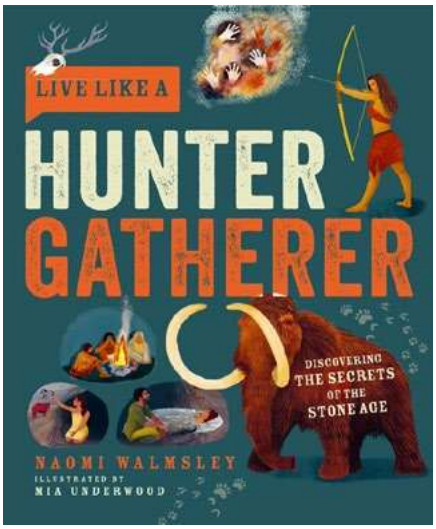
LIVE LIKE A HUNTER GATHERER

Pupil activity sheet

CENTRE for INDUSTRY EDUCATION COLLABORATION

This is one of a series of six activity sheets to use alongside the books which have been shortlisted for the Royal Society Young People's Book Prize 2023.



"Living in the Stone Age was a constant battle for survival. Where would your next meal come from? Was your next meal also coming to eat you too?"

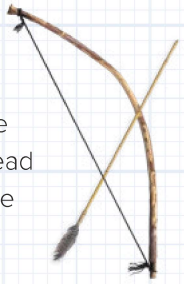
Live like a Hunter Gatherer

Be inspired by the amazing skills that early humans needed to survive in a Stone Age world.

Mathematics challenge

Finding the best bow and arrow

Did you know that scientists need to use maths when carrying out their investigations? They make measurements of their observations, and these measurements help them explain how much impact a certain change has had.



For example, if you wanted to investigate the best way to use a bow and arrow you would need to carefully measure every change that you make (perhaps the weight of the head of the arrow) and you would also need to carefully measure everything that you wanted to keep the same (such as the length of the arrow or the angle from which it was fired). You would then need to accurately measure and record the distance the arrow travelled each time. If you were changing the weight of the arrowhead you would need to take several measurements for each weight that you were comparing and then work out the average (mean) of all the measurements. This is because the arrow won't travel exactly the same distance each time and an average gives a better idea of the impact of the changes that you have made.

To carry out an investigation like this, start by following the instructions on pages 26 – 27 to make a bow and arrow. What changes will you test? How will you record the changes? How will you record your results?

Just imagine...

A world before any of our familiar technologies existed. The only way to travel would be by walking. The only way to talk to someone would be by being next to them and speaking or signalling. There would be nothing made of metal, plastic, or paper. Everything that you have would be made by you or your family; if you could not make it, you could not have it.

How would you stay safe? How would you keep warm? What would you eat?

The text of this work is licensed under the terms of the Creative Commons Attribution License which permits distribution, provided the original author and source are credited. Modification or commercial use is not permitted. The license is available at: **creativecommons.org/licenses/by-nc-nd/4.0** Images are not covered by this license. © Centre for Industry Education Collaboration **www.york.ac.uk/ciec** Issued: October 2023. DES8681_6

LIVE LIKE A HUNTER GATHERER

Pupil activity sheet (continued)

Making a shelter

One of the first things that you would need to do if you were stranded away from all of the things that we use every day would be to make a shelter. Have a go at building something that would be big enough to shelter you from the sun and rain. It will need to be strong enough to withstand a strong wind. Page 14 shows how you could build a shelter if you were in woodland. However, you will need to use whatever materials you can find in your environment, just as early hunter gatherers would have done. Perhaps you can start by looking for useful materials in the PE cupboard such as hoops, cones and parachutes. Remember to test your finished shelter to make sure that it is watertight!

© iStock.com / carstenbrandt.

© Alamy / IFTN.

Science adventurer

Thor Heyerdahl was born over 100 years ago. As a child he loved science and even created his own small museum at home. He studied science at university and became interested in how early humans were able to travel around the world. He thought that it would have been possible for stone age people to travel from South America to Polynesia. To test his ideas Thor built a boat which he called *Kon-Tiki* out of materials and technologies that would have been available thousands of years ago. He safely made the journey. This was a big breakthrough in understanding about early humans, as before that most people did not believe that it would have been possible to travel such long distances.

© iStock.com / U Ozel © iStock.com / ipopba. © iStock.com / Jamie_Hall © iStock.com / Peter Carruthers

Knowing the land

Early hunter gatherers knew everything about their environment. They knew what animals lived there and which plants grew there. They knew which plants and animals were useful and which were dangerous.

Let's see how well you know your environment. On your way home from school look around to see how many different plants and animals you see (don't forget tiny plants growing in the cracks of pavements and different grasses). How many do you recognise or know anything about? You can use a book or the internet to find out things, but our ancient ancestors would have to remember everything and pass it on from generation to generation. Their survival depended on it!

Shadow stick

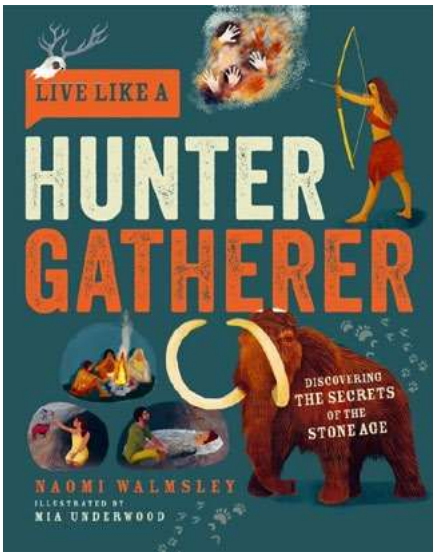
On page 32 there are instructions for finding north, south, east and west. On a sunny day follow the instructions and then use a compass to find out if the instructions work.

LIVE LIKE A HUNTER GATHERER

Teacher activity sheet

CENTRE *for* INDUSTRY EDUCATION COLLABORATION

This is one of a series of six activity sheets to use alongside the books which have been shortlisted for the Royal Society Young People's Book Prize 2023.



Each activity sheet contains ideas for experiments to do with your pupils, provides information relating to careers, and has a maths focus to help pupils understand the importance of mathematics education across the curriculum.

These investigations can be done as standalone activities or carried out as an in-depth sequence to develop pupils' disciplinary and substantive knowledge. The pupils' deeper learning and their science capital development would be more memorable if they were able to collaborate with a scientist such as an experimental archaeologist or paleontologist. If you work with a scientist in this way you could also consider applying for a Royal Society Partnership Grant of up to £3,000. For more information and to apply, visit: **royalsociety.org/partnership**

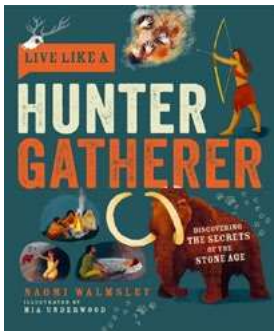
Fire in school

Although the idea can be daunting, you do not need specialist qualifications to light fires in school. However, you do need to take sensible precautions and know what you are doing. Scan the QR code to visit the CLEAPSS website for easy-to-follow guidance. Consider joining a safety organisation if your school is not already a member.

Stone Age science

Isaac Newton encapsulated the idea of successive generations of scientists building on the work of those who had gone before when he said, 'If I have seen further, it is by standing on the shoulders of giants'. Encourage pupils to think about the science and engineering that Stone Age people did, asking questions like; What investigations did stone age people carry out? What new technologies did they invent? What would the world be like if stone age people hadn't invented the technologies that they did?

The text of this work is licensed under the terms of the Creative Commons Attribution License which permits distribution, provided the original author and source are credited. Modification or commercial use is not permitted. The license is available at: **creativecommons.org/licenses/by-nc-nd/4.0** Images are not covered by this license. © Centre for Industry Education Collaboration **www.york.ac.uk/ciec** Issued: October 2023. DES8681_6



LIVE LIKE A HUNTER GATHERER

Teacher activity sheet (continued)

Waste not want not

Stone Age people understood the value of things that they had worked for, and nothing went to waste, as can be seen on pages 30 and 31 of the book. This is something that we could learn from today. Challenge pupils to consider how they could use something in their environment that would otherwise go to waste. This could include items that are usually thrown away or put out for recycling, or plants in the local environment.

Scan the QR code to access the free resource Potatoes to Plastics which shows one of the ways that modern day scientists are tackling the problems of waste in the modern world.

Fuel for the fire

Hunter gatherers' understanding of fire was vital to their survival. These hunters knew which were the best materials in their environment to use and the ideal fuels that light easily and burn for a long time without producing too much smoke.

Scan the QR code to access the free resource Renewables don't run out, which has ideas for investigations to compare the usefulness of different plant materials and oils as fuel. Once you have chosen the best oil, page 15 of the book has instructions for making a fat lamp.

Career links

- **Experimental archaeologist**
  A lot of the activities described in this book would be carried out by an experimental archaeologist. Experimental archaeologists test theories about how prehistoric people lived by living in the same conditions. For example, experimental archaeologists have made arrow heads using the same materials that would have been available in the stone age. You could watch the four-part series 'Surviving the Stone Age' featuring this book's author, to find out more about how experimental archaeologists work.
- **Paleo geneticists**
  test ancient DNA to find out about how humans are related to other hominids such as the ones described on page 5.
- **Archaeologists**
  find out about ancient people by studying the remains that they leave behind including buildings, artefacts and human remains.