## Youth Challenges

Learning can be tailored for Duke of Edinburgh Award scheme, and Scout/Explorer/Network challenge badges.

## What do I see when I look at the bell?

Names used for different parts of the bell mechanism:


## What is a bell made of?

Bells are cast from a special alloy of bronze (typically $80 \%$ copper and $20 \% \mathrm{tin}$ ) to strengthen two otherwise soft metals. The alloy has excellent resonant qualities.

## What notes do the bells ring?

The 8 bells at St James are tuned to an octave of $F$ major ( $F, G, A, B b, C, D, E, F$ ), but each bell does not just have a single pitch, but a chord of harmonising notes at various volumes.

The loudest most predominant note is called the 'prime' or 'fundamental'. There is normally a 'hum' note at a lower pitch, and also notes at $3^{\text {rd }}, 5^{\text {th }}$, and octave above.

Each of these notes is produced from a different part of the bell, the loudest from where the clapper strikes the 'soundbow' near the edge of the bell, and higher pitch notes from further up the bell towards the shoulder.

## Is it an expensive hobby?

No, it is FREE, and if you ring for a wedding you get paid a small amount. Donations are always welcome of course, and there are collection jars in the tower.
Membership of Lancashire Association and Carlisle Guild is encouraged (but not mandatory) once a ringer reaches service ringing standard, costing a small amount annually. Ringing excursions/outings may cost a few pounds.

## Welcome and Social Activities

There are about 40,000 ringers in over 6,000 towers all over the UK and abroad who warmly welcome ringers who visit their tower. Drop in on holiday or business trip, or when you go to college/university or start a new job.
A big part of what we enjoy is our friendships and going for walks, outings, meals, quizzes and lots of other stuff outside normal ringing.

I heard about a simulator, how does it work?
St James the Great has an 8 bell simulator. The bells are rung as normal except the clapper is fixed to prevent it striking the bell (so it is quiet outside the church). Sensors on the bell wheels and frame send signals to a computer that plays the sound on speakers or headphones in the ringing chamber. It is not a substitute for ringing the bells out loud, but we can use it for teaching bell handling and having extra practices and training courses to speed up learning without disturbing residents nearby.

## Curious to discover more?

Contact Barrow St James' tower captain Andy Pollock:

## Mobile: 07879411824

Email: info@barrowbells.org.uk
Website: www.barrowbells.org.uk
Why not visit on one of our Tower or Heritage Open Days or come along to a Wednesday practice night at 7.30 pm ?

## Questions and Answers

## This leaflet answers lots of questions about bell ringing and why it is such a fun and fascinating hobby.

## What are some of the best reasons to ring bells?

\& Make friends and enjoy a warm welcome when visiting bell towers everywhere.
\& Free to learn and ring each week.
A Open to all... any age over 10 , and no need to be religious, strong, or musical.
\& Enjoyable and satisfying - master the skills needed to ring well, as part of a great team.
\& Social activities - walks, outings, quizzes, etc.
\& Skill for Duke of Edinburgh Award, and the Scout movement badge/awards.
\& Make a couple's wedding day special.
\& Discover historic parts of churches that other people don't often get to see.

## Read on to find out more.....

## Do you just pull a rope to ring the bell?

A bell can be 'chimed' by pulling the rope when the bell hangs down, but ringing this way is very limited.

So instead we ring the bells from a position with the bell mouth facing upwards, and ringer uses rope and wheel to rotate the bell by $360^{\circ}$.


The clapper strikes the bell at the end of the rotation a couple of seconds after the ringer pulls the rope. The bell is out of sight, and the ringer must keep the rope taut, and 'sense' when the bell reaches the top of the swing.

While balanced upside-down the ringer can wait or pull rope earlier to fine-tune when their bell rings next time.
English style church bell ringing is characteristic by the way the bells are rung in orderly sequences, and is achieved by this simple design and technique which has remained largely unchanged for over 400 years.

Almost anyone can learn the essential skills to do this with step-wise tuition and practice. Once mastered, there is so much more to learn - to ring together as a team, and to keep you interested and entertained for a lifetime!

## What sort of person goes bell ringing?

Bell ringing may not sound like a mainstream hobby, but ordinary people like you and me enjoy the combination of learning skills with friends, just like other forms of sport, music and many other hobbies.

Bell ringing is an inclusive hobby/activity for people from all walks of life; any age from teenager to grandparent; any faith/religion or none. Note: younger (under 18) ringers need permission to ring from parent or guardian.

## How long does it take to learn to ring?

It varies - some people are quicker to learn than other people. The basic technique is taught with 1-to-1 tuition in small steps, and can take anything from 5 to 40 hours to learn, spread over several/many weeks. Tutors are experienced ringers and teach you at your own pace and are patient, friendly and encouraging.

Sometimes we can speed up learning by giving extra lessons using the computer simulator.
Once a ringer masters the basic technique, there is always something new and exciting to learn and improve, which is part of the challenge and sense of achievement

## Where are the bells and ropes?



The 'anatomy' of the tower is illustrated on the right. The tower/spire is 45 m ( 150 feet) high.

The bells used to be in the 'Old Belfry' about 23 m above the ground behind the louvres.

After the bell restoration in 2013-2014, the bells were moved down a floor into the 'New Belfry' (single window), and the sound goes up through a metal mesh/gantry floor between old/new belfry and then out through the weather protection screen and louvres.
The bell ringers pull the ropes in the ringing chamber (triple window)

Access is by a spiral staircase with handrail.

## Do you need to be religious?

No, everyone is welcome irrespective of faith (or none). Many ringers have secular views, and others follow a different faith or go to a different church. This is quite OK.

We are encouraged to ring for services, weddings, and other events and special occasions. This is optional but most ringers are happy to do so in return for the use of the bells and the enjoyment we get from ringing them.

## Do you need to be musical?

No. Ringing has its own unique musicality, following rules and patterns rather than a 'tune' as most people know it.

## How big are church bells?

Church bells weigh anything from under 50 kg to the largest change ringing bell in the world that can be rung by one person at over 4 tonnes (Liverpool Cathedral)!

Barrow's bells range from 227 kg to 621 kg (about half the weight of a car) and the largest is over 1 m wide.

## Do ringers need to be strong?

No, despite their heavy weight, most people of average build (age 10 upwards) will be physically capable of ringing church bells. Heavier bells can need a bit more strength, but good technique is much more important.

You can ring and control a bell many times your own weight. Most first-time bell-ringers comment on how they expected to have to pull harder on the rope.

## Can ringing be dangerous?

Ringing a church bell is quite safe when rung properly.
There are some hazards just like operating any other heavy equipment. This is why each person is carefully trained how to ring bells safely under close supervision of an experience ringer.
There are very few accidents, and bell ringing has a much better safety record than many other active pursuits or activities in daily life.

