Stonehenge

A Reading A–Z Level W Leveled Book
Word Count: 1,366

LEVELED BOOK • W

Stonehenge

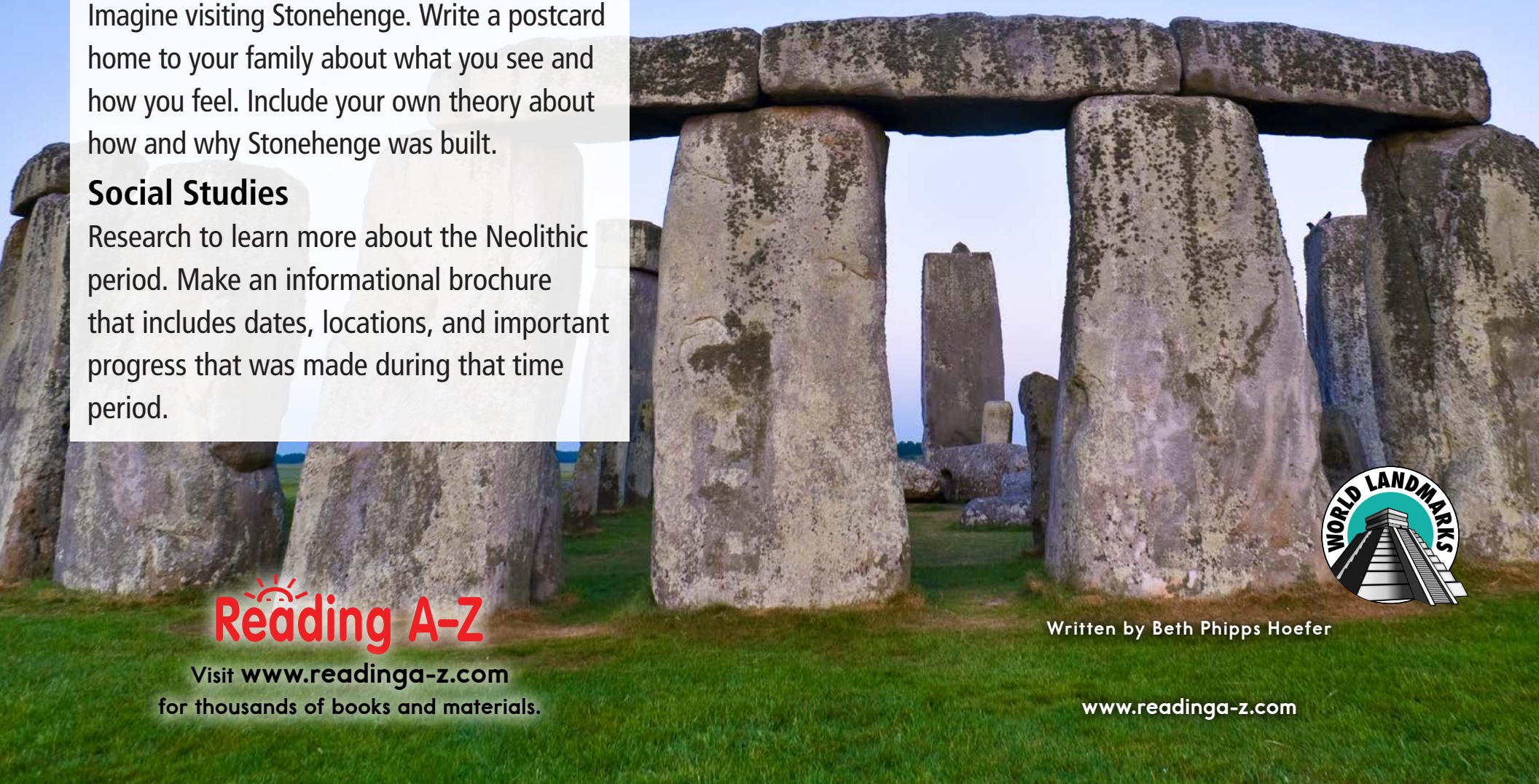
Connections

Writing

Imagine visiting Stonehenge. Write a postcard home to your family about what you see and how you feel. Include your own theory about how and why Stonehenge was built.

Social Studies

Research to learn more about the Neolithic period. Make an informational brochure that includes dates, locations, and important progress that was made during that time period.



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Focus Question

What makes Stonehenge a popular landmark, and why does it deserve special recognition and protection?

Words to Know

archaeologists	Neolithic
ceremonial	quarry
embankment	restorers
engineering	ritual
heritage	solstices
lintels	theories

Front and back cover: Some of the stones at Stonehenge still stand, but many have toppled over during its long history.

Title page: The circular shape of Stonehenge is much clearer when seen from above.

Page 3: Two children try to pull a heavy stone at Stonehenge's visitor center.

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Correlation

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Table of Contents

Almost nine hundred years ago, an English historian named Geoffrey of Monmouth told a story about a mythical wizard who told a king to build Stonehenge.

An Ancient Sacred Site

Giants, wizards, and space aliens have all been considered potential builders of Stonehenge. Once a person sees this monument made of giant stones in southern England, it's easy to understand why. The size and weight of these slabs make it seem impossible for human hands to have built Stonehenge without the power of modern machinery. The monument dates from a time before any written history, which adds to its mystery.

People have been studying Stonehenge for hundreds of years. In that time, **archaeologists** have developed scientific **theories** instead of supernatural explanations. They've excavated the site for clues about its history, creators, and possible purposes.

Their research has revealed that the monument is about five thousand years old—much older than originally thought. It was constructed during the **Neolithic** period, around 10,000 to 2500 BC. This was a time before the people living in the area invented the wheel or knew how to make metal tools and weapons. Archaeologists believe that the construction of Stonehenge began about 3000 BC. Generations of people continued working on it for more than a thousand years.

As archaeologists continue to excavate and research, they make new and revealing discoveries. They're still amazed by what these ancient people built.

An archaeologist works at an excavation at Stonehenge in 2008.

The Monument

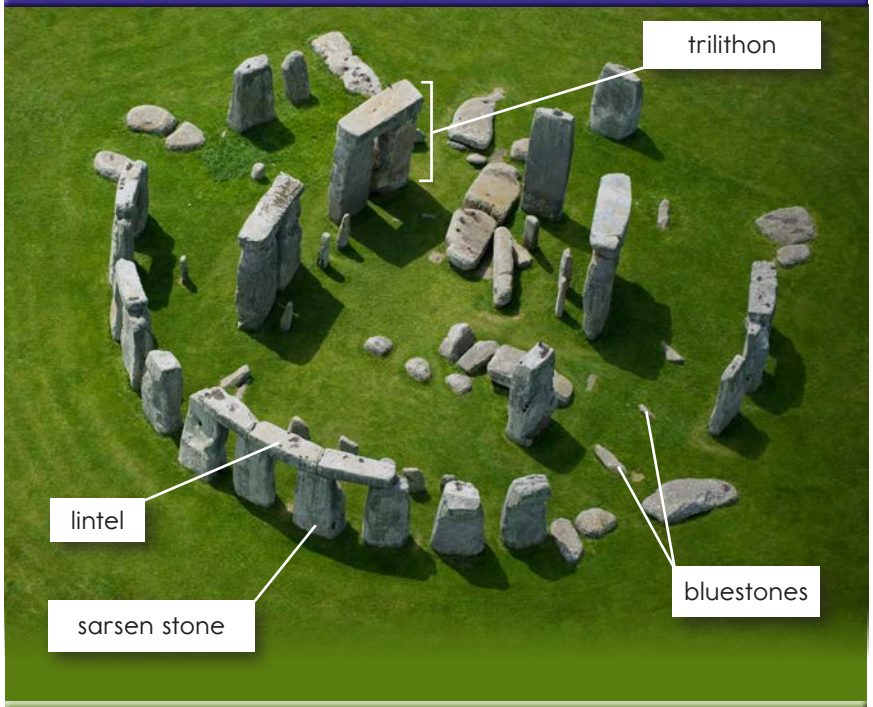
Stonehenge is a monument made of earth and enormous stone slabs called *megaliths*. It's not nearly as tall as the Eiffel Tower or as big as Mexico's Pyramid of the Sun. Still, the site inspires awe in the thousands of tourists who visit each day. Much of the mystery of Stonehenge comes from its ancient origins.

Circles inside of circles form the monument's design. The outer ring is a ditch around an **embankment** of mounded soil. Within that ring is a circle of sandstone slabs called *sarsen stones*. Stone **lintels** lie across the tops of the standing sarsen stones and once connected all of them together.

Inside the ring of sarsen stones is another group of standing sarsen stones, set in a horseshoe shape. These are trilithons, square arches formed of two standing stones and a lintel placed across them. They range between 6.7 meters (22 ft.) and 9 meters (29.5 ft.) tall. Smaller boulders made of bluestones, a type of coarse rock called *dolerite,* also lie within the sarsen circle. The largest bluestone weighs about 2,994 kilograms (6,600 lb.).

Stonehenge was not the only monument of its kind. Archaeologists have discovered individual stones and other monuments nearby.

Stonehenge



- The outer ring creates a circle about 110 meters (360 ft.) in diameter—about the length of a football field.
- The blocks of rock at Stonehenge average 22,680 kilograms (50,000 lb.)—heavier than a school bus! They stand more than 5 meters (16.4 ft.) tall.
- The largest sarsen stone weighs about 36,000 kilograms (79,366 lb.).
- Today, seventeen upright sarsen stones mark the curve of the Sarsen Circle. Archaeologists believe there were thirty at one time.
- Free-standing stones, including the Heel Stone and Slaughter Stone, are also part of the monument but lie outside of the Sarsen Circle.

United Kingdom

The Landscape of Stonehenge

Stonehenge is located on Salisbury Plain, an area of hills and grassy flatlands in southern England. Evidence suggests people have been living in this area for more than ten thousand years. Back then, trees covered the area and animals roamed freely. People were hunter-gatherers, hunting game such as deer and gathering roots and nuts. Experts speculate these Neolithic people may have considered the area sacred because of its wealth of food.

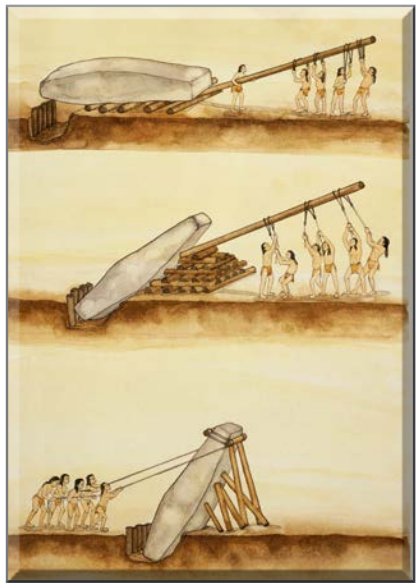
A Project for the Ages

Gradually, beginning around 7500 to 4600 BC, the culture shifted from hunting and gathering to farming. Agriculture made it possible to produce more food more reliably. With enough food, people could spend less time working the fields. This left more time to work together on projects like Stonehenge.

Experts consider the transport of the giant stones of Stonehenge to be one of the great **engineering** feats of Stone Age people. They believe the giant sarsen stones came from about 32 to 48 kilometers (20–30 mi.) away.

How did the builders transport these enormous stone slabs in a time before wheels or wagons? Teams of researchers have conducted experiments to evaluate different theories. They proved it was possible to transport the giant stones to the Stonehenge site using human skills and strength.

In May 2016, researchers loaded huge stones onto wooden sledges that were pulled along wooden rails greased with animal fat.



The builders of Stonehenge might have built wood platforms beneath stones as they were pulled into place.

For a long time, the bluestones presented an even greater mystery than the sarsen stones. No source for them has been found anywhere near Stonehenge. Researchers eventually discovered where they came from—a **quarry** in Wales more than 241 kilometers (150 mi.) away.

Lifting the standing stones must have presented a unique challenge. One method may have been to dig a pit under the base of each standing stone. Then wedges could have been used to raise the top end until the bottom dropped into the pit. Men might have used ropes to pull it carefully into a standing position.

Placing the lintels was perhaps the biggest challenge. One possibility is that the builders constructed ramps of dirt and wood leading from the ground to the tops of the standing stones. Teams of workers could have used ropes to slide the lintel up the ramp and into place to form the arch.

Who were these master builders who developed such amazing engineering techniques? They didn't use writing and left behind few examples of art. Little is known about the languages they spoke or the religions they practiced. Everything we know about them has been pieced together from evidence discovered by archaeologists.

Chemical tests performed on human skeletons buried near the site offer some clues. Some of the people who built Stonehenge seem to have migrated there from Wales and other lands. By testing the teeth of one skeleton, archaeologists learned that the man had traveled from mainland Europe—some 1,126 kilometers (700 mi.) away! The discovery came as a shock to archaeologists. It suggests that the fame of Stonehenge may have stretched far in ancient times.

Scientists think a skeleton found in a burial near Stonehenge was probably an archer because he was found with stone wrist guards commonly used by archers.

Possible Purposes of Stonehenge

People have been investigating Stonehenge for clues about its purpose for hundreds of years. It was built more than a mile from any human settlement and does not seem to have had any practical use as a shelter or marketplace. These details have led archaeologists to believe Stonehenge was a kind of religious temple. They also believe its religious and **ceremonial** purposes changed during its long history.

Archaeologists think Stonehenge began as a burial site. They have excavated the remains of as many as 240 people near the monument. Many of the bodies were cremated, and some were buried with tools and jewelry.

Stonehenge probably served as a **ritual** site, too. Villagers may have paraded to it for special events such as the crowning of rulers or special days for honoring dead ancestors.

These arrowheads were found in a burial near Stonehenge.

The sun shines through the stones of Stonehenge on December 21, 2014, the shortest day of the year.

Another popular theory about Stonehenge is that it was built with astronomy in mind. The giant stones are placed so that the sun shines through some of them at certain times of year. This is especially noticeable during the **solstices**. The summer solstice marks the first day of summer (about June 21), and winter solstice marks the first day of winter (about December 22). In a way, the monument functions like a giant clock marking the seasons. This was important information for ancient farmers as they planned the planting of crops.

In recent years, archaeologists have speculated about another purpose for Stonehenge. They believe it might have been a large community project to unite people in the area. For fifteen hundred years, Stonehenge was an important center of activity. That came to an end about thirty-seven hundred years ago—no one knows why.

Visiting Stonehenge Today

One of the most famous prehistoric landmarks in Europe, Stonehenge attracts more than nine hundred thousand tourists each year. At one time, visitors could touch and climb on the giant stones, but now they are mostly off-limits.

By 1900, many of the standing stones had fallen over, so British **heritage** groups decided to reconstruct the fallen stones using archaeological evidence. Giant cranes lifted the stones. Some standing stones were anchored in concrete. The **restorers** hoped these restorations would give the public a better idea of the monument's original appearance.

Wowser!

At Stonehenge's visitor center, tourists can see what life was like in England forty-five hundred years ago. Thatched-roof huts have been built using authentic materials and techniques. Volunteers show visitors ancient crafts and skills, such as rope weaving, pottery making, and stone knapping—the process of chipping flint to make stone tools.

Visitors go inside reconstructed Neolithic huts like those in which the builders of Stonehenge might have lived.

A Wonder of the Ancient World

Archaeologists continue to investigate the Stonehenge site. They use the latest technology such as magnetometers that detect magnetic fields, laser scanners that measure potential archaeological sites precisely, and ground-penetrating radar that can detect artifacts and structures hidden underground. These advances allow archaeologists to make new discoveries faster by showing them exactly where to dig.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) named Stonehenge a World Heritage Site worthy of special recognition and protection. Stonehenge will continue to amaze people for thousands of years to come.

Without a time machine, we'll never know exactly why and how Stonehenge was built. However, that won't keep visitors from being amazed at the minds, the strength, and the teamwork required to create it.

Archaeology students work at the Stonehenge site in 2008.

Glossary

archaeologists *(n.)* scientists who study the remains of ancient cultures (p. 5)

ceremonial *(adj.)* relating to or used for a formal event that takes place on a special occasion (p. 12)

embankment *(n.)* a wall or mound of dirt, often used to support a roadway or hold back water (p. 6)

engineering *(n.)* the work of designing and building things using science and math (p. 9)

heritage *(n.)* a way of life, tradition, or characteristic that is passed down from generation to generation (p. 14)

lintels *(n.)* pieces of stone or wood lying across the top of an opening, such as a window or door (p. 6)

Neolithic *(adj.)* of or relating to the latest part of the Stone Age, known for the use of polished stone tools and weapons (p. 5)

quarry *(n.)* a place where stone, marble, or slate is excavated (p. 10)

restorers *(n.)* people who repair old or worn things to return them to their original condition (p. 14)

ritual *(adj.)* relating to or done as part of a ceremony with standard steps or actions (p. 12)

solstices *(n.)* either of the two times of the year when the Sun is farthest from the equator (p. 13)

theories *(n.)* possible explanations (p. 5)