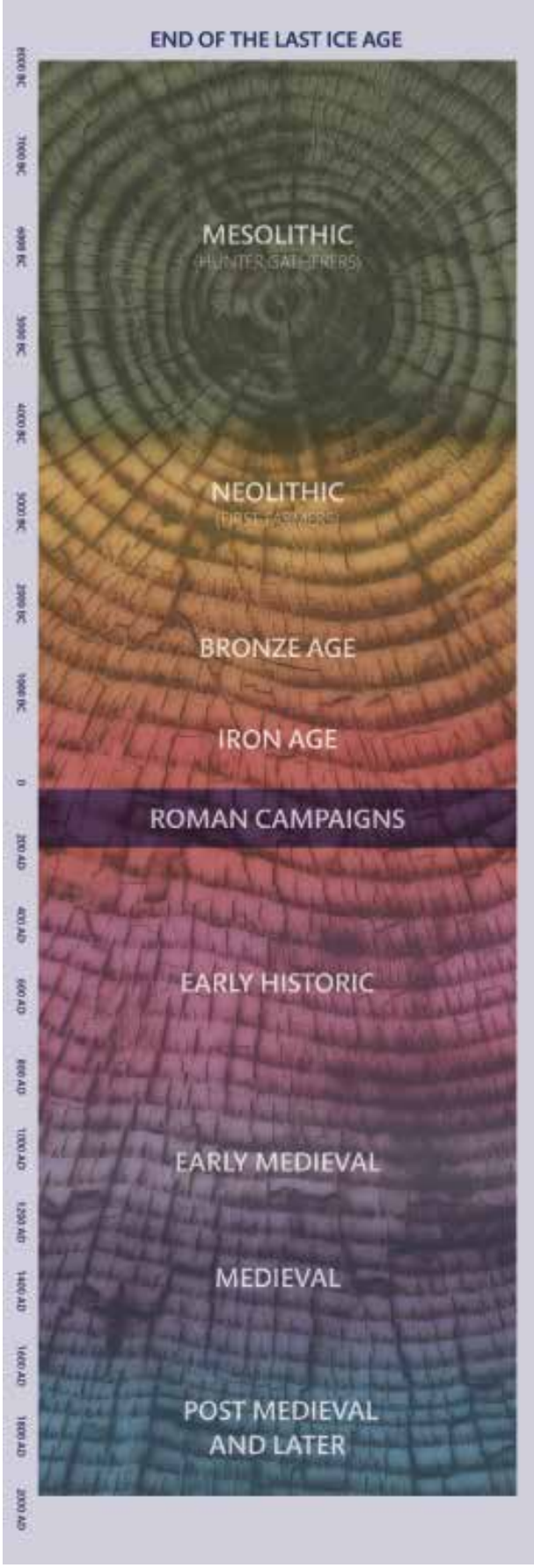

With the help and support of:

SCRAN

DIG IT! 2015

Aberdeenshire Council

Historic Scotland / Alba Aosmhor

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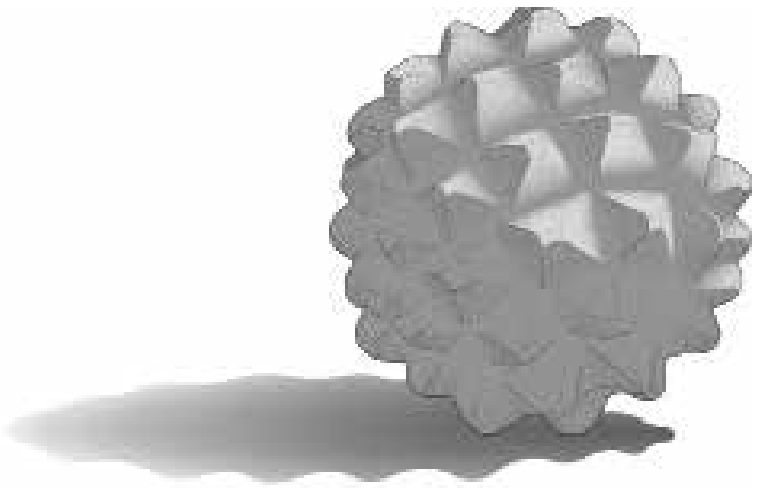

Introduction

This resource aims to help teachers and youth group leaders explore the recumbent stone circles of Aberdeenshire.

The study of recumbent stone circles will also allow a meaningful discussion of the movement of the planets, the changing of the seasons and why in the past this might have been of great significance to our ancestors. Several of the best examples of recumbent stone circles can be found on Scotland's National Forest Estate.

> **'The story of the Solar System is the story of the emergence of order out of chaos, guided by the simplest law of physics: gravity. The planets and their moons exist in relatively stable orbits because of a delicate interplay between gravity and angular momentum, and this beautiful natural balance is written before our eyes in the spinning patterns and rhythms of the heavens.'**

Wonders of the Solar System **Brian Cox 2011, 68.**

Recumbent stone circles are also a wonderful conduit for discussing important elements of numeracy and mathematics such as the exploration of shape, radius and circumference; and can involve very active games exploring measurement and turning through angles. Exploring recumbent stone circles allows pupils to discover cardinal points and to study why the circles might be where they are in the landscape.

Your class will be encouraged to visit your local recumbent stone circle and to explore them online through collections of images relating to the recumbent stone circles on **SCRAN**, **Canmore** and on the **Aberdeenshire Council Sites and Monument Record**.

You are also provided with links to museums and other online collections in order to investigate what the stones tell us about prehistoric life. By visiting local recumbent stone circles and accessing resources online, pupils can explore how Bronze Age people lived, what their environment was like and about the times that they lived in. They can also explore what people in the past might have believed and contrast their life and times to those of our own. The resource also encourages engagement with new technologies, making it possible for pupils to share their experiences, creativity and understanding.

This resource aims to:

- inspire and encourage practitioners to engage with this fascinating topic;
- bring the recumbent stone circles alive for young people, through a series of classroom and place-based activities;
- encourage teachers and pupils to explore their historic environment; and to
- promote the active engagement of schools with the wealth of historic and archaeological learning resources available online and in print.

How to use this resource

The resource will highlight the scope to study recumbent stone circles as a focus topic, or to support learning as part of the study of the Solar System, Weather and Climate Change, Mathematics or local environment. Teachers are given further reading and guides to more in depth activities at all stages.

The activities in the resource are designed to deliver skills learning and outcomes at Level 2 (Curriculum for Excellence). The activities are best suited to pupils in P6 and 7, but are adaptable for later or earlier stages. The activities will be categorised by when they should be used and the Curriculum for Excellence outcomes that they cover. All of the tasks offer potential for different levels of challenge. Three integrated topics are described within three separate sections.

Discovering Recumbent Stone Circles (preparatory activities in class)

A series of interpretative and reflective classroom based activities to inspire curiosity and encourage investigation. This section is designed to be completed prior to a visit in order to provide stimulus and context.

Exploring Recumbent Stone Circles (on site activities)

A series of outdoor and out of class activities to reinforce classroom learning, build confidence and provide new challenges.

Sharing Recumbent Stone Circles (follow up activities back in class)

A range of useful post-visit activities to provide the opportunity to build community relationships, develop citizenship, share new knowledge and showcase and reward achievement. This section includes activities that encourage pupils to summarise and share their findings and their work with others, perhaps during a school assembly or working with the school or community library to display their work.

These activities are designed to be flexible. They can be taught as part of an exploration of societies in the past or as a recumbent stone circle project. They also offer useful and practical applications to support other learning in Science and Mathematics.

The Word Bank

This includes all the most unfamiliar vocabulary and must be shared at the beginning of each section of learning. Pupils can either copy out or cut and paste the vocabulary into their project book. The words can be included in visual displays in the classroom.

Further Resources

This section includes texts, websites and on-line resources. A SCRAN Pathfinder Package called *Recumbent Stone Circles* has also been developed for use in conjunction with this resource.

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Nine Stanes

Key themes

> **'Recumbent stone circles are among the most spectacular ancient structures you could ever hope to see. Silhouetted against a skyline, they dominate the landscape for miles around.'**

Great Crowns of Stone, **Adam Welfare 2011**

There are several key themes that can be discussed and explored during a visit to a recumbent stone circle.

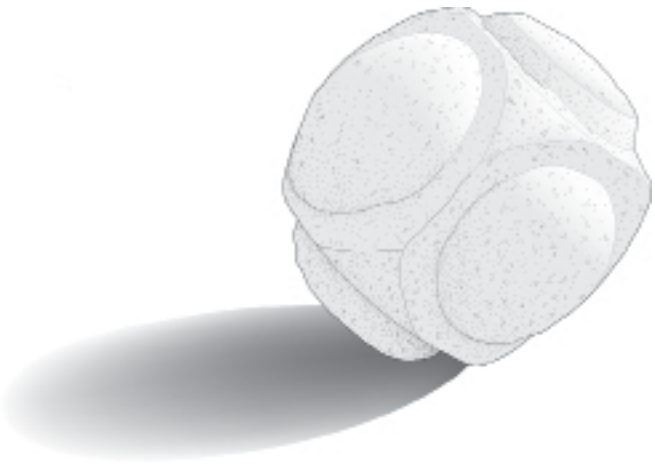
- **People, Past, Events and Societies**: the people of the Bronze Age Scotland
- **The Planet Earth and our solar system**
- **Religious and moral education:** exploring and understanding of how beliefs develop and recognising the diversity of beliefs in society, then and now

Recumbent stone circles are often though to be enigmatic spaces and, as such they can stimulate a wide range of creativity and thought. Some of the key questions to investigate through discussion prior to and during your visit are fundamental issues such as just what is a recumbent stone circle? Are there certain characteristics that they all share? Is every recumbent stone circle the same? The next question to explore is what might have happened here? Why do recumbent stone circles exist at all and do we build things like that now? How did the people build them? How did they carry heavy weights and measure things? Did they measure things? Is there any evidence?

Recumbent stone circles give us lots of clues about the communities who built them. We can guess from their size whether communities had lots of people to help or were quite small. We can also decide whether or not these were important places. We can find clues in the landscape about the people who built them and their lives. Empathy can help to explore what might have mattered to them (the seasons, the harvest and the importance of storing things for winter). We can ask if there are people who would share the same values in our community today. The location of many of the recumbent sites hint at a their use: they are often on prominent ridges or high ground and if you use your imagination and maps you can guess at how visible they might have been from quite long distances.

Visiting a site gives us a sense of scale. Bronze Age people had no heavy lifting equipment, so how did they move such huge stones? Are the stones set at regular intervals? Did Bronze Age people understand maths? Is the circle significant and is it even a genuine circle? How did they measure without rulers? We know that sites like these can be linked to the passage of the Sun or Moon. Why might that have been important to Bronze Age people? Do we understand why the Moon is important to us on Planet Earth? How does day and night happen and what are the seasons? Who is most affected by the seasons in our community today? Do you think Bronze Age people would have understood these things like we do? How else might they have explained the changing seasons and is this linked to recumbent stone circles in some way? How do we record the passing of the year and are calendars important?

Recumbent stone circles give us a chance to explore the mathematics and the mythology behind cycles and circles. There is an opportunity to discover circles in culture and religion, what do they symbolise and does this give us some clues about our Bronze Age community? A visit to a recumbent stone circle gives us the opportunity to test what we know about the special features of a circle (degrees, diameter, radius and angles) and give them a real life application by exploring the compass face.



Curriculum for Excellence

This resource encourages teachers and pupils to explore evidence related to recumbent stone circles on-line and in the environment to deliver outcomes in the Curriculum for Excellence. The main focus is on learning about The Planet Earth and its Solar System and in People, past events and societies; however, in engaging pupils in learning out of doors and conducting meaningful research within the classroom, this resource offers pupils the opportunity to demonstrate learning across the curriculum. The activities in this pack are designed to address each of the curricular areas and to provide real and cohesive links across the subject areas.

Health and Wellbeing

A trip to one of the sites and many of the classroom activities mentioned will provide opportunities for active learning. Pupils will cooperate to achieve outcomes and learn the effective use of technology. By participating in physical activity the pupils will appreciate the enjoyment to be gained from healthy outdoor learning.

Expressive Arts

Pupils will be encouraged to imagine Bronze Age life and belief through the creation of interpretive dramas. Using loan boxes from Forestry Commission Scotland, Archaeology Scotland and Historic Scotland, pupils will discover the richness of material evidence of people in the Bronze Age. Exploration of artefacts can provide stimuli for a variety of creative projects.

Literacy and Language

Through activities that will include discussion, reading, research, note-taking, interpretation, presentation and creative writing, pupils will explore all areas of functional and imaginative language skills. There is the potential to engage directly with the community in the production of creative writing or visitor information, posters and leaflets for a recumbent stone circles that is special to you or your community.

Mathematics

Through map work and site survey pupils will learn accurate measurement and the importance of scale. They will also learn the significance of the circle, the degrees of the circle as it relates to angles and to the cardinal points of a compass. Pupils will be encouraged to use different methods of note-taking using photography, video and sketch-making. Pupils will also discover mathematics in practise in a different time period.

Religious and Moral Education

Exploring the potential uses of recumbent stone circles can provoke interesting discussion in the classroom about beliefs and can provide a natural route into exploring the often diverse cultural heritage in a classroom. It can be a useful tool to explore end of life rituals and different approaches to life after-death. Exploring the possible links between the stone circles and the Sun and the Moon opens up the topic of why people believe certain things and why belief might be seem less popular in the 21st Century.

Sciences

Pupils will use the study of a recumbent stone circle to explore the importance of the Solar System and the seasons, enabling a greater understanding of the interdependence of people and their environment.

Social Studies

Investigating recumbent stone circles will immerse young people in the key principles and practise of Social Studies. Recumbent stone circles are a perfect platform to experience and explore outcomes in People, past events and societies. This rich topic gives the opportunity to explore 'evidence' in the landscape and to think about the similarities and differences between earlier societies in Scotland and our own. Preparatory activities will involve pupils in a wide range of investigative techniques from book research to the use and interpretation of maps, plans and aerial survey and the use of Google Earth.

Technologies

This pack will encourage learning through the use of technology for research. Pupils will use historical search engines such as SCRAN, Canmore and the Aberdeenshire Council Site and Monuments Record in order to enrich their understanding. Some pupils might like to explore the possibility to recreate environments using Trimble Sketchup or to leave information about their site visit on Google Earth, merging survey and photography to create a virtual interpretation of the environment that they have explored. Using Windows Movie Maker, photography and video, pupils can create an audio-visual record of their visit.

Outdoor learning

A visit to a local historical site promotes physical activity and provides enhanced learning in each curricular area. Visiting our heritage in the landscape:

- provides challenge;
- provokes enquiry and critical thinking;
- provides a real-world context for classroom learning;
- promotes more confidence in pupils who find classroom-based learning challenging;
- promotes positive working relationships;
- promotes a greater appreciation of the environment; and
- promotes the benefits of a healthy and active life-style.

Outdoor Learning is an essential tool in developing the four capacities:

1. Successful Learners

First-hand experiences and new learning environments help to motivate and inspire.
A visit to a recumbent stone circle site will introduce new skills and help to reinforce learning from across the curriculum, involving pupils in map work, research skills, survey and measuring, photography, imaginative artwork, creative writing and the use of IT and online resources.

2. Confident Individuals

Familiarity with and understanding of a local landscape or monument can inspire a sense of ownership in young people. Through understanding, young people can have the opportunity to share their learning with their peers and the wider community. Engagement with the local environment can provide the opportunity for young people to work with individuals and organisations in the wider community.

3, Responsible Citizens

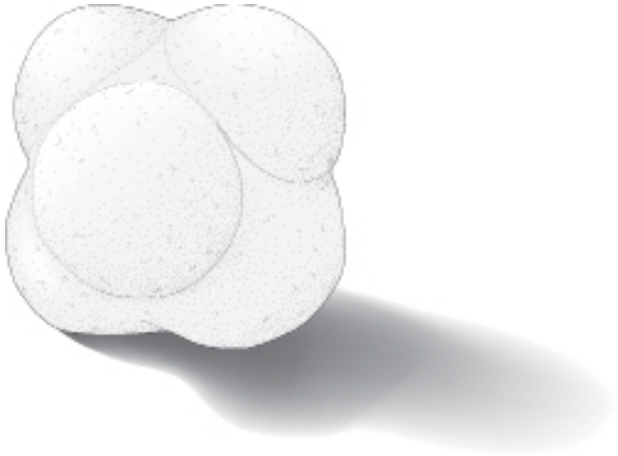
Young people can be motivated to take an active role in the protection and promotion of sites of special interest in their community. Engagement with local sites can involve pupils in the preservation and interpretation of the site for the enjoyment of themselves and others. Young people can be a 'champion' for local sites; making them key to explaining sites for a wider audience.

4. Effective Contributors

Pupils will enjoy the opportunity of telling others about their local heritage. Young people can be encouraged to share what they know through a variety of media.

Acknowledgements

Forestry Commission Scotland (FCS) is proud to support *Our Place in Time: the Historic Environment Strategy for Scotland* and the emerging *Scottish Archaeology Strategy*; and often seeks to contribute to initiatives such as the Scottish Archaeological Research Framework and Dig It! 2015. This resource was written by CSW Heritage and Education and edited by Matt Ritchie (FCS) with illustration by Small Finds & Design. All images copyright FCS unless otherwise stated. Thanks are due to all those who contributed to the development of this resource: Craig Fletcher (Historic Scotland); Helen Foster (SCRAN); Claire Herbert (Aberdeenshire Council); Philippa Murphy (FCS); Jeff Sanders (Society of Antiquaries of Scotland); Douglas Scott; and especially Adam Welfare (RCAHMS).



Introducing Recumbent Stone Circles

Recumbent stone circles are the oldest surviving structures in the North East and amongst the oldest structures in Scotland. The period of time between us and the Romans is the same as the time between the Romans and the people who constructed the recumbent stone circles. Many generations of people have visited them and wondered at their origins.

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Tomnaverie, with Morven in the background. It has often been thought that recumbent stone circles have a special relationship with the environment around them. Tomnaverie offers spectacular 360° views of the mountains of Morven and Lochnagar.

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What is a Recumbent Stone Circle?

A recumbent stone circle comprises a circle of standing stones ranging from around 11 m to 30 m in diameter. The key feature of the circle is a substantial stone slab, laid *recumbent* on its edge in the South Western or Southern arc of the ring. Although most recumbent stones weigh somewhere in the region of 18 tons, the largest weighs as much as 45 tons and the smallest as little as 1.5 tons. Each recumbent stone was carefully levered and chocked to ensure that their upper surface was as level as possible. The recumbent is flanked by the two tallest stones of the circle. The other upright stones in most cases are graduated in size, the smallest being the furthest away from the recumbent stone and the largest, the flankers, standing on either side. Recumbent stone circles belong to the earlier parts of the **Bronze Age**, although were often reused for burials in the Later Bronze Age. Recumbent stone circles are unique to North East Scotland, with the most recent review recording seventy one surviving examples, although many must have been destroyed and new discoveries are still being made.

These extraordinary monuments occur almost exclusively in Aberdeenshire and tend to be smaller than stone circles found elsewhere in Scotland. They sometimes exist very close to each other in the landscape. Their distribution suggests that something unique was occurring in the Bronze Age of the North East, particularly in terms of the construction of communal monuments and possibly in terms of belief and ritual.

Who built them and when?

Recumbent stone circles date from the Bronze Age, which is roughly the period between c. 2500 BC to c. 800 BC. The Bronze Age saw enormous social changes – particularly visible in the shift from large communal chambered tombs (in the preceding **Neolithic**) and large ceremonial monuments to individual burials in stone cairns. The Bronze Age also saw the emergence of roundhouse architecture, which is the standard house form for the next 2000 years. The period also sees the introduction of metal, new forms of pottery (**Beakers**), climate change (from warm and dry to cold and wet) and the subsequent appearance of hillforts.

Circles of the Sky

Archaeological excavations have indicated that recumbent stone circles often enclose traces of funeral pyres and low burial cairns – so some people see them as monuments of ritual, the recumbent stone symbolising a blocked doorway to be viewed from the outside. The archaeologist Adam Welfare goes further, interpreting the circles as replica facades, the recumbent stone and its flankers designed to imitate the blocking stone and entrance portal of earlier Neolithic chambered tombs:

> **'in their original form, recumbent stone circles… marked places where the bodies of the dead were cremated, before their ashes and the debris of the pyre were swept away and largely removed. As such, they are best described as commemorative monuments, perhaps less of the individuals who were committed to the flames than of the places where this rite occurred'**

Great Crowns of Stone, **Adam Welfare 2011, p 263–4**

Others have seen the function of recumbent stone circles as solar or lunar observatories – or as open rings for ceremonies, perhaps involving the movements of the Sun and Moon, with the lighting of fires and rituals (perhaps of fertility) being held at special times of the year.

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Strichen

The recumbent stone may have served as an altar and, along with its flankers, perhaps formed a frame through which celestial events could be viewed. The recumbent stone and its flankers are always on the southern arc of the stone circle, framing the horizon and southern sky. Perhaps the long shadows cast by the stones and the low sun at the winter **solstice** were as important as the stones themselves – and perhaps the space they enclosed was more important to the builders than the structure itself. Perhaps the changing positions of the Sun and the Moon in the sky were important in the lives of the people who built these special places. Stone circles, stone rows and standing stones perhaps formed a link to the ever-changing skyscape of Sun, Moon and stars, defining patterns that confirmed and reaffirmed the changing of the seasons.

Others have argued that the recumbent and flanking stones form a framework through which to view the rising or setting of the Major Standstill Moon that occurs every 18.6 years. At that point, the Moon dips towards the recumbent; and they have maintained that **cupmarks** (cup-shaped hollows between 10 and 50 mm in diameter) on some recumbents, flankers and the immediately adjacent stones at twelve of the surviving recumbent stone circles, cluster at points where the Major Standstill Moon rises or sets.

The cupmarked stones may represent older monuments subsequently reworked into the circle. Many of the stones on the south side of the circle exhibit nodules, thin veins or bands of **quartz** on their external faces and there is also evidence for rituals involving the smashing of quartz rocks inside the circle. Quartz glistens in both moonlight and in the light from bonfires emphasising the night aspect of any rituals taking place in the circles. In addition, the enigmatic Neolithic and early Bronze Age **carved stone balls** have a distribution in Moray and Aberdeenshire that mirrors that of recumbent stone circles – can they have been connected?

Whatever their purpose – whether commemorative monument, funerary cairn or ceremonial circle – we know that life was good for their builders, with small populations and numerous resources. The people were farmers, growing barley and perhaps oats and raising cows, goats, pigs and sheep. The rivers were full of fish and there would be deer and wild fowl to hunt. The climate was slightly warmer than it is today and it is often argued that it was this wealth of resources that allowed people so much spare time to construct the recumbent stone circles.

Falling out of use

It is possible that the introduction of **Beaker** culture from Europe around 2400 BC (characterised by inhumation burials with distinctive Beaker pottery and other grave goods) roughly coincided with the period of construction and use of recumbent stone circles. Towards the end of the Bronze Age there was a marked change in climate, with temperatures dropping and increased rainfall. These changes put pressures on families living on higher more marginal ground, as it was harder to grow crops and ultimately led to the abandonment of this land and a retreat to the lower lying more fertile ground. Of course, this land was already occupied and it has been argued that this increased pressure led to conflict and there is an increase in the number of weapons and the appearance of defended settlements.

Intriguingly, this later period, around 1000 years after the circles were built, also witnessed a return to the recumbent stone circles, as some are used for cemeteries while others are used as foundations for houses. While we do not understand the motivation behind such acts, they clearly remained important and revered places. This latter use may reflect an attempt to draw authority and power from the past into the contemporary world. Even as late as the 18th century, churches (such as that at Midmar) were being built deliberately on or near the site of these circles.

In more recent centuries, while some landowners were fascinated by these ancient monuments (even building protecting walls around them such as at Easter Aquhorthies), many others viewed them as a nuisance, getting in the way of farming Improvements. Many stone circles were completely destroyed, while others were robbed piecemeal for their stones, or gradually became a general dumping ground for the erratic boulders turned up by the plough and cleared from the fields.

Midmar

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Further Reading

- *Farmers, Temples and Tombs* by Gordon Barclay (Historic Scotland / Birlinn, 2005)
- *Great Crowns of Stone: The Recumbent Stone Circles of Scotland* by Adam Welfare (Royal Commission for Ancient and Historic Monuments Scotland, 2011)
- *The Stone Circle Trail: A guide to ten of the best stone circles in Aberdeenshire* (Aberdeenshire Council Archaeology Service, 2014)
- *The Folklore of Aberdeenshire Circles and Standing Stones* by James Ritchie (Proceedings of the Society of Antiquaries, 1926)

Visiting Recumbent Stone Circles in Aberdeenshire

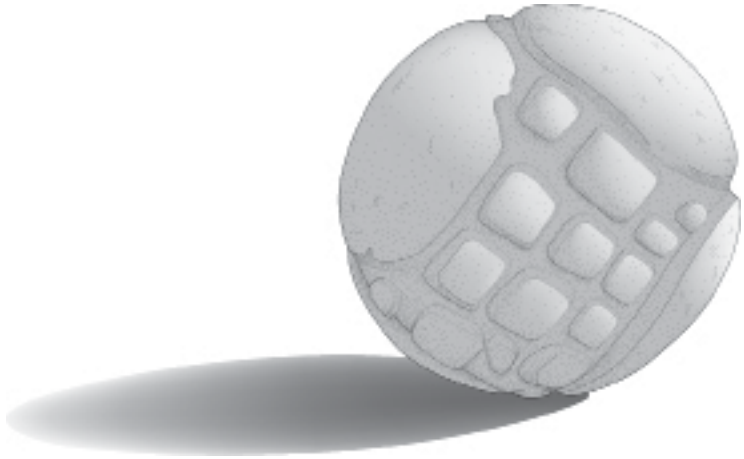
Wherever you are in Aberdeenshire, there will be a recumbent stone circle very close by. The sites mentioned in this resource are in the care and management of Forestry Commission Scotland, Aberdeenshire Council or Historic Scotland and are amongst the better known and most accessible. Some of the sites have on-site interpretation panels but most of the sites mentioned in this resource are included in the new Aberdeenshire Council Archaeology Service's leaflet **The Stone Circle Trail: A guide to ten of the best stone circles in Aberdeenshire**. The leaflet has a brief description of each of the recumbent stone circles highlighted and a clear timeline and glossary of key words. It is a useful and portable guide to the sites. Class sets of the leaflet can be requested via the Aberdeenshire Council Archaeology Service website.

Each recumbent stone circle presents tremendous opportunities to inspire adventure, critical thinking, team building and challenge.

Outdoor Learning Guidelines are available from the Education Scotland website. Some of the sites mentioned in the resource have quite challenging and limited access, so please familiarise yourself with your education department's outdoor learning guidelines and requirements before planning your trip. Always make a visit to the proposed site prior to your planned field trip.

Make sure you look at **Historic Scotland's Travel Subsidy Scheme** as your group may qualify for some help with your transport if you are visiting a Historic Scotland site.

Guides to using archaeology to deliver outdoor learning can also be found on the **Archaeology Scotland** website.



Discovering Recumbent Stone Circles

As pupils will all be at very different levels of understanding and many will have never have seen a stone circle, this topic is best introduced visually thought a montage of photographs.

We suggest that you use the **SCRAN Pathfinder Package: Recumbent Stone Circles** to assist you.

This is a good point to explain what recumbent means and a little about what we know about them; where they are, their unique relationship to the North East, their size, shape and location. It would be good to consider the lives of the people in the Bronze Age. Use our introduction and **Farmers, Temples and Tombs** to help to paint a picture for the class. It is useful to explain that even archaeologists don't have all the answers to the questions that the class will ask and that we can only prove what we have evidence for.

Aikey Brae from the air

© ACAS

People, Past, Events and Societies: the people of the Bronze Age Scotland

Creative thinking: The Making of the King

Exploring some of the legends and stories that have grown up about recumbent stone circles and stone circles in general is a good way of exploring how people in communities have attempted to explain their existence in the past. Story-telling can also help us to understand things that are beyond our understanding and there is little doubt that Bronze Age people had stories that helped them to explain the mystery of day and night and the changing of the seasons. **The Making of the King** is a modern reimagining of what was happening in a community at the time the recumbent stone circles and similar monuments were built and what they were used for.

The story touches on religion and climate change and through discussing the story and what we understand now about natural events compared to what would have been known in the Bronze Age, gives pupils a key to unlock more scientific and anthropological thinking.

Other good folklore about stone circles includes:

- **The Dancing Giants of Brodgar**
- **The Tale of the Farmer of Auchleven who cleared a stone circle**
- **The Gate Posts at Auchterless**

It is interesting that the recumbent stone circles of Aberdeenshire do not have the same folklore and fairy stories associated with them as similar sites on Orkney and in the South of England.

Another evocative text that might be used in class at this point is **The Boy with the Bronze Axe**, which blends a good story whilst imaginatively recreating life in the Bronze Age. For other fictional texts please see the **Further Resources** section

Get creative!

Using an image of a recumbent stone circle as a stimulus, encourage the pupils to create their own stories about what the recumbent stone circles are and why they are here. Let their imaginations run – aliens are fine at this stage!

Discussion time

In order to organise thoughts and to enable pupils to check their own progress, we suggest using the KWL table approach. By creating a KWL table at the head of each section, you can use the resource and the associated SCRAN pathfinder package to stimulate discussion and audit the pupils' learning. Using the KWL table also helps pupils to take independent steps to establish their prior knowledge, set out a purpose for their learning and can help them to check that they gain understanding as they go along. The KWL table is a good way of recording individual or class progress in the topic area and will help to achieve learning outcomes across this huge and exciting topic.

The pupils make a table in their jotter or on a blackboard. It should be split it into three columns: call one column **K** for 'What I know' and call the second column **W** for 'What I want and need to find out'. The **L** column is where the pupils will record what they think they have learned. This method helps them to think strategically about where they are and what they want to achieve and can encourage independent thought. Individually or as a class, the pupils

can try to think of things that they know about recumbent stone circles creating a **'What are Recumbent Stone Circles?'** KWL table. Please stress that it is OK to have a blank **K** column at this stage but a good introduction and class discussion should mean that every pupil will be able to get started. Encourage the pupils to look at the pictures in the **SCRAN Pathfinder Package: Recumbent Stone Circles**. How can the SCRAN pathfinder package help them?

Possible questions for the **W** column. These are examples of the questions that pupils may generate individually and they provide excellent discussion topics for the whole class:

- What is a recumbent stone circle?
- Where can we find them?
- When were they built?
- Who built them?
- Why were they built? (Consider community activity, what draws people together now; •
- festivals, games and religion)
- How did they build them before machinery and mathematics?
- Were the communities large or small? The size of the recumbent stone circle might give you a clue.
- How do we find out about the Bronze Age people? What did they look like?
- What was life in the Bronze Age like?

KWL Table (Know, Want to know, and Learned)

What are Recumbent Stone Circles?		
K **What I know**	**W** **What I want to find out**	**L** **What I have learned**
They are in Aberdeenshire	**When were they built?**	*We will look at the 'Learned' column once you have completed the activities*
They are made of stone	**Who built them?**	
	What are they for?	

Discovering material culture: 21st Century versus the Bronze Age

There are some beautiful objects that are associated with Early Bronze Age Aberdeenshire: decorated pottery, **carved stone balls**, delicate flint arrow heads, axe heads, beads and jewellery. Each object gives us a tiny glimpse into the lives of people in Aberdeenshire around 4000 years ago. The following tasks offer a chance for pupils to investigate real objects for themselves and to connect directly with people in their community's past.

It is useful to explore the pupils' understanding of the resources that they can use to answer the questions that they have generated. For older classes use the **Further Resources**

section to access an excellent **BBC video 'Interpretation**'. A good practical introduction to archaeology and the world of artefacts is 'the dead body' game.

The dead body game (or ëWhat survives?ĩ)

Select a class member to be the dead body. Now hop into a time machine and project the class 4000 years into the future ask the class, if their classmate was buried in the Earth, what might have survived? What won't rot away (decompose)? Those things that survive are the things that become artefacts. What will survive from our classroom, homes, bedrooms and the wider world? What will it tell people in the future about us?

What survives from Bronze Age Scotland?

Through discussion, find out what the class think might have made it through the ravages of time. To expand their learning use the images of Bronze Age artefacts in the **SCRAN Pathfinder Package: Recumbent Stone Circles**.

In pairs or individually, pupils could select two different items and put together a physical or electronic (PowerPoint) presentation about the objects. The pupils should:

- explain what they objects are and why they selected them;
- describe where the objects were found and what they are made of;
- try to explain what their chosen artefacts can tell us about the people who made and owned them; and
- decide if we can we find out anything about the recumbent stone circles from the artefacts. They should try to explain their conclusion.

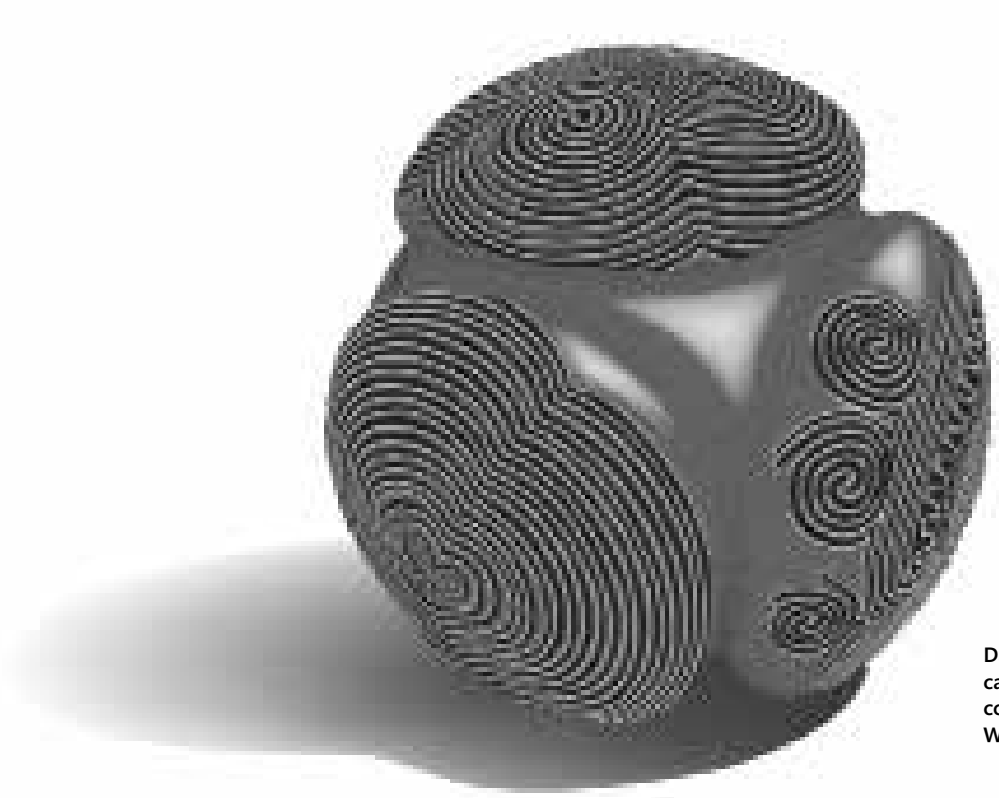
Get Creative!

The learners could choose their favourite object of the two that they have selected and make a replica of it for display in the class. They might like to think about the scale of their replica – 1:1 or 1:5? This is a great practical activity to reinforce learning about ratio and scale or it is also a good way of introducing the concept to the class. There are some great online resources in the Further Resources section that can be used for the whole class on a smart board or by individuals on a tablet or laptop.

Examples that you could use:

- Make a replica spiral clay pot. This can be achieved using plasticine or modelling clay. The pot can then be decorated with cords, or fine diagonal lines or impressions in the clay. Use the **SCRAN Pathfinder Package: Recumbent Stone Circles** to access images of Bronze Age pottery.
- A socketed bronze axe head could be recreated in papier-mâché and painted to look like aged and patinated bronze.
- Recreate a beaded necklace or a bronze torque.
- Make and paint a **carved stone ball**. You can use papier-mâché or modelling clay.

The task could be completed by setting the pupils the challenge of writing a description their object for display. It must cover all the important details from their presentation but should be no more than 250 words.



Dating to the Neolithic and early Bronze Age, carved stone balls appear in their greatest concentration in the North East of Scotland. We do not know what they were for.

Geography: finding the recumbent stone circle

Looking at maps to find where recumbent stone circles are and the kind of environment where they can be found can give us insight into their use and importance to the people who built them. Recumbent stone circles tend not to be very high on ridge but nevertheless command impressive views out from them and in most cases, their location can be seen from far around. They tend to have impressive sky views particularly to the South. We don't know for sure if this was always the case but we do know that those that are now found deep within modern forestry are unlikely to have been deep in woodland originally.

The following tasks are also supportive and practical applications of any map reading and orientation activities that are going on in class. Once again these activities could be achieved in small groups, pairs or individually.

Where are the recumbent stone circles?

Use the **SCRAN Pathfinder Package: Recumbent Stone Circles** to view the Scotland wide map to emphasise the unique nature of recumbent stone circles in Aberdeenshire. Ask the class if they can spot the phenomenon and consider why this might be?

Use **The Stone Circle Trail: A guide to ten of the best stone circles in Aberdeenshire** to identify what they think is their nearest recumbent stone circle. In some cases, this might be a tricky judgement and if the class work in pairs at this stage it will provide a number of answers that the class can compare and discuss later.

To get more information, the class could access the Royal Commission for Ancient and Historic Monument's Scotland's (RCAHMS) database **Canmore** or the **Aberdeenshire Council Sites and Monuments Record** to find their recumbent stone circle and to down load or take notes on the details including the **National Grid Reference** (NGR).
For an excellent introduction to NGRs see the link in the **Further Resources** section.

Read the landscape using OS maps

This activity provides a basic introduction to map reading for your class and uses the resources available to download from the **OS mapzone.** To extend their learning, let the pupils choose their own OS maps. You will need Land Ranger (Pink) OS maps 1:50,000 series numbers 37, 38 and 45.

There are two main ways to find the exact location of the recumbent stone circle that the pupils have chosen. Split the class in half, one group for each task:

a. Along the corridor and up the stairs: find the selected recumbent stone circle using the National Grid Reference.

b. Identifying archaeological sites on an OS map.

For activity **a**, using the simple four figure grid reference for the site and the OS hand out called Grid References downloadable from OS Mapzone, explain how to use the grid references as a class and see how they get on. What gave the pupils the final clue to the site of their recumbent stone circle?

For activity **b**, use the OS hand out, Map Symbols 1:50K downloadable from OS Mapzone. Discuss what the pupils can identify from the hand out and start the task. Pay special attention to the Forestry Commission Scotland symbol and the Historic Scotland and the general archaeology symbols. Can the pupils find their site using the symbols alone?

At the end of the tasks, discuss which group finished more quickly and why this might have been. What is therefore the best combination of knowledge to have in order to identify site?

What can you tell from the map?

Using the OS map of their site and the OS Mapzone guides 'Relief' and 'Contour' discuss with the pupils what they can work out about:

- the height of their site
- the environment surrounding their site (Trees? Fields? Enclosed? Open?)
- what they might expect to be able to see from the site?
- are there any other Stone circles or archaeological features of interest?
- what is the land being used for?

Are there any clues about the use of recumbent stone circles or any clues about Bronze Age people from the locations?

Aerial photographs and old maps can help identify changes in land use over time. Access the RCAHMS' online site for aerial photography and the National Library of Scotland's on-line maps site to look at old aerial shots and maps of the site. For advice on good activities related to this got to the National Library of Scotland's historic on-line learning resource for pupils and teachers **Mapping History**.

Plan your trip

After this exercise you should have chosen your nearest site. Set the pupils the challenge of planning their own trip. Using the OS map of their site and the **OS Mapzone** guide 'Measuring Distance' get the pupils to decide on the best route to the site from your school. You can use prior learning to discuss scale on a map.

This is a great time to introduce the compass and main cardinal points (perhaps using the **Mr Measure and the Compass** video) to the class and to set them some basic tasks using a

compass in the classroom (such as "in which direction is the SmartBoard?"). Is the recumbent stone circle that you have chosen to the North, South, East or West of your school? If the pupils have decided on a route, they can add how far in which direction they have to go at each stage of their journey.

There are other ways to plan your route. Discuss these with the class (such as using Google maps). You can set this as a task asking the pupils to consider the pros and cons of suggested routes and estimated times if they walked or went by car. To support and extend learning use the **OS Mapzone** games.

Collaborative learning task: What was a Recumbent Stone Circle for?

You could usefully do a mini KWL table just for this task. It would create a good platform to discuss the difference between knowledge (what we have proof for) and ideas (things that we have yet to find any evidence for).

Recumbent stone circles are huge. The effort that must have gone into building them suggests that these places are important. Many of the flankers (the stones on either side of the recumbent) exceed 2 m in height. Then there is sometimes a ring cairn in the centre, edged by stone and once completely covered in smaller rocks and in some cases liberally peppered with quartz. Building these structures was a great human endeavour. Why would anyone bother?

Discuss other monumental structures that they know about (such as castles or cathedrals). Why were they built? This is a good opportunity to introduce the concept of religious belief and explore how beliefs arise. Discuss whether they have found any clues so far about the use of recumbent stone circles. What kind of artefacts have been found there?

What was a Recumbent Stone Circle for?

The class will develop their own theory and test it against what they find out.

a. Individually: each pupil writes down what they think the circles might be for and then writes down why they think that and any evidence that they have found.

b. In pairs: each pupil joins a partner and they share their ideas. Who has the best ideas and explanations? Can they come up with their best explanation between them?

c. In groups of four: The pairs should come together to form groups of four. They should share their ideas and evidence. They must come up with a brilliant theory with lots of evidence pulled from both of the pairs. They must then elect a spokesperson to share the ideas of their group with the whole class.

d. Class discussion: through sharing and discussion the class will decide on their class theory and write it down in their jotters or on a shared project area so they can test it as they find out more as they go along.

Get Creative!

If some of the pupils have come up with a very visual idea about how they think the site might have been used, they could be encouraged to make a short screen play that can be performed and recorded on site. Theories arising here may have strong link with religious studies in as much as they may touch on the development of belief and this should be explored.

The Planet Earth and our solar system

Discovering the solar system

As well as being an integral part of a larger project on recumbent stone circles the following activities can be made to support learning and provide additional challenge, in the study of Planet Earth and our solar system. The initial introduction here can be used in any introduction that you might design for this topic. It is important to share the word bank with the class. This section has links to excellent online videos to illustrate each point of learning.

The Earth and the Moon

The Earth is a planet and the Moon is her satellite. The Moon orbits the Earth and the Earth orbits the Sun, the star at the centre of our solar system. All this going around in circles has very interesting and important effects.

> **'At the heart of our complex and fascinating Solar System sits its powerhouse. For us it is everything – and yet it is just one ordinary star amongst 200 billion stars within our galaxy. It is a large wonder that greets us every morning; a star that controls each and every world that it holds in its thrall. The sun reigns over a vast empire of worlds and without it we would be nothing; life on Earth would not exist.'**

Wonders of the Solar System, **Brian Cox 2011, 22**

The Earth's axis is tilted by 23 degrees (use a globe to demonstrate the tilt). As we journey around the sun, travelling at 108,000 km an hour on a 900 million km **orbit** known as the **ecliptic** (a year-long journey that takes exactly 365.25 days), this axis creates the changing dynamic that defines our seasons. In the Northern Hemisphere above the **equator**, the summer months coincide with the North **Pole** leaning towards the sun. By winter, this dynamic has changed and the North Pole is pointing away from the sun and it is the Southern Hemisphere that is bathed in additional sunlight. The Earth takes one day to spin around on its axis.

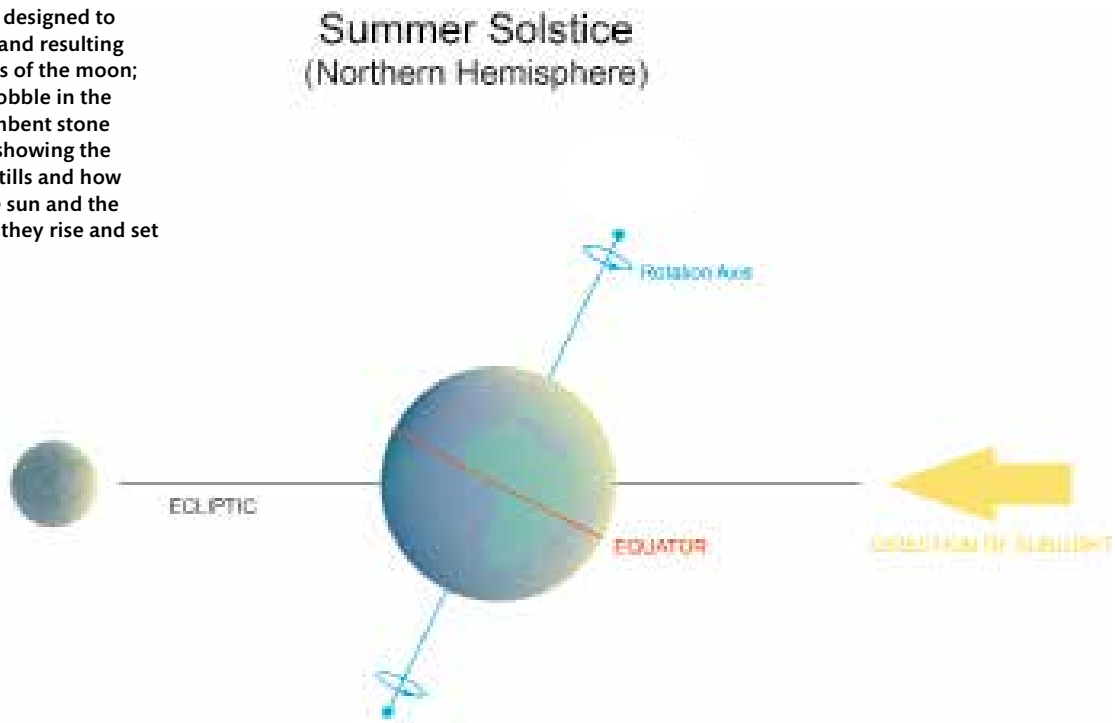
Because the **ecliptic** and the **equator** are not on the same plain, four things will change over time:

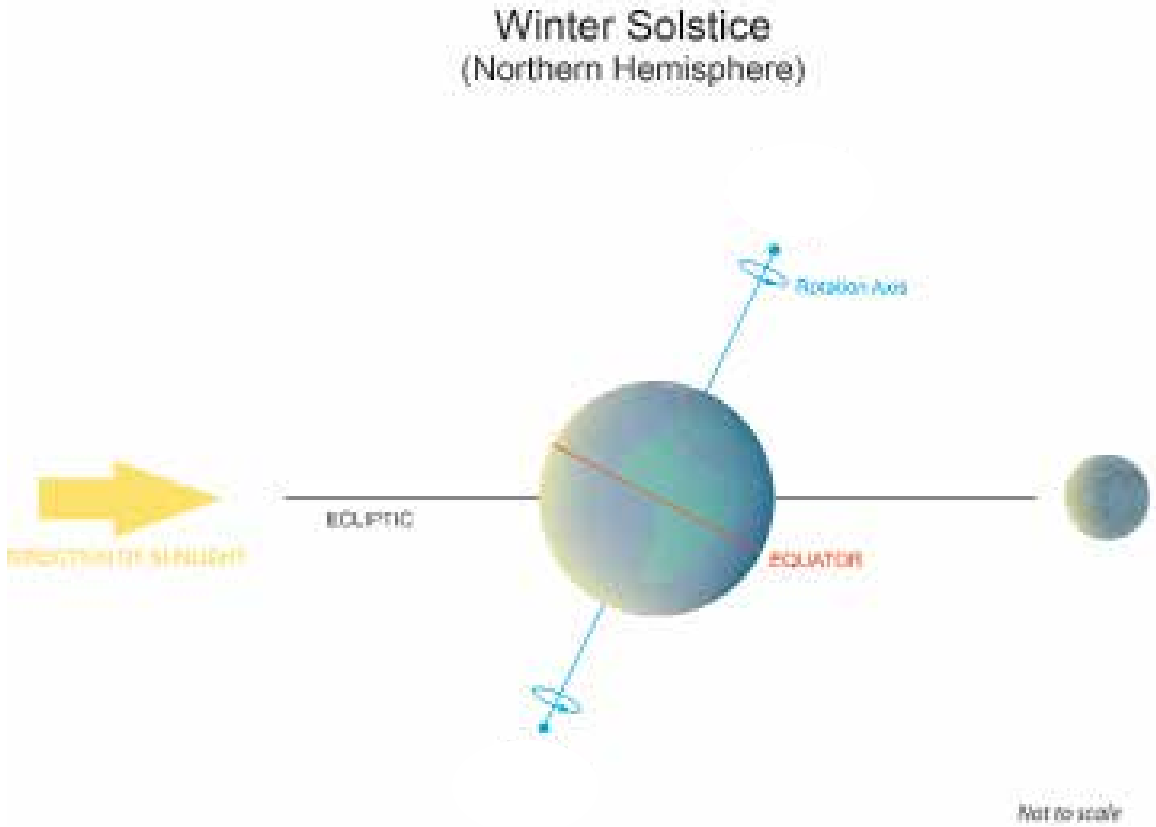
- the position of the Sunrise;
- the position of the Sunset;
- the length of daylight; and
- the height of the Sun in the sky above the Southern horizon.

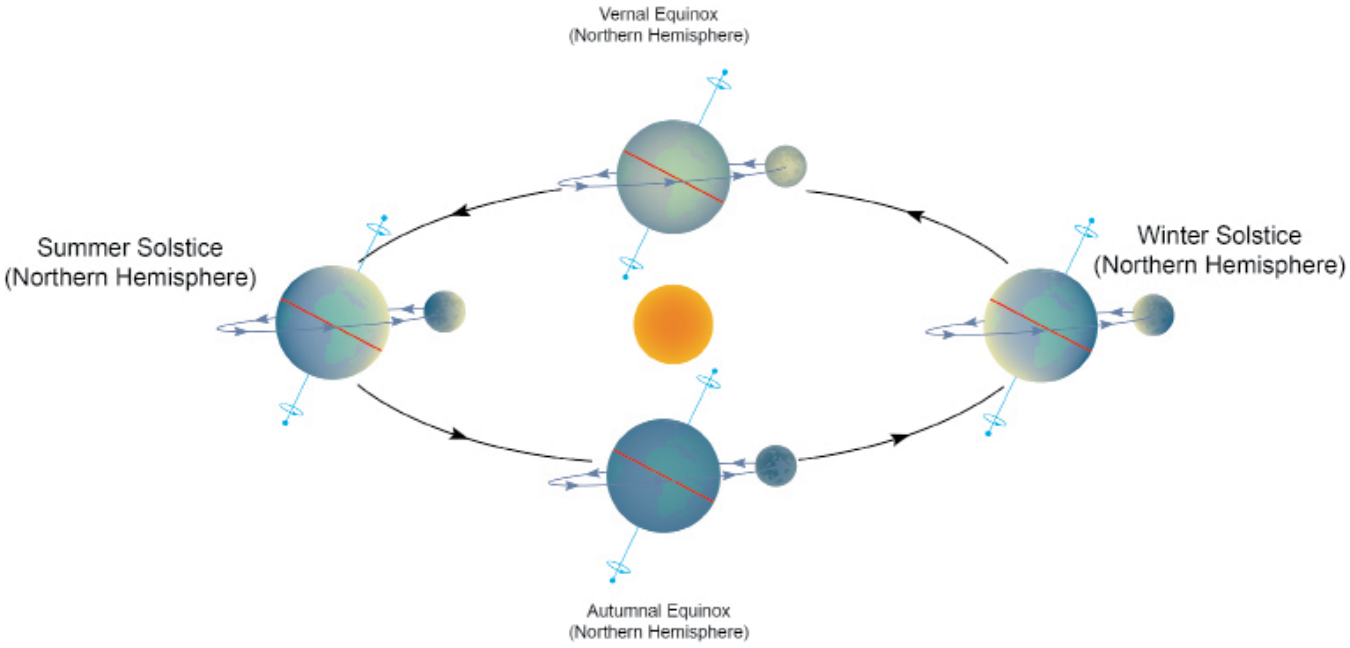
Just like a huge **pendulum**, the position of the sunrise will change twice a year; from the furthest point North East at the summer solstice, through autumn to the furthest point SE at the winter solstice and back again during spring to the North East (one whole pendulum swing). At each extreme point there is a 'standstill' or Solstice or 'standstill of the Sun'. Something similar happens to the Moon.

If the Earth wasn't tilted and the equator was parallel to the **elliptic** then all of these things would stay the same. There would be no seasons.

This series of illustrations is designed to explain the Earth's axial tilt and resulting seasons; the monthly phases of the moon; the scale of the 18.6 year wobble in the moon's orbit; and the recumbent stone circle as celestial compass, showing the various solstices and standstills and how they affect the height of the sun and the moon in the sky and where they rise and set on the horizon.







'Throughout human history, this majestic wonder has been a constant source of comfort, awe and worship, but our understanding of the Sun has developed slowly. For centuries, the finest minds in science struggled to understand how it created such a seemingly endless source of heat and energy. As recently as the nineteenth century, science had little knowledge of what the Sun was made of, where it had come from, or the secret of its phenomenal power.'

Wonders of the Solar System, **Brian Cox 2011, 29**

Being able to observe these things from Earth has meant that from very early times humans have been able to create calendars and some people believe that is what stone circles are. Some theories that have grown up around the existence of recumbent stone circles suggest the possibility of a relationship between the stone settings and the **solstices** of the Sun and the Moon.

Where to find the Moon in the sky at any given point in a month depends on:

- the **Phase** of the Moon on that day;
- where the Sun is in the sky; and
- where the Moon is on its 18.6 year cycle.

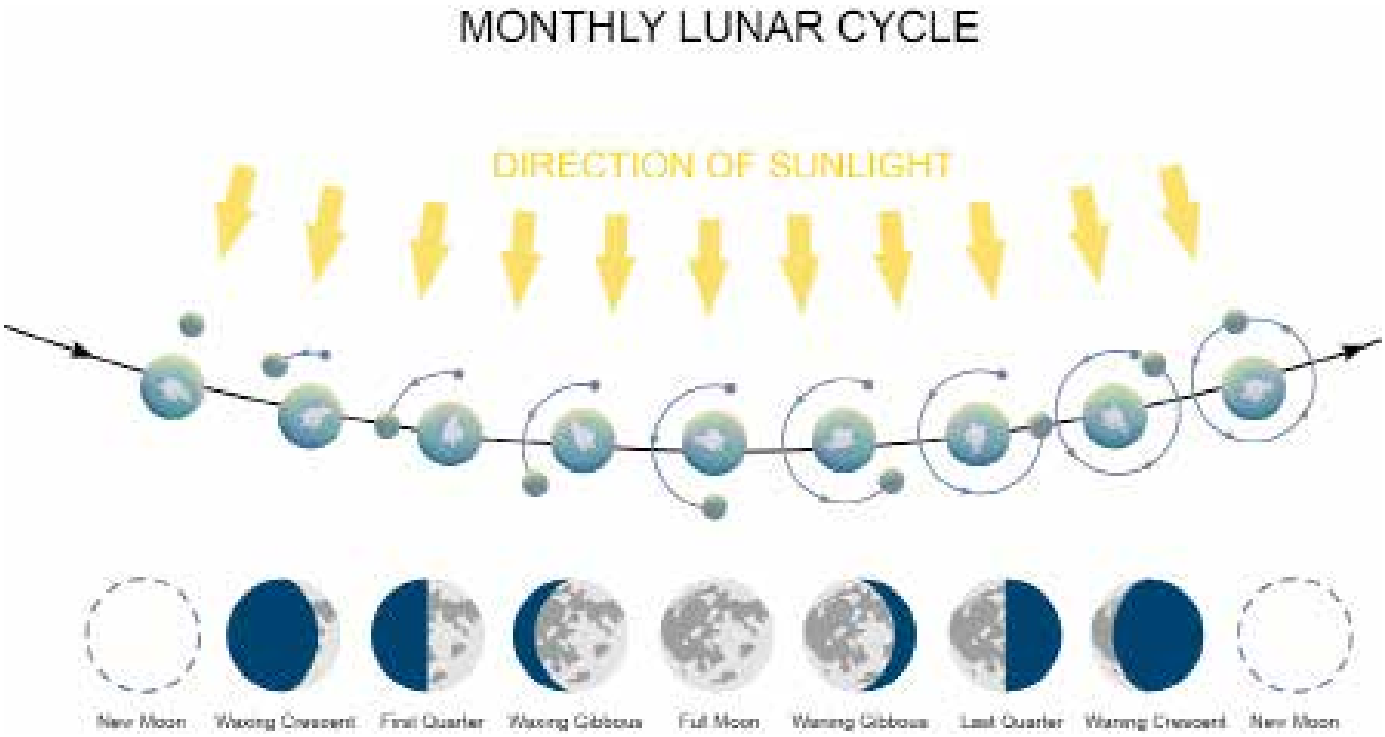
The Moon orbits the Earth. This takes approximately 29.5 days to complete. This is also how long one cycle of moon phases takes to complete. The Moon will complete 12 or 13 cycles of change in one year. Does this remind the class of anything? [Months]

The only reason that the Moon is the brightest thing in the sky is that the Sun lights up its surface so we can see it glow. The phases of the Moon happen because the light that lights the Moon is interrupted (from our point of view on Earth) at different points in the month.

The Phases of the Moon (Homework)

Using the **Phases of the Moon** worksheet, each pupil should attempt to keep a record of the Moon over a period of 28 days. Each evening the pupil will observe the shape of the Moon and maybe its approximate compass position in the sky. They shade the Moon on their daily sheet to show how much of the bright moon they can see. At the end of the month the individual's records can be cut out and stapled on the left margin to form a flip cartoon book of their Moon observation.

Just like Earth, the Moon has a specific orbit and we can see the extreme points of this in the sky at night. The major lunar standstill or Major Standstill Moon happens once every 18 years. As the Earth spins on its axis, day becomes night around the globe depending upon what part of our planet is facing the Sun. And because the Earth's axis is tilted, as the Earth orbits the Sun over the course of the year, the Sun at midday moves from very high in the sky (at the summer solstice) to very low in the sky (at the winter solstice). That is, the course of the Moon changes from rising and setting from its northernmost points on the horizon (travelling higher in the sky than the Sun) to rising and setting from its southernmost points on the horizon (travelling lower in the sky than the Sun).



Discussion time

In order to organise thoughts and to enable pupils to check their own progress, we suggest using the KWL table approach. What is so important about the Moon and Sun that ancient people built structures that seem to be linked to them? Refer to the possible link between the Moon and recumbent stone circles. We are certain that in the time before clocks, radios, and calendars early people knew how to mark the passage of the year. For people who were farmers and who did not have the freezers, poly-tunnels and technology that we have, it was

vital to be certain when to plant and when to harvest and when to prepare to survive the winter; they couldn't stock up at the supermarket if they ran out of food. Some people have suggested that stone circles were built to track and to celebrate the passing of time.

The class should set up a KWL table for **'What is so important about the Moon and Sun and the Solar System?'** Working individually or as a class, the pupils can try to think of things that they know about The Moon and their Solar System in general. Please stress that it is OK to have a blank **K** column at this stage but a good introduction and class discussion should mean that every pupil will be able to get started.

To fill out the **W** the class should be encouraged make up some research questions:

- Why is the Moon important?
- What does it effect? (tides, bed time, life cycle of animals)
- What is the Sun? What does it do?
- What are seasons?
- How do we record the passing of the year?
- Why would these be important to Bronze Age people?

The Earth and the Moon challenge

At the end of this challenge your class:

- will understand the relationship between the Sun, the Moon and the Earth;
- will be able to explain the importance of the Earth's rotation and the Moon's orbit;
- will have considered their impact on our Earth today and be able to describe why it was important to Bronze Age people;
- will be able to provide evidence of the impact of the Moon and Sun on our Earth by exploring the tides, the seasons and climate; and
- will be able to use technology and creativity to provide visual evidence of their learning in the form of an audio-visual presentation.

The class will work independently in groups using the resources in the class and other resources suggested in the **Further Resources** section of this resource.

Ideally your class will be split into the following groups:

- The phases of the Moon
- Day and night
- The seasons
- The tides
- Time

Each group will have a box of resources and a list of web links to help them to research their topic and given inspiration for their tasks.

All groups

Using the KWL table for **'What is so important about the Moon and Sun and the Solar System?**' each group should decide on the **W** questions that are most relevant to them. They can add additional question, specific to the topic for their own group at this stage.

The phases of the Moon

Using the research questions and any others that the group have generated, this group will use the available resources to answer the questions and turn their research into a script. They will create a short play or screen play (with props and costumes) to illustrate why the Moon looks different to us at different times in the month. They should use their answers to the research questions to create a narration for their play or film. The drama and narration should be planned out on a storyboard. Pupils can use flip cameras or video recording equipment to film their piece. Pupils could also explore why the Moon is bright at this point, filming their experiment. Pupils should be encouraged to see if they can work cooperatively with other groups during this challenge. Other groups might be filming can they share props?

Day and night

Using the research questions and any others that the group have generated, this group will use the available resources to answer the questions and turn their research into a script. They will create a short play (with props and costumes) to illustrate why Day and Night occurs and why it is important to us here on Earth. They should use their answers to the research questions to create a narration. The drama and narration should be planned out on a storyboard. Pupils should be encouraged to see if they can work cooperatively with other groups during this challenge. Other groups might be filming can they share props?

The seasons

Using the research questions and any others that the group have generated, this group will use the available resources to answer the questions and turn their research into a script. The pupils will create a short play or an animation to explain what seasons occur and when and why seasons happen at all. An extension task would be to find out if seasons happen at the same time all over the world and if not, why not? Their presentation will explain why the seasons are important to us here on Earth.

The tides

Using the research questions and generating some more questions of their own, this group will use the available resources to answer the questions and turn their research into a poster that they will create in PowerPoint (or using more conventional means).

The poster will explain how the tides and the Moon and Sun are linked and why this is important to us. They could research the effects of a tidal surge and the combination of weather and high tides. The Groups should present their poster to the class and this can be filmed and included in the class film.

Time

Using the research questions and generating some more questions of their own, this group will use the available resources to answer the questions and turn their research into a poster that they will create in PowerPoint (or using more conventional means). Their poster should explain how we record the passing of the year and why it is important to do that. They should explain who invented our calendar and they should also explain why it might have been important to very ancient people to do this. The Groups should present their poster to the class and this can be filmed and included in the class film.

Whole class

Each of the groups will feed back their findings of their research to the others through film, drama or presentations.

They can all now complete the **'What is so important about the Moon and Sun and the Solar System?'** KWL table.

Discussion Time: The whole class should extend their enquiry by addressing the question:

What is so important about the Moon and Sun that ancient people built structures that seem to be linked to them?

Encourage them to link up their learning by referring to the result of all their learning. Stimulate empathy with ancient people: they could watch the Moon like we did but would they understand it in the same way that we do? If not, why not? What do they think that Bronze Age people were thinking? How would they have explained the world around them?

Each of the elements of the task could be pulled together in Windows Movies Maker or Serif Movies Maker to create a film that explains the relationships between the Earth, the Moon and the people of our plant. The class can chose suitable music as a sound track.

Discussion time

It is also a good time to discuss if there is anything that they have learned so far that can go into their **L** (what I have learned) column of their 'What is so important about the Moon and Sun and the Solar System?' KWL Table.

Religious and Moral Education: exploring and understanding of how beliefs develop

Many archaeologists have thought that there is a strong relationship between recumbent stone circles and the phases of the sun and the Moon. The fact that people were buried and cremated on these sites in the Bronze Age also suggests that they were special to the people who built them. They were such big structures that a whole community must have committed time and effort to their construction. Remember, they were probably used over hundreds of years so they were special to different people over time. Even now many of our most famous stone circles are visited at certain times of the year by people who believe that these places have a powerful spiritual presence. They believe old gods were associated with the Sun, the Moon and Nature. Sometimes they are known as **Druids** or **Pagans**.

Discussion time

The class should set up a KWL table for 'What did Bronze Age People believe?' The pupils now have a surprising amount of knowledge and this task can help establish if they are beginning to link their learning. Individually or as a class, the pupils can try to think of things that they know about what Bronze Age people might have believed in. Please stress that it is OK to have a blank K column at this stage but a good introduction and class discussion should mean that every pupil will be able to get started. Encourage the pupils to make links with their previous tasks. How can they help them?

To fill out the W the class should be encouraged make up some research questions:

- Do we have any evidence for Bronze Age belief?
- Where do we bury people today?
- What else happens to us when we die?

- Is it important? Why?
- Can we answer those questions for Bronze Age people?
- Why might their special places link to the Moon?
- What did people believe about the weather?
- Who caused floods?
- Did they understand weather systems?
- Who would they blame if there were terrible storms?
- Who do we blame for extreme weather?
- Did they have a god? Can we guess what it was?
- Do people worship the Sun and the Moon today?

Using artefacts

Encourage the pupils to return to their artefacts and the things that they found out about them. Is there any evidence here for what Bronze Age people believed in? Where were the artefacts found? Some will be associated with burial and cremations.

Science and Belief: Solstice and Equinox

Using the resources in the **Further Resources** section of the resource, pupils will create a poster that explains:

- What is a **Solstice** and when does it happen?
- What is an **Equinox** and when does it happen?

Exploring rituals

Many recumbent stone circles have a high quantity of quartzite stones of many colours but predominantly white. There are such high quantities on some sites that the theory is that they were brought there by people for a special purpose. Certainly the **quartz** would have made the site stand out and twinkled in moonlight, Sun light and fire light.

Here are a few activities that might hint at why quartz was important to ancient people and why they might have used it.

a. Explain what quartz is, take the class outside and see if you can gather some. Bring it back to class and clean it. Each pupil should make a list of adjectives to describe their piece of quartz.

b. If you have black-out blinds, close them. If you don't have black-out blinds a heavy piece of black felt or a dark cupboard will do. You will need some fairly large pieces of quartz for this task and a torch. The use of protective glasses or lab specs is advisable. The pupils who are brave enough to try this can but they must explain what they see to the class. The first experiment involves the pupil striking the quartz together. They should see brilliant little sparks. The second experiment asks the pupils to shine a torch on to the quartz. What happens? What can the pupils see (colours? reflections?).

It is worthwhile testing the quartz you have selected first to make sure that they give the desired results. Discuss how this might have been used by ancient people. Can they imagine how and when? Discuss the other qualities of quartz as a class.

It is also a good time to discuss if there is anything that they have learned so far that can go into their **L** column – alongside any new questions?

Ceremony

Create a class drama based on how the pupils think that recumbent stone circles might have been used at certain times of the year. The class could use elements of their previous learning and some of their earlier activities to contribute to the script. This could be rehearsed in class and filmed on location.

Exploring our beliefs: class discussion

This is a good time to explore beliefs in the class. Do we still believe that the Sun and Moon are gods? This may illicit some interesting responses in a multicultural classroom.

Does anyone in the class celebrate festivals associated with lunar cycles – for example, Sri Lankan Buddhists have a holiday on every new moon. How do the Jewish and Christian faiths respond to the Sun and the Moon?

> **'God made two great lights – the greater light to govern the day and the lesser light to govern the night.'**

Genesis 1:16, *The Bible*, **Old Testament**

Nine Stanes

© ACAS

Finish your mini KWL table for this section 'what did Bronze Age people believe?' by completing the **L** column. What do we think we know? Return to the overall KWL table 'What are Recumbent Stone Circles?' You can use the individual tables to help the class too. This is a good point to look at the questions that you have been able to answer so far. Everything that the pupils feel they have learned should go into the L column. Have they been able to answer all their questions? Discuss why some questions have not been answered. The class can discuss how they might solve these puzzles and discuss if they have any new questions to add to their table. Is there any reason why some of their questions might never be answered successfully?

Exploring Recumbent Stone Circles

The activities in the following section are generic and therefore can be undertaken in every suggested location. Because there are subtle differences in terms of the number of stones in position it is important that staff decide on adaptations to the activities when they conduct their exploratory visits.

Recumbent stone circles are excellent out door classrooms and provide a stage for creativity and challenge. The activities assume that some or all of the preliminary classroom activities have been undertaken.

It is recommended that a workbook is created for your trip so that pupils can easily record observations. Whether in their visit workbook or in their jotters it is important that the class has access to a detailed description of their stone circle which includes dimensions and details of missing stones.

Tillyfourie or the Whitehill Recumbent Stone Circle is found in Bogmore Wood, which is approximately 3 km SE of the village of Monymusk. There is a sign posted track from Pitfichie Forest Car Park. It is situated on an east facing terrace and has 13 stones. Only the recumbent, the west flanker and one of the others stones are still standing upright.

The pupils will be learning a lot about the structure and mathematics of the stone circle and how it might relate to the passing of the day and night. They will be doing activities and solving problems that Bronze Age people would have to done to achieve their goals. As a group, discuss what these activities have taught us about Bronze Age peoples and the Solar System. Could Bronze Age people see these constellations too? How could they tell the time of day without watches? How do we think that they measured things?

We understand so much more about what we can see than they would; do the class understand why that is and can they think what Bronze Age people might have thought and felt looking at their night and day without the benefit of Modern Science. They wouldn't understand that the Earth was turning and that we were travelling around the Sun!

People, Past, Events and Societies: the people of the Bronze Age Scotland

Observing the landscape

On arrival it is important to encourage pupils to explore. Ask them to think about what they can see from the recumbent stone circle? What can they see in the circle? Is it a high spot? Could the site be seen from miles around? What can they see from the site? If they look at out of the circle, over the recumbent, is there anything to see framed between the flankers? The pupils can write their own observations and impressions of the site in their notes.

Exploring measurement, shapes and angles

Pupils should make their own map of the recumbent stone circle. There are lots of formal ways of doing this (such as using a plane table or conducting an off-set survey) but at this stage it can be a sketch and a scale drawing can be made back in class or a survey completed on another visit. The pupils sketch should include all of the visible the stones and should note the heights of the stones, the spacing and the dimensions of the circle.

Pupils should chose a specific stone to draw and record in their notes. Does it have any interesting features, what colour is it? How big is it? Which position is it in within the circle? (is it in the North, South, South West?). They should take photos to help them remember.

Several further activities can be used to explore measurement, shapes and angles in the past:

a. We know that Bronze Age man did not have metre wheels and measuring tapes like ours. How did they do it?

1. Checking their method: measure the total length across the base of the outside of the recumbent and flankers from the outside of the left hand stone to the outside of the right hand stone. Write down the result.
2. Now measure between all the stones that are standing. Take the measurements from the outside of the circle and from the far left of one stone to the far right of the next. Write the results down.
3. Are there any consistent results? Is the distance between the stones the same or is it really random? Is one side more regular than the other? If the measurements are reasonably regular, what does that tell us about Bronze Age people and measuring things?

b. How could they have achieved any regular spacing without a measuring tape? Ask the pupils if there is something that they know the height or length of? The pupils should come up with their own solution to tape free measuring? They should check if their theory works by testing their improvised measurements against a measurement made with a tape? The class should take photographs to record their experiments and their results they could also write an explanation of their solution.

c. Check the diameter of the circle. The pupils should have a description of the circle to work from.

1. They must decide how to locate the centre of the circle effectively.
2. They must measure the diameter of the circle using the best measuring equipment available. This measurement must be recorded.
3. They must work out the radius of the circle.
4. Using the central point, each other and a long rope or tape they must work out how to decide if their recumbent stone circle is a true circle and if not, they must explain how they came to their decision.
5. Once the centre line has been established using ropes and pupils can be asked to demonstrate different kinds of angles: acute, reflexive, obtuse and a full rotation by showing them on the ground and filling them full of classmates making a recumbent stone circle pizza. This extended task can also be linked to Activity (d) to provide more in depth learning about the degrees on a compass and the degrees in a circle.

d. Degrees of change. For this task each pupil should have their own compass rose (a detailed one is preferable) on a white A4 back ground with sufficient space to draw around the outside. They must have a pencil, ruler, rubber, protractor and a compass to complete this task successfully. You will have to mark the centre of the stone circle with a football marker. The pupils must create a plan of their recumbent stone circle which accurately plots in each stone with the distance of the stone from the central point of the circle.

1. Using the compass each pupil will start from the centre and chose a stone to draw in first, this stone will be A.
2. They will check the bearing (direction) of the stone from the central point and draw a straight line on their compass rose from the centre out to the edge of the paper, in that direction.
3. The will measure the distance from the centre point of the circle to the inner face of their stone and record this measurement on their straight line on the diagram.
4. Measure the height of the stone
5. Complete a rough sketch recording the shape of the stone.
6. The pupils will repeat steps 1 to 5 for all the other stones including the recumbent. All the stones must be given a letter.

As an extension task or homework, you could set the following questions (these are examples and will vary from circle to circle):

- Which stone is in the North East of the circle?
- Which stone is 45° W from the recumbent stone?
- Which stone is at an angle of 180° from the recumbent?

The Missing Stones challenge

Each of the recumbent stone circles has a very accurate description that you can download from **Canmore** or the **Aberdeenshire Sites and Monuments Record**. An example of a wide game that you can base on this description is given below based on the description of Tomnaverie. This can be adapted for the description and any other observations that you have made for your site.

Make a treasure hunt style check list for your stone circle. To add a little more challenge, you could place one or several caches (air tight boxes) somewhere on site (no digging or moving stones please!) from which they can claim prizes to prove they have located them. The caches could also contain additional challenges or pieces of information about the circle itself and a piece of paper that they can record their visit. This is a comprehension and orientation task and could be quite challenging.

Pupils should work in pairs and for each clue they should take a photograph of their result. They will need cameras, questions, pencils and a compass and a detailed description of their stone circle. Example questions based on Tomnaverie might be:

1. Count the number of upright stones in the stone circle. How many are there?
2. Find the gaps for the missing stones and replace them with your partner. Take a photograph of your partner standing in the gap.
3. Stone (1) is missing in the West North West of the circle.
4. Stone (2) is missing from the North West.
5. Take a photograph of yourself next to the Stone that was found in the bottom of the quarry. It has been re-erected in the circle.
6. Treasure Hunt: go 12 m directly to the North East from the recumbent stone circle. Turn to the South. Count three stones to the East of where you are standing. Go due West from this stone. Hunt around at the base to find the treasure.

Please ensure that all caches that you have placed on site and any litter are removed from the site at the end of your visit.

The Planet Earth and our solar system

Observing the skyscape

A number of outdoor activities can be used to observe and explore the changing positions of the Sun and the Moon in the sky.

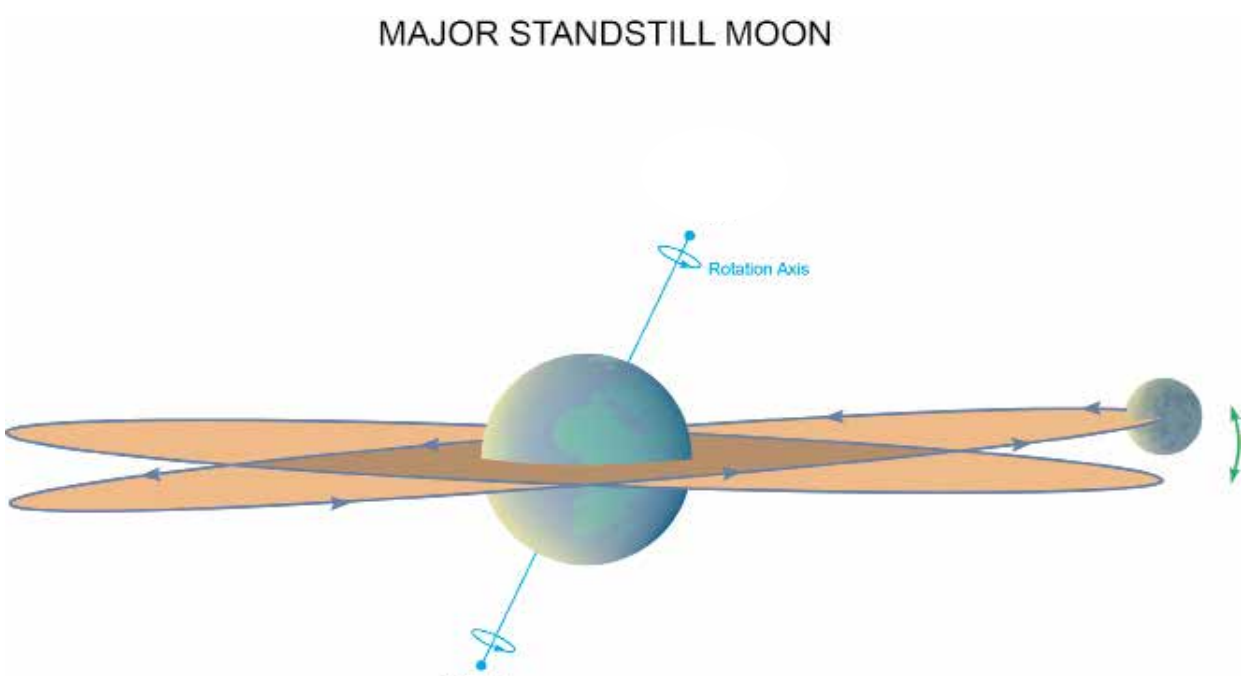
The Shadow Game: telling the time without the Sun

This game is rather weather dependent. It is also important that phones and watches are hidden in bags or tucked up sleeves. No cheating. Pupils have to decide where South is; how are they going to decide? Are their shadows long or short? Is it before mid-day, close to mid-day or after mid-day, can they explain why? This can be recorded in a visit notebook. Using class cameras or the cameras on their phones pupils can stand in pairs and take photos of their shadows. Are their shadows the same length? Can they decide if their shadows will be the same length all the year round, if not why not?

Where is the Sun in the sky?

The pupils will record the date, the time and the Sun's position in the sky (is it in the North? South? South West?). Where do they think it rose and set on the circle? Can they explain their thinking? Is the Sun High or Low in the Sky? Can they explain why? They will have to use prior knowledge that links the time of year of their visit to long and short days. Has the Moon come up yet? Can they see it? If not, where would they expect it to rise at this time of year and why? The pupils could use large cardboard models of the Sun and the Moon to create a short video of how they imagine the Sun and Moon might rise and set relative to their chosen recumbent stone circle. They could take winter and summer clothes with them to show when it is a winter solstice and a summer solstice.

On some days, it might be possible to see the Moon in the sky too? It is important for the pupils to note its position in the sky, the time of day and its shape. Can they explain its presence? The Moon doesn't shine (it isn't **luminous**) and what they can see is due to an **albedo**, or the reflective power of a celestial body. There is a good activity in the **SCRAN Pathfinder Package Recumbent Stone Circles** that can be explored in class as a stand-alone task or as part of the earlier Earth and Moon Challenge.



A Solstice Visit

In some years it might be possible to plan a Sunrise or Sunset visit to your site at with either the Winter or Summer solstice. Pupils could record the date and time of the visit, they could record when they expected the Sun to set and when it did finally vanish and where in the sky it was when it set. Looking at the wider site, did the Sun set over a particular stone? Were there interesting shadows cast into the circle? It would be important to have the ability to film and take still shots to record their observations.

Viewing the night sky

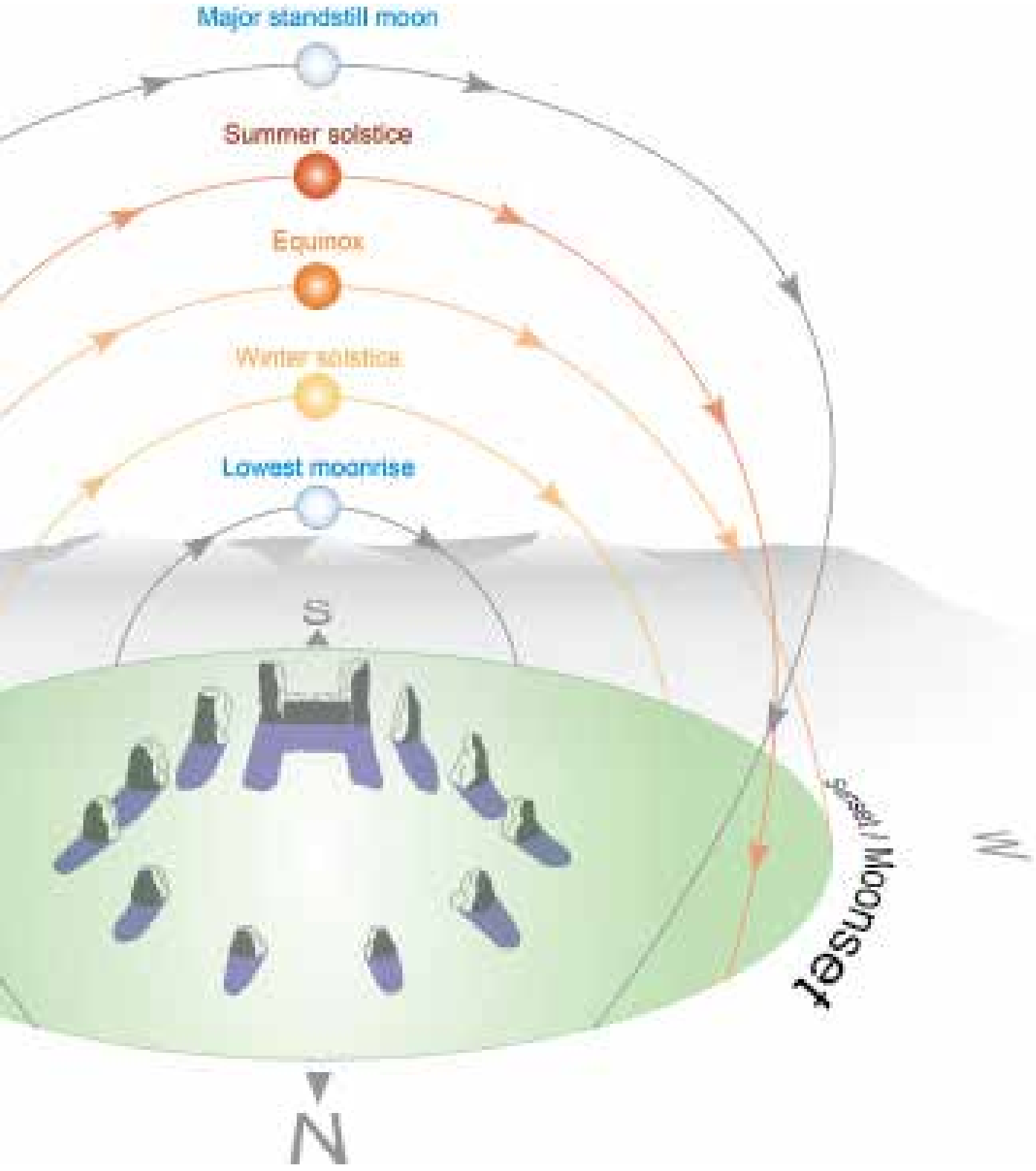
It might be possible to visit your site after dark. Wrap up warm though! You do not need a telescope for this. The pupils will take about 15 minutes to adjust to the dark. Cover any torches with red paper or plastic to prevent the irises from closing. As they stay out longer, their eyes will get better at seeing in the dark. This is an important experience. Bronze Age man did not have telescopes, night sights or binoculars!

British astronomy magazines like **Astronomy Now** will give you a star chart for the time of year of your visit, so you know what to expect. It is useful to give the pupils an illustrated tick list of all the major constellations that they might be able to see. They can decide what they can see and tick then off.

Additional tasks would be to use the recumbent stone circle like a large compass. You will have to know the position of the recumbent on your chosen site (South, South West, South, South East?). Using the recumbent stone circle as a compass can the pupils state where in the sky which heavenly body is (in the North, South?)

As the Earth spins on its axis, day becomes night around the globe, depending upon what part of our planet is facing the sun. And because our planet's axis is tilted, as the Earth orbits the sun over the course of the year, the sun at midday moves from very high in the sky (at the summer solstice) to very low in the sky (at the winter solstice).

Similarly, as the moon orbits the earth every lunar month, the plane of its orbit wobbles very slowly – and every 18.6 years it reaches its maximum. This is called the major standstill moon – over the course of just two weeks the course of the moon moves from its highest point in the sky to its lowest. The course of the moon changes from rising and setting from its northernmost points on the horizon (travelling higher in the sky than the sun) to rising and setting from its southernmost points on the horizon (travelling lower in the sky than the sun).


Major standstill moon
Summer solstice
Equinox
Winter solstice
Lowest moonrise
S
N
W
Major standstill moonset

Sharing Recumbent Stone Circles

When pupils have an enriching school trip or have studied an exciting topic, they benefit enormously from the opportunity to discuss their experiences and share what they have learned from others. This may involve speaking in front of an audience or using different forms of media to share their story with others. Engaging with others tests their learning and provided a huge emotional as well as academic challenge. This section includes activities that can help to pull together whole class learning on the topic of recumbent stone circles.
The suggested activities will also encourage pupils to engage with their wider school and community audience.

Collaborative learning task: What are Recumbent Stone Circles?

The class should go back to their original question. Individually, the pupils should look at their **'What is a Recumbent Stone Circle?'** KWL table. In the L column they should fill in all the things that they think that they have learned about recumbent stone circles. In pairs, pupils can compare their learning and add to their table by sharing their knowledge. This is a good time to encourage them to check accuracy and rate each other's answers. In a group, Pupils can make a poster pulling together all their learning with examples. A spokesperson should be selected for each group and on a SmartBoard or pre-prepared class KWL chart, each group can share their knowledge with the whole class. Things to discuss include accuracy, the quality of examples of learning and whether or not they still had questions that they have not been able to answer. Pupils could at this stage decide which part of the project was the most successful for them e.g. a piece of creative writing, a performance, some art work or their field work and select that for assessment.

Timeline

A class timeline is a really useful thing to create to help pupils understand the sequence in which major earth and human events have occurred. Adding the things that they have learned about to the timeline will help with perspective and also help them to understand e.g. Standstill Moons can occur, re-occur and be anticipated.

Drama re-enactments

Pupils can have a location day on their chosen recumbent stone circle in order to recreate their ceremony re-enactments or any dramas that they have written. As some sites are incomplete, some pupils could be the 'missing' stones. The class can use their site descriptions and their on-site observations to decide where to place the 'stones'. Allocate pupils to be film crew, director and site photographer to record the dramas.

Recumbent Stone Circles film projects

Pupils could use dramas, science learning and footage from their visit to create their own film. They should use a proper narration and select a sound track. The class could choose the best footage to use and decide on a running order. Windows Movie Maker or Serif Movie Maker are excellent for combining video, audio and stills to ensure that lots of aspects of the project can be featured. They are also very straight forward to learn to use. Aberdeenshire Council's Film and Media Unit provide excellent support and workshops for classes planning this kind of presentation.

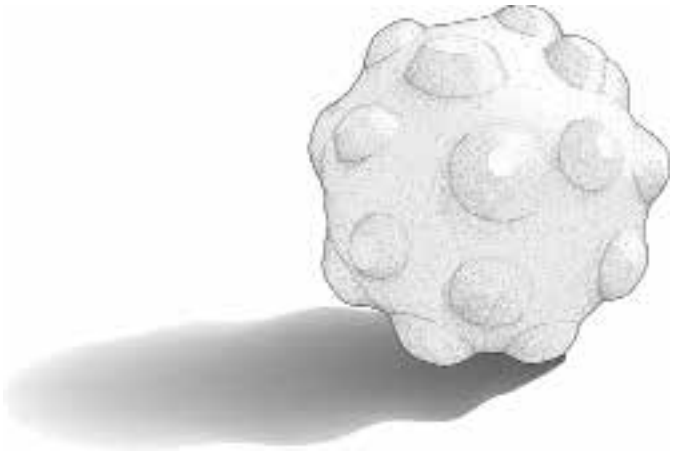
A Recumbent Stone Circle exhibition

The work the class generates could be curated into an exhibition for their school or community space e.g. the local library. Pupils will have gathered the data and the knowledge necessary to recreate a scale model of their whole circle or perhaps and actual size model of their recumbent stone and flankers. They will have their curated replicas to display and they will be able to create a wall display to show the relationship and recumbent stone circles and the skyscape and landscape.

Aberdeen University Museums provide excellent workshops that help pupils explore the messages and meaning that can be shared through displays of research and objects. This can give the pupils an opportunity to handle specific museum objects related to their project. Alternatively, the pupils can hold a 'Recumbent Stone Circle' or 'The Earth and the Moon' assembly to share what they have learned with their peers.

Sharing via Google Earth or the school website

Many sites allow pupils to add information directly. Google Earth is a good example of where a class could share their wider learning with a much wider audience. It might be possible for your class to create a 'Recumbent Stone Circle' webpage to cover all aspects of the learning that is undertaken and to help support other classes over time.



Word Bank

Word	Definition
Albedo	This is the name for the reflective power of a celestial object The Moon is a celestial object
Aerial Photography	Photos taken from above either from an aeroplane, micro-lite or kite.
Beakers	Beakers are pottery vessels associated with a neo-Bronze age culture called 'The Beaker People'. The people were named for their distinctively designed and decorated pottery. They are associated with cist burials in Aberdeenshire.
Bronze Age	The period in prehistory characterised by the creation and use of Bronze Objects
Carved Stone Ball	These are small stone spheres that have been decorated with a series of evenly spaced bosses or knobs. These details have been carved in relief into their surface. They date to the late Neolithic or early Bronze Age, between around 3200 and 1500 BC. They are made of various stones ranging from sandstone to granite. They are found in the most concentrated numbers in the North East of Scotland and their use is uncertain.
Consumption Dykes	The name given to the huge dykes (some big enough to carry tracks) that were created when farm land was enclosed in the AD 1700s. Initially as pasture was cleared the boulders and stones that accumulated were formed into enormous dykes. Some recumbent stones circles suffered this fate.
Cupmarks	Mysterious, small round hollows found carved on bedrock, boulders and some standing stones in Scotland and northern England. They have been found on some of the stones used in recumbent stone circles. They are sometimes associated with a ring mark too and there may be a link between those cupmarks found on recumbent stone circles and the Major Standing Moon.
Druids	Originally an Iron Age priesthood referred to by Julius Caesar and other Roman writers. Today, druids practice a modern nature-based religion.
Ecliptic	The direction of the Earth's solar orbit. So called because Lunar and Solar eclipses only occur when the Moon crosses the ecliptic.
Elliptic	As defined by the German astronomer, Kepler. In layman's terms, an oval shape but it generally refers to the orbit of planets.
Equinox	One of the two periods in the year when the days and nights are equal in length all over the Earth, owing to the Sun's crossing the equator. Hence, the precise moment at which the Sun crosses the equator.
Equator	The band around the centre of the Earth's sphere whose plane is perpendicular to the axis of the Earth. It is therefore equidistant from the North and South poles.

Word	Definition
Glacial Erratics	Large stones moved and dumped during the retreat of a glacier (a dense moving body of ice)
Luminous	Full of light, bright
Lunar	Of the Moon
National Grid Reference (NGR)	The National Grid is the map reference system used on all Ordnance Survey maps to identify the position of any feature anywhere in the UK. An NGR is a set of letters and numbers that refers to a specific location on the map.
Neolithic	Characterised by the building of monumental stone structures and the introduction of settled farming communities. Between 5000 – 2500 BC
Orbit	An orbit is the gravitationally curved path of an object around a point in space.
Ordnance Survey (OS)	The national mapping agency for Great Britain. Its roots are military, ordnance relates to military supplies. It was set up in the turmoil of 18th century Britain and Europe to map the geography of Scotland and the coast lines of England, protecting both from Scottish rebellion and attack from the French.
Pagans	Originally a term for those who lived in the countryside, 'pagan' came to be associated with those who were not Christians. Today, pagans practice a modern Nature-based religion.
Pendulum	A pendulum is a weight suspended from a pivot so that it can swing freely. If it is moved to the side it will always return to its resting (starting position) due to gravitational forces.
Phases	The view of the Moon from Earth according to the amount of light that falls on it
Poles	The axis of rotation of the Earth running North to South
Quartz	The most common mineral on Earth. Often a white rock but can come in many different colours. It exists in many different forms.
Recumbent	Lying down
Scale	A measurement of proportion
Solar	Of the Sun
Solstice	An event that occurs twice (winter or 'Yule' and Summer or 'Litha') a year as the Sun reaches the highest and lowest point in the sky.

Further Resources

Publications

People, past events and societies: The people of the Bronze Age Scotland

Farmers, Temples and Tombs

Gordon Barclay

Birlinn/Historic Scotland (2005)

A well written and interesting introduction to the Neolithic and early Bronze Age in Scotland. This is a straight forward overview of a complex period with useful graphics and photographs.

Suitable for: staff and older pupils

The Whitestone Stories

John R Barrett

iUniverse Inc (2007)

An entertaining and fanciful imagining of the lives of Scotland's early peoples which touches of lives, livelihood and beliefs. Can be used a creative introduction to the period which can otherwise be very abstract for young people.

Suitable for: staff and older pupils

The Boy with the Bronze Axe

Kathleen Fidler

Kelpies (2012)

ISBN-13: 978-0863158827

A children's novel set in the last days of Skara Brae.

Suitable for: pupils

The Folklore of the Aberdeenshire Circles and Standing Stones

James Ritchie F.E.I.S.

http://archaeologydataservice.ac.uk/

An interesting academic article looking at the mythology surrounding prehistoric sites in Aberdeenshire.

Suitable for: staff only

Warrior Scarlet

Rosemary Sutcliff

Farrar, Straus & Giroux Inc (1974)

ISBN-13: 978-0374482442

A novel of the Bronze Age. In Bronze Age Britain, young Drem must overcome his disability-a withered arm-if he is to prove his manhood and become a warrior.

Suitable for: staff and older pupils

The Wolf King

Ann Turnbull

Back to Front (2008)

ISBN-13: 978-1904529408

A young bronze-age boy sets out to kill the Wolf King, a mysterious figure who controls a wolf pack that has been raiding the local villages.

Suitable for: staff and older pupils

Great Crowns of Stone

Adam Welfare

RCAHMS (2011)

The definitive text on the recumbent stone circles of Scotland which provides a comprehensive analysis of the sites. Beautifully illustrated, the text is both completely readable and comprehensible to expert and enthusiast alike.

Suitable for: staff only

The Stone Circle Trail: A guide to ten of the best stone circles in Aberdeenshire

Aberdeenshire Council Archaeology Service (2014)

An excellent guide to 10 recumbent stone circles in Aberdeenshire, with good pictures, maps and descriptions.

Suitable for: staff and pupils

Planet Earth and our solar system

Nightwatch: A practical guide to viewing the Universe, 5th Edition

Terence Dickinson

A & C Black Publishers Ltd (2006)

This is the most comprehensive and accessible beginners guide to star gazing. Tim O'Brien is enthusiastic and readable and the lay out is clear and well-illustrated.

Suitable for: Staff and pupils

The Solar System

Usbourne Beginners

ISBN 978 -1—4095-1424-4

A very well illustrated basic introduction to our solar system and its key elements which will support the learning of those requiring more supported learning.

Suitable for: Pupils

Solar System

Janice VanCleave

John Wiley & Sons Inc (2000)

Packed full of useful illustrated experiments relating to the Solar System.
The experiments can be carried out by pupils individually or as a whole class.

Suitable for: Staff and Pupils

Astronomy Now

UK Magazine

This publication provides monthly skycharts for observations which are useful for
planning trips.

Suitable for: Staff

Maths in the Historic Landscape: exploring measurement, shapes and angles

Using Maths Survival Skills (Using Maths 2)

Hillary Knoll

Tick Tock (2007)

Some good practical guides to teaching compass skills and using angles to help young people to explore their environment.

Suitable for: Staff and Pupils

RME: Exploring and understanding how beliefs develop and recognising the diversity of beliefs in society, then and now

The Ancient Celtic Festivals: And how we celebrate them today

Clare Walker Leslie and Frank E. Grace

Inner Traditions International (2008)

This is a very appealing introduction to the whole topic of pre-christian festivals as we understand them with a very strong and well-illustrated introduction to the importance of being able to track time passing to ancient people. It also covers modern interpretations of

the key Equinox and Solstice festivals in the year and links them to more familiar Christian festivals showing our continuing need to mark the passing of time and the lengthening and shortening of the days.

Suitable for: Staff and Pupils

Websites

Aberdeen Astronomical Society

www.aberdeenastro.org.uk

Aberdeen Astronomical Society

Local information about the night sky and good contacts for learning.

Suitable for: Staff

Aberdeenshire Council Sites and Monument Records (Aberdeenshire SMR)

www.aberdeenshire.gov.uk/smrpub

The online database of archaeological and historic sites and monuments for Aberdeenshire, Angus and Moray. This resource includes interactive maps, images, and is searchable by site name, type, period.

Suitable for: Staff and Pupils

Archaeology Scotland

www.archaeologyscotland.org.uk/learning

Excellent help and advice about using archaeology in the curriculum.

Downloadable activities and resources to hire.

Loan boxes (delivery charges apply out with the Central Belt)

Suitable for: Staff

The BBC website

www.bbc.co.uk/programmes/p00jkgmd

www.bbc.co.uk/history/interactive/timelines/treasure/index_embed.shtml

Comprehensive interactive study aids for staff and pupils throughout the site in a number of different areas:

An introduction to Interpretation

Time lines

www.bbc.co.uk/education/clips/ztwykqt

A video of a practical demonstration of Day and Night

www.bbc.co.uk/education/clips/zy4pr82

A short video: Why the Moon Changes Shape

www.bbc.co.uk/education/clips/zrdpvcw

Looking at all sorts of different angles using Pizza.

www.bbc.co.uk/education/clips/zb96sbk

Mr Measure does compass and map reading; a short but practical guide for new compass users

www.bbc.co.uk/schools/digger/7_9entry/7_9.shtml

A rewarding set of on-line extension tasks for checking learning on-line maths/science for primary covering stars and maps

Suitable for: Staff and Pupils

The Canmore database

canmore.rcahms.gov.uk

The Royal Commission for Ancient and Historic Monuments Scotland's sites and monuments on-line search engine, with detailed studies of sites, illustrations and interactive OS maps.

Suitable for: Staff and Pupils

Cardinalpoints

www.cardinalpoints.co.uk

A Stone Circle Based orientation exercise. It explains compass settings very well.

Suitable for: Staff and Pupils

Education Scotland

www.educationscotland.gov.uk

Education Scotland has pages to support learning for the Solstice and Equinox and also in outdoor learning and climate change.

www.educationscotland.gov.uk/scotlandshistory/earlypeople/index.asp

The Scotland's History has an Early People's Section with great 'Bronze Age' links, particularly to the National Museums Scotland collection.

Suitable for: Staff and Pupils

Historic Scotland

www.historic-scotland.gov.uk

For information about sites and resources.

Suitable for: Staff

Manchester University Childrenís Site

www.childrenSuniversity.manchester.ac.uk/interactives/science/earthandbeyond

Linked to the University's Astronomy Department this site has wonderful learning materials for the solar system. There are great orbit graphics and really clear explanations especially for moon phases & there are on-line tests to check learning at each stage. For use as a whole class on smart board or interactive Whiteboard or by individual learners.

Suitable for: Staff and Pupils

Ordnance Survey Mapzone

mapzone.ordnancesurvey.co.uk

Excellent Resources to support learning in teaching resources and clear activities to introduce maps and map reading to 7 – 16 year olds

www.ordnancesurvey.co.uk/mapzone/Tools

What is a National Grid Reference – a straight forward explanation

Suitable for: Staff and Pupils

Maths is Fun

mapzone.ordnancesurvey.co.uk

www.mathsisfun.com/definitions/scale-drawing.html

Teaching resources and clear activities to introduce maps and map reading to 7–16 year olds:

Excellent graphic explaining scale drawing testing understanding of scale.

The GAMES ZONE has interesting and entertaining extension tasks.

Suitable for: Staff and Pupils

National Library of Scotland/Archaeology Scotland

digital.nls.uk/mapping-history

An excellent introduction to maps and using the landscape and historic maps to investigate historic topics.

Suitable for: Staff and Pupils

Orkneyjar

www.orkneyjar.com/folklore/giants/brognt.htm

An excellent site for the history of Orkney which details the vivid story of the Dancing Giants of Brodgar.

Suitable for: Staff and Pupils

SCRAN

www.scran.ac.uk

For the Recumbent Stone Circles Pathfinder Pack and other learning.

Suitable for: Staff and Pupils

www.youtube.com/watch?v=z8aBZZnv6y8

A strong info-graphic of the planets of the Solar Systems, their positions and their orbit.

Suitable for: Staff and Pupils

www.coloringpict.com/wp-content/uploads/2014/02/Free-Printable-Solar-System-Coloring-Pages.gif

A colour in Solar System

Suitable for: Pupils

www.iboard.co.uk/activity/Flight-Rescue-Compass-Directions-420

A very good game for teaching about compass direction

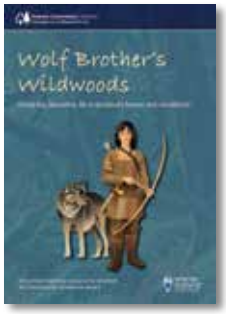
Suitable for: Pupils

resources.woodlands-junior.kent.sch.uk/time/equinox.html

An excellent explanation of Equinox and Solstice

Suitable for: Staff and Pupils

Teachersí Resources from Forestry Commission Scotland Forest Education Iniative



Wolf Brotherís Wildwoods: imagining Mesolithic life in Scotlandís forests and woodlands

An outdoor learning resource for teachers of Curriculum for Excellence Level 2

This resource has been produced to support teachers who are reading the novel Wolf Brother by Michelle Paver with their classes. Set in Mesolithic times, the novel is not only an exciting read but also reveals much about the lives of hunter-gatherers who lived in Scotland 10,000 years ago. Much of the action is set within the forests of an unspecified northern European country. The characters are utterly at home in this environment, and know how to make the most of the resources the forest can offer. Understanding the woodland is therefore the key to understanding Mesolithic life. The activities are most suitable for pupils who are working at Curriculum for Excellence Level 2, but may be adapted for pupils older or younger. Activities are designed to be carried out by a non-specialist classroom teacher.

This resource aims to:

- Bring the Mesolithic period to life through a series of woodland and classroom learning activities;
- Encourage pupils and teachers to enjoy spending time in their local woodland; and
- Support teachers in delivering Curriculum for Excellence outcomes through outdoor learning.

Trees and the Scottish Enlightenment

A learning resource for teachers of Curriculum for Excellence P6/7 S1/2

Scotland is the home of modern Forestry. Forests here are managed now very differently to how woodlands were managed in the past. This resource tells the story of how Scottish forestry developed during a particular historical time period, known as the Enlightenment and in a particular sort of place, the Scottish Country Estate. The Enlightenment happened throughout Europe, especially in England, Holland, France and Germany but Scotland played an important part despite being smaller, poorer and, at times, at civil war. It wasn't a single event, rather it was a complicated series of developments that happened over a long time, starting in the 17th century and continuing through into the 19th century.

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Forestry Commission Scotland
Coimisean na Coillteareachd Alba

Forestry Commission Scotland serves as the forestry directorate of the Scottish Government and is responsible to Scottish Ministers

Contact

Forestry Commission Scotland
National Office
Silvan House
231 Corstorphine Road
Edinburgh
EH12 7AT
Tel: 0300 067 5000
Fax: 0300 067 3003
E-mail: fcscotland@forestry.gsi.gov.uk
Web: www.forestry.gov.uk/scotland

If you need this publication in an alternative format, for example, in large print or in another language, please contact:

The Diversity Team
Forestry Commission
Silvan House
231 Corstorphine Road
Edinburgh
EH12 7AT

Tel: 0300 067 5046
E-mail: diversity@forestry.gsi.gov.uk

Published by - Forestry Commission Scotland - March 2015
ISBN - 978 0 85538 922 2
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All photography from Forestry Commission Picture Library unless otherwise stated
Designed by Ian Kirkwood Design for Design and Interpretative Services, Forestry Commission Scotland, Edinburgh
FCMS130/FC-S(DIS)/MLG/500/MAR15