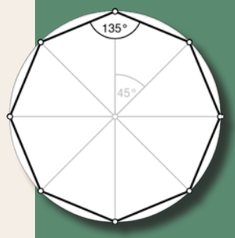
STOP 4

THE CHAPTER HOUSE

On your way to the Chapter House, can you see the model of the timber roof? What angles can you spot in the structure?

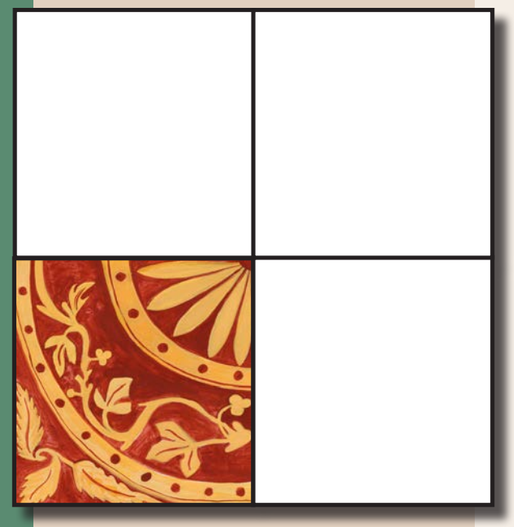
Stand on the central square in the Chapter House and turn around. How many sides does this room have?



Geometry is a type of maths that helps us understand and create shapes like this **octagon**.

Look up at the ceiling. What mathematical shape can you see? In geometry, an 8 sided star shape is called an **octagram**.

Now look down and study the floor tiles. The patterns are repeated around the Chapter House floor.



Can you complete the design in the grid above? Is it better to start in an **adjacent** square (next to the design) or the **opposite** square?

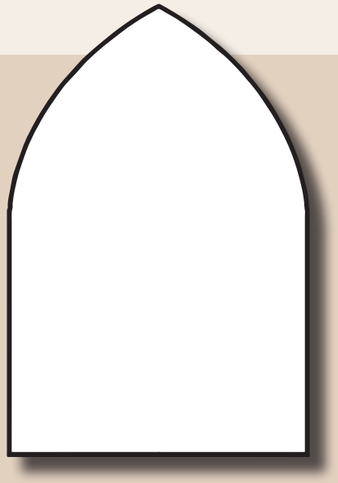
STOP 5

THE GREAT EAST WINDOW

Spend a few minutes looking at this fabulous window. What shapes and images can you see?

This window has 3 sections and represents stories from the Bible about the beginning and end of the world.

'Tri' means three. In Christianity God is called the Holy Trinity; the Father, Son and Holy Spirit. Can you think of any mathematical words starting with 'tri'?



Create your own stained glass design using knowledge from this Quest. You could use:
- the number 3
- a variety of shapes
- repeating patterns
- examples of symmetry

Congratulations on completing your Maths Quest. We hope to see you again soon.

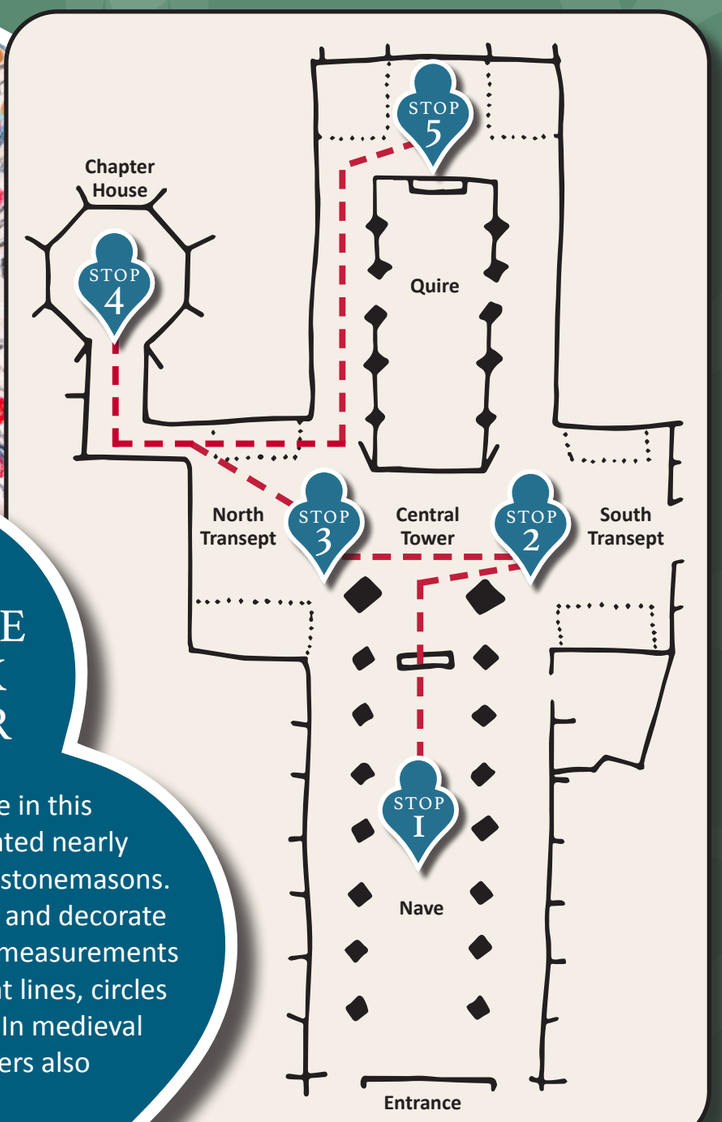
EQUIPPING CHRISTIAN LEADERSHIP in an AGE of SCIENCE

This project is funded by a grant from Equipping Christian Leaders in an Age of Science (ECLAS) as part of the Scientists in Congregations programme.

YORK MINSTER

MATHS QUEST

There are so many different ways to explore York Minster. Today we are looking for shapes, patterns and numbers that are hidden all around us.



WELCOME TO YORK MINSTER

Most of what you can see in this awesome building was created nearly 550 years ago by people called stonemasons. They used maths to plan, build and decorate the cathedral. Calculations and measurements were used to create the straight lines, circles and arches that you can see. In medieval times, shapes and numbers also had meanings.

Take the Maths Quest to find out more.

YORKMINSTER.ORG

Registered Charity No. 1201499

STOP 1

THE GREAT WEST WINDOW

Look back at the Great West Window. The patterns made in stone are called **tracery**. What shapes can you see? This window shows us beautiful images of Mary, Jesus and important Christians in History.

Can you spot the large heart shape towards the top?

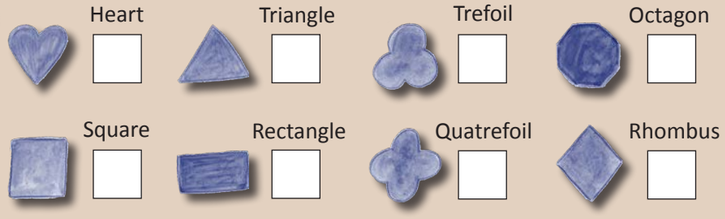
What might a heart shape represent?

The long **rectangular** shaped windows are called l**ights**.

How many lights are there from left to right? ☐

How many people can you spot in the windows? ☐

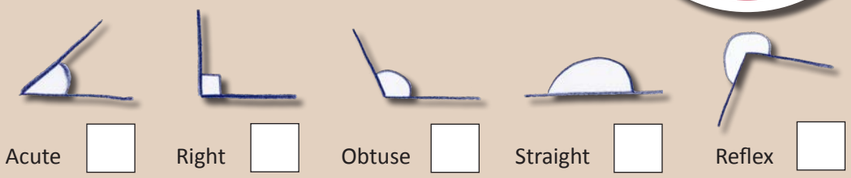
As you explore the Minster, tick off these shapes when you spot them.



SEMAPHORE SAINTS

Below the Great West Window you can find the headless Semaphore Saints; statues that spell out the words **'Christ is here'** in **semaphore**. Semaphore is where you make shapes with your arms to spell out letters.
They were created in 2004 by an artist called Terry Hammill.

What angles can you spot their arms making? Tick the box when you recognise an angle.



Think
If you were Terry Hammill, what message would you have wanted the statues to say? Think about the beliefs that are important to you.

Walk up the middle of the Nave.
What shapes and **angles** can you see on the floor?

Make your way to the central crossing in front of the screen of kings. Can you find the **hexagon**?

STOP 2

ROSE WINDOW

This window was created to celebrate the marriage of King Henry VII and Elizabeth of York in 1486. It contains red and white Tudor roses and the red roses of Lancaster.

The meaning of a circle
Circles are important because they represent something that is never ending. Christians believe God's love never ends.

Number challenge
Count the number of petals in the inner circle. ☐

If the outer circle of petals is double the inner circle of petals, how many petals are there in the outer circle? Now count them to make sure you are right. ☐

STOP 3

THE FIVE SISTERS WINDOW

The Five Sisters Window is made up of 100,000 pieces of glass. If you look carefully, you can see that each of the 5 **lights** have repeating patterns. Can you spot each of them?

These are **symmetrical** shapes. This means if you draw a line down the centre, the image is the same on both sides.

Create a symmetrical shape here or copy one from the window.