

History



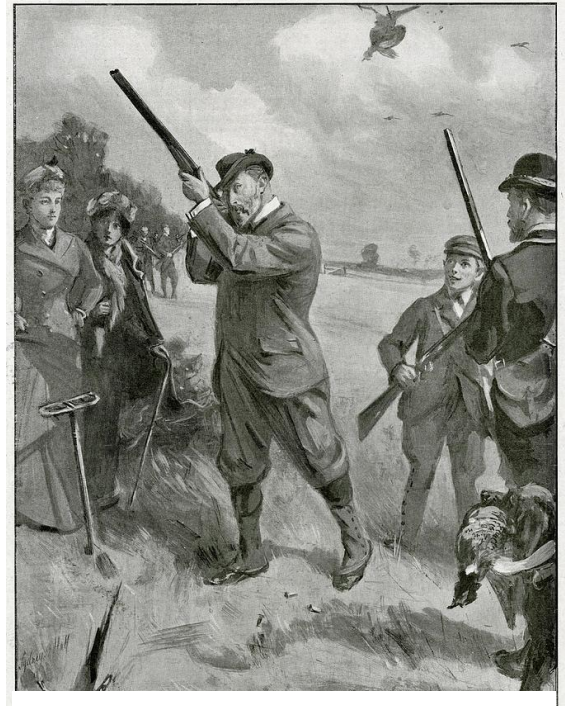
Find out about Appleton Water Tower's past...

Hello! Welcome to Appleton Water Tower. My name is Tom and I'm 10. I was born at the turn of the 20th century on New Year's day. What is my date of birth?

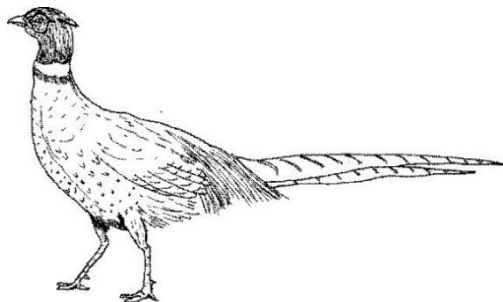
I live in a cottage on the Sandringham estate (King Edward VII lives at Sandringham House). I have two brothers and we like to help Dad when there is a shooting party. Dad's a **gamekeeper** on the estate.

Fact:

Gamekeeper – is someone who looks after birds and small animals on an estate, where shoots are held. Game birds such as pheasant, grouse and partridge are raised on big estates so that there is a supply of birds to shoot. Edward VII loved shooting and was a very good shot.



"Bravo, Sir!"



Dad and I often walk in the woods by Appleton Water Tower when we check on our game birds in their rearing pens. That's where we put them to fatten them up. We make sure the pens are secure. The pheasants always want to escape and they make the most noise! Have you heard them yet?

One day Dad told me why the tower was built. He said that when King Edward VII was still Prince of Wales, he caught **typhoid** (very nasty). His dad Prince Albert had died of it and his mum Queen Victoria was very worried.

It was decided to improve the water supply and build a new water works. These included a new water pumping station and the big water tower you are staying in today. Storing the water at the top of a tower means gravity gives it the pressure needed to flow all the way to the big house.

Fact:

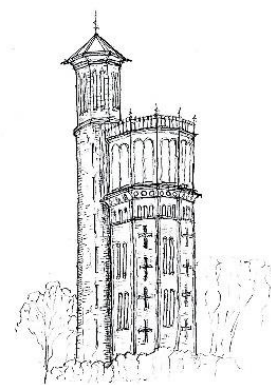
Typhoid – is a horrid disease that is rare today in rich countries. Over a hundred years ago, it was common and even rich people could catch it if the water supply wasn't clean. Tiny living things called bacteria can grow in dirty water and make people very sick.



The big tank on top of the tower was used to put out fires at Sandringham. Fire hoses were connected to twelve hydrants (they are like big taps). An underground pipe took water from the tank to the hydrants so that water could gush out to extinguish any flames. A few days before the Prince's 50th birthday party, a fire did break out. It started upstairs where fires were lit in the fireplaces by the maids. Many bedrooms were damaged.

King Edward also used the second floor of Appleton Water Tower as a viewing room when he had shooting parties. His guests loved the idea of being inside a water tower – a first for them too! They joked about a stray bullet springing a leak above their heads...

We had our own time zone called Sandringham Time on the estate. Really! The Prince loved shooting so much that he wanted to enjoy it for as many hours as possible in winter. He added half an hour to **GMT** in the autumn. When it was 4 o'clock in London, it was 4.30pm at Sandringham. This way he could shoot for longer. His grandson, George VI abolished it in 1936 when he became king. Would you like to bring it back during your stay and why?



Fact:

GMT – means Greenwich Mean Time. It is a standard for setting time zones (there are more than 24 in the world)! Imagine a line running through Greenwich, London. Other lines mark one hour east and west from the GMT line.



In 1877, the Princess of Wales and other Royals came for a ceremony to lay the foundation stones at Appleton Water Tower.

In the winter of 1910, King Edward VII was on the throne. Why not colour in this picture of him when he was younger.

After nearly 100 years, the estate decided they no longer needed Appleton Water Tower. Luckily, Landmark found a use for it! Now you can stay here and enjoy the same views from the second floor, high up in the sky.

Unruly Rulers

Who were the Saxe-Coburgs and Windsors?

Saxe-Coburg was the surname of German Prince Albert who was Queen Victoria's husband. When Victoria died **Saxe-Coburg** continued as the royal family surname. It changed to **Windsor** in 1917 because England was fighting against Germany in World War One and the King was worried British people wouldn't like a German royal family anymore - so he changed them to **Windsors**, after the castle.



King Edward VII

He loved shooting game and had an eye for the ladies! A granddad by the time he became king, he wanted peace not war.



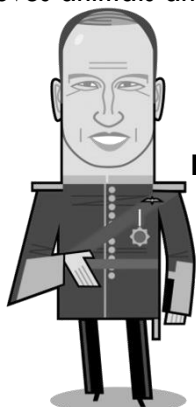
King Edward VIII

A romantic and selfish king. Married the woman he loved and 6 months later gave the throne away to his brother, George.

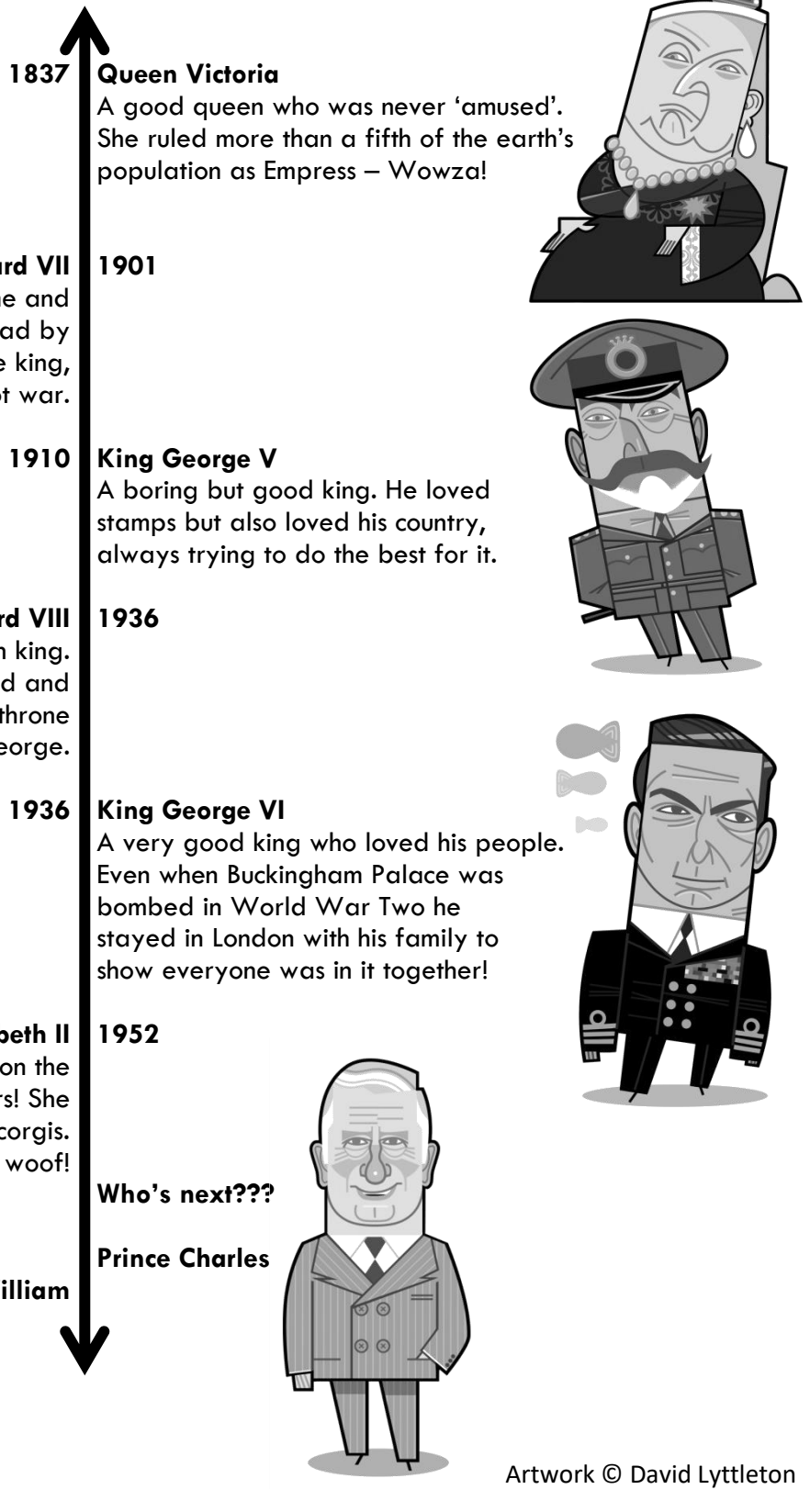


Queen Elizabeth II

Good queen Lilibet has been on the throne the longest of all the rulers! She loves animals and has 5 corgis. Woof woof!



Prince William





Meet King Edward VII

– who ruled when Tom lived on the Sandringham estate



Hi Eddy!

So when did you become king?

I became king on the 22 January 1901 when I was 60.

What's your nickname?

I had a few! One was Tum-Tum (I loved to eat). You can call me Bertie.

What is your favourite thing to do?

Eating, shooting and leaving parties with new friends. I was a favourite at parties all around the world, you see.

What is the naughtiest thing you've ever

done? Mummy (that's Queen Victoria) would say there are too many naughty things to list!

Design



What does Appleton Water Tower look like?

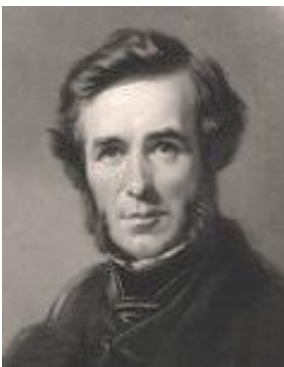
Can you walk all the way around it?

Can you use any of these words to describe the building?
Draw a circle around the ones that do.

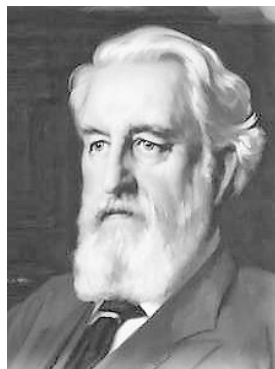
What do you like most about Appleton Water Tower?
.....

- | | |
|-------------|---------|
| Castle | Tall |
| Pretty | Folly |
| Stone | Brick |
| Symmetrical | Home |
| Square | Elegant |
| Friendly | Tower |

Two important **engineers** (say, en-gin-*near*) worked on Appleton Water Tower.



Sir Robert Rawlinson was in charge of building the new waterworks. He and James were both successful civil engineers.



James Mansergh designed the tower and the pumping station. James and Robert had worked together before – designing the water system for Birmingham.

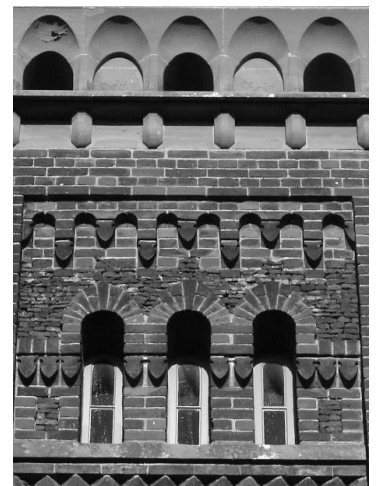
Fact:

Engineer – is someone who uses science to solve problems. Engineers design buildings, railways, bridges and engines! There are many different types of engineer. For example, mechanical engineers work with machines and **civil engineers** design bridges and towers. Electrical engineers work with electrical systems and chemical engineers often work in laboratories.

Fact:

Neo-Byzantine – was popular in England in the 1840s. It “revived” bits of Byzantine architecture found in the Middle East (an ancient region by the Mediterranean Sea). Things like arched windows and rich decoration were popular. Neo means new. The original Byzantine style started in Turkey during the Byzantine Empire more than 1500 years ago!

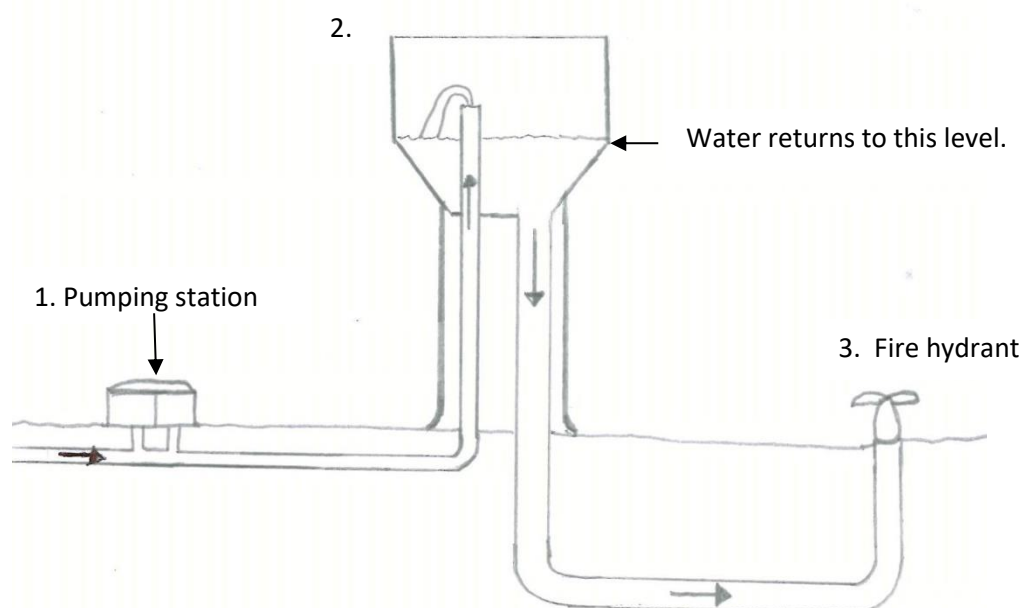
Appleton Water tower has fancy brickwork patterns on its sides. James Mansergh designed it in the **neo-Byzantine** style of architecture (say ‘*arch-i-tec-ture*’).





How do water towers work?

Look at the diagram below and follow the numbers to see how a water tower and pumping station work together to provide clean water.



1. Water flows down pipes from a spring in the ground to a pumping station. A motor provides the power to pump the water all the way up to the top of the tower.
2. The water enters the big tank at the top. It then flows down the other pipe under pressure (water always flows downhill)!
3. When the fire hydrant, or big tap is opened on the ground, the water flows out easily because it's under pressure caused by gravity. Did you know you can't squash water?

Facts:

Appleton Water Tower is 60 feet high to the base of the tank.

Appleton Water Tower can hold 32,000 gallons of water (that's about 400 baths)!

Here's a science one – the chemical formula for water is written as H₂O.



What is Appleton Water Tower built from?

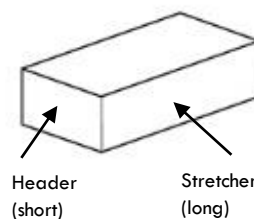
Appleton Water Tower made of brick with local stone at its base.

Fact:

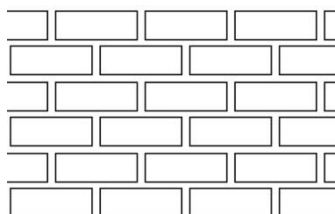
The earliest bricks date back to about 7,500BC and were made of mud. The mud was packed into wooden moulds. They were then turned out and left to dry in the sun until they were hard. The first fired bricks were made around 3,000BC. Fired bricks are harder and last longer in wetter climates.

Today we make bricks in factories by mixing together clay, sand and lime. This mixture is poured into a mould, dried and then fired in an oven at 1100 degrees.

Bricks have a long and a short face like this.

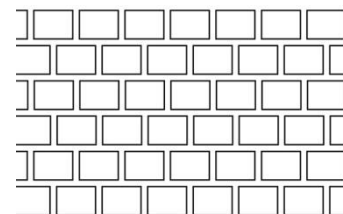


They are arranged in layers, or courses which have different patterns.



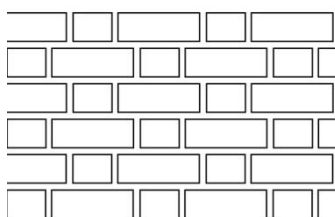
Stretcher bond

The simplest bond to lay – using the long face of the brick.

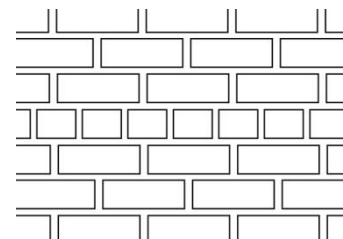


Header bond

The bricks are laid with the header facing outwards. The header is the end of the brick.



Flemish bond Bricks are laid with one header and one long face.



English bond

Up to three rows of long face and one row, of headers.

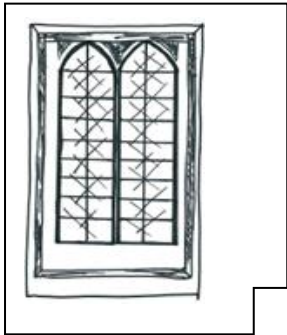
Try colouring in the short end on the brick patterns above, so you can see the pattern.

Here is a picture of the brickwork at Appleton Water Tower. Look at it carefully. Which type of bond does it most look like to you? _____ (Answer overleaf).

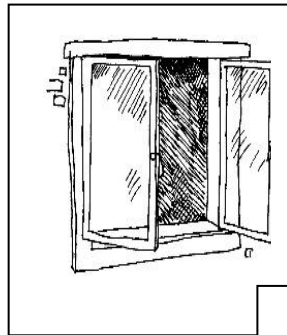




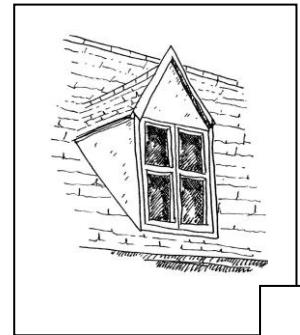
The size and shape of windows tells you a lot about the age and style of the building. What type of windows does Appleton Water Tower have?



Pointed or Gothic



Casement (it opens)

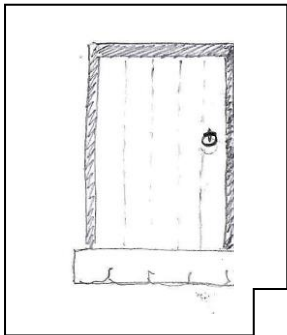


Dormer or attic (in the roof)

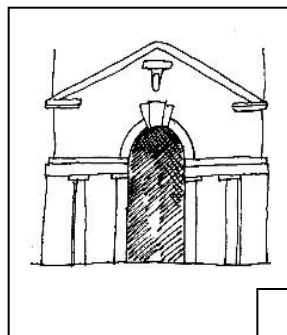
Fact:

Have you seen that in some very old buildings the windows don't open? Imagine how hot it got in the summer! When the casement window was invented it was the first type of window to open.

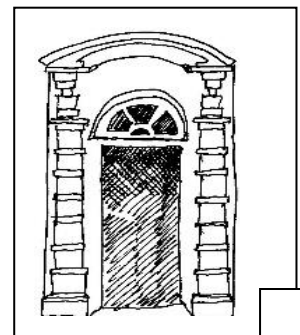
Entrances can be grand or simple. What is the front door of Appleton Water Tower like?



Vernacular

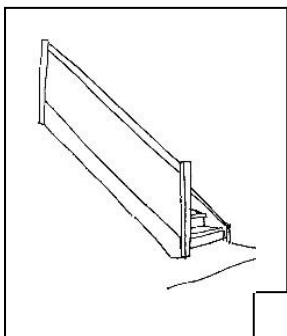


Porch

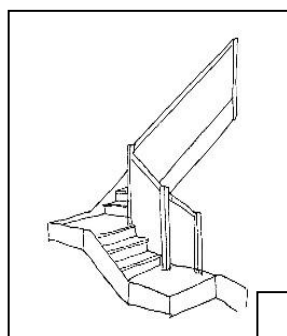


Canopy

There are many different styles of staircases. Which style is closest to the outside staircase at Appleton Water Tower?



Straight



Quarter turn



Spiral

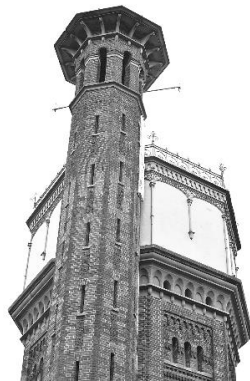
Quest



Discover more about Appleton Water Tower

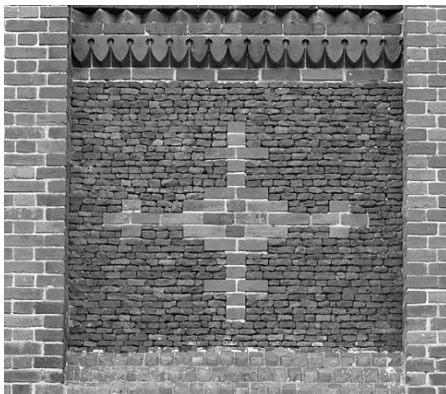
Appleton Water Tower has been here for over 140 years. When it was built in 1877 it was called Sandringham Water Tower. Landmark renamed it 100 years later. Follow this Quest to discover more about it.

Walk around the building. How many sides does it have? This shape is called an **octagon** (say 'ok-tuh-gon') that means it has 8 sides and 8 angles.



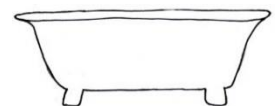
There was a viewing room for the Royal family from the start. They got to the viewing room by climbing stairs in the stair turret. How many sides does the turret have? _____

Later, Landmark added internal stairs so that you can reach the top bedroom from inside the main tower (and not have to go outside first)!



Can you find this pattern of a cross in the brickwork? Count how many you see like this when you walk round the building.

Can you find where Landmark put the bath? (Hint: you'll need to use the stair turret). This room was originally bigger and kept valves and machinery for the water tank above.



If you climb the stairs to the very top of the tower and go outside, on a clear day you can just see the Wash in the distance. This is a huge bay and very wide **estuary** along the coast of the North Sea.



As you take in the views, count how many stars are topping the spikes in the ironwork balustrade.

Fact:

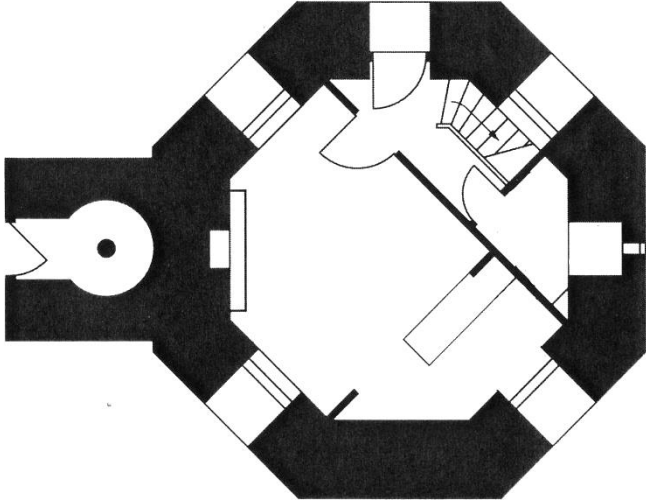
Estuary (say es-tew-ree) – is where fresh water from inland rivers meets the salt water of the sea. Lots of different plants and animals live around salty estuaries. Fish breed there and animals like crabs live in the mud flats.



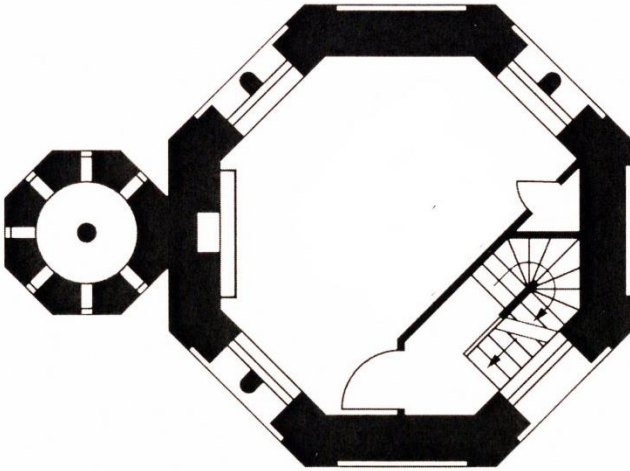
Living in Appleton Water Tower

The floorplan of a building is a map of the rooms. Appleton Water Tower has four floors. The plan below shows you the shape of two of them. Take a walk around and write on the plan what each room is used for.

Ground Floor



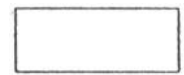
First Floor



We use these symbols to show where beds, tables and bathrooms are. Draw the symbols on to the floorplans to show where the furniture is.



Bed



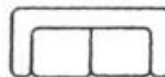
Rectangular (or a round) table



Bathroom



Cooker



Sofa



Kitchen sink



Can you find an example of each of these things inside Appleton Water Tower. Describe, or draw the object when you find it.

Your favourite piece of furniture

Your favourite window

Draw the pattern of a rug on the floor

In the box below, draw the view from the sitting room window. Can you see any birds and animals outside? Include them too.

A large, empty rectangular box with a black border, intended for drawing a view from a window.



Can you answer these questions correctly?

1. What is Appleton Water Tower made of?

Straw

Wood

Stone

Brick

2. In which county is Appleton Water Tower?

Norfolk

Surrey

Suffolk

Yorkshire

3. Which type of engineers were James Mansergh and Sir Robert Rawlinson?

Chemical

Civil

Mechanical

Electrical

4. What is the name of the body of water you can just see in the distance from the top of the tower?

The Wash

The Channel

The Tap

Bath

5. Who was on the throne when Tom was born in 1900?

George I

Victoria

Edward I

Edward VII

6. How much water can Appleton's water tank hold?

A kettle's worth

3,200 gallons

32,000 gallons

An Olympic swimming pool

7. In the winter, many woods are full of white flowers. What are they called?

Tulips

Bluebells

Snowdrops

Daffodils

8. Which animal would you not find in the surrounding woods?

Mouse

Fox

Tiger

Squirrel

9. How tall is Appleton Water Tower?

6000 ft

400 ft

600ft

60 ft

10. What is the name of the nearby city?

King's Lyn

Leeds

London

Portsmouth

To find the answers skip two pages...



Colour in the pheasant below

You can look up the pheasant in the Bird Book in the Landmark bookcase to copy the colours if you wish.

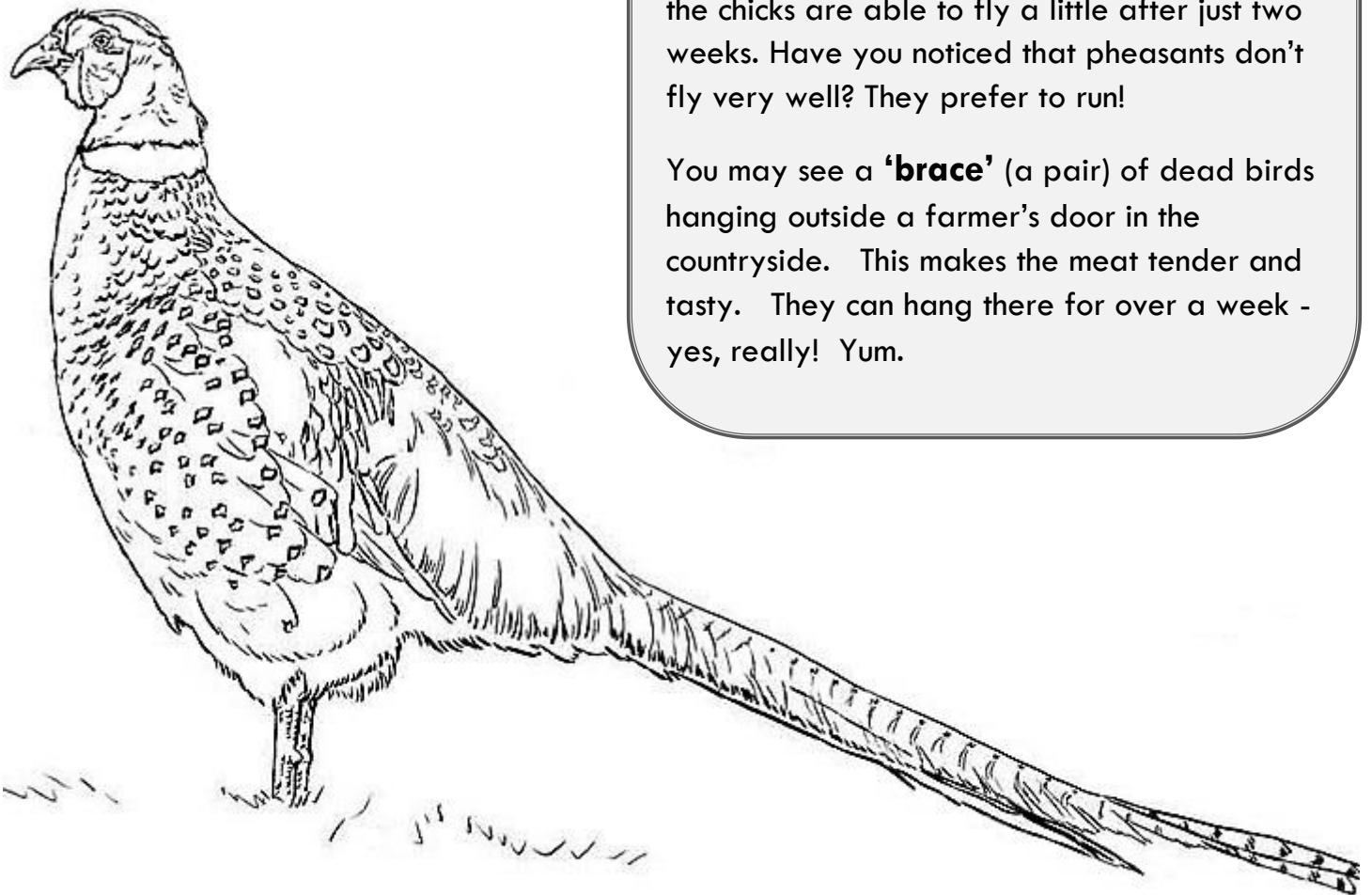
Pheasant Facts:

Common pheasants are bred to be shot during the shooting season, October 1 to February 1. They were brought to Europe from Asia many centuries ago.

The male is the colourful character with a greenish black head and red cheeks. The female (hen) is a bit boring looking! She's a beige-brown colour with darker spots.

There are usually 10-12 eggs in a clutch and the chicks are able to fly a little after just two weeks. Have you noticed that pheasants don't fly very well? They prefer to run!

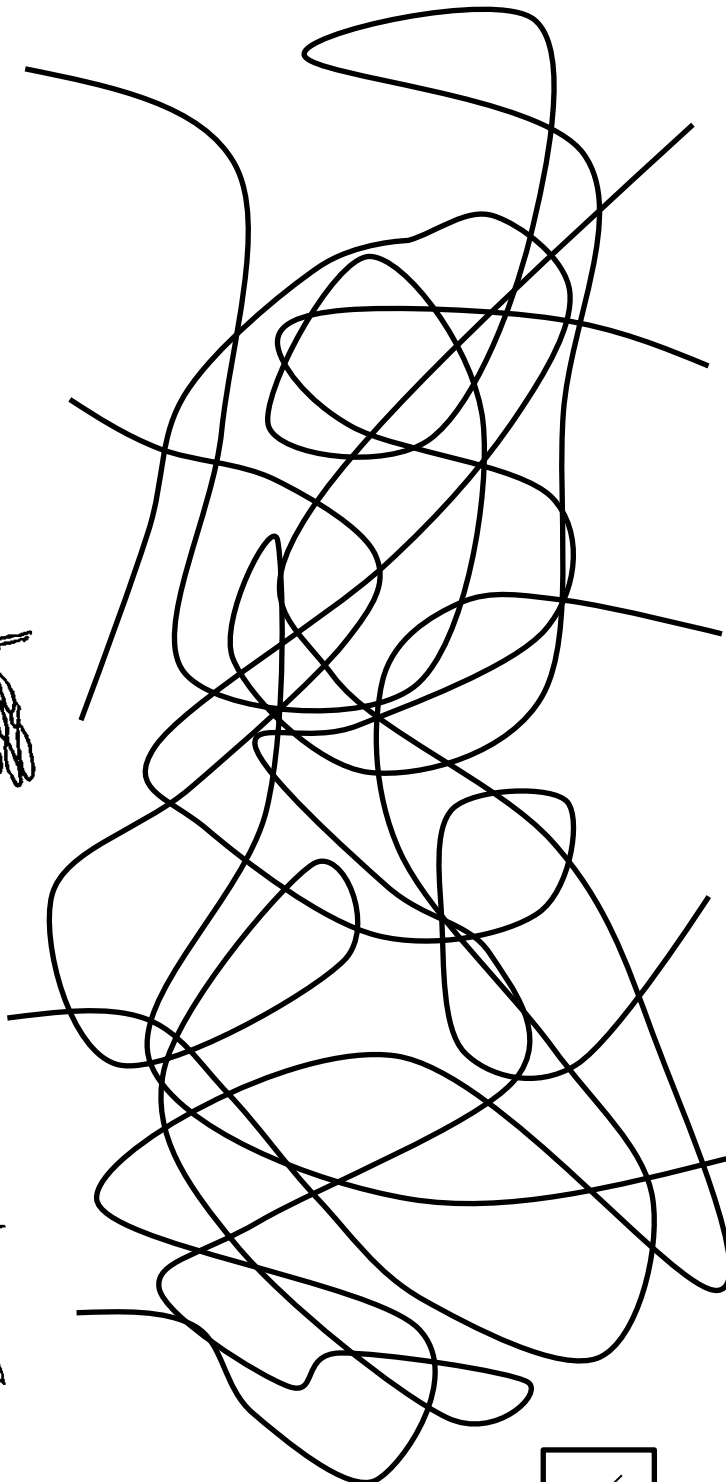
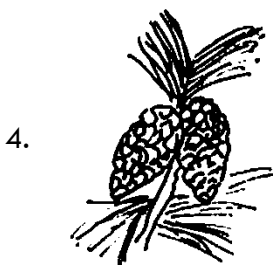
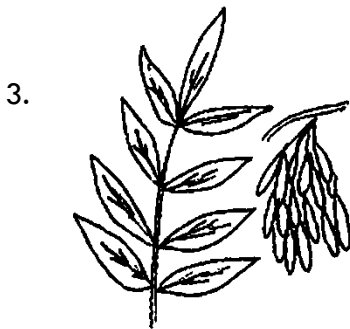
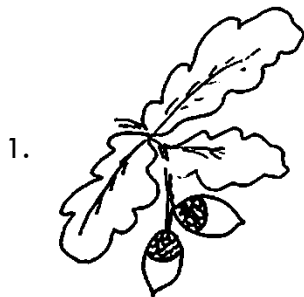
You may see a '**brace**' (a pair) of dead birds hanging outside a farmer's door in the countryside. This makes the meat tender and tasty. They can hang there for over a week - yes, really! Yum.





Which leaf belongs to which tree?

Match the leaf to the correct tree.



Horse Chestnut

Willow

Pine

Ash

Oak

Did you match them correctly? Put your score in the box.

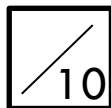


Answer sheet:

Quiz answers:

1. Brick
2. Norfolk
3. Civil
4. The Wash
5. Edward VII
6. 32,000 gallons
7. Snowdrops
8. Tiger
9. 60 feet
10. King's Lynn (the locals call it Lynn)

How many did you get right?





Design your own water tower

In the box below, why not draw your own design for a water tower. Put a tank at the top and remember, it can be any shape you like (think animal, vegetable or mineral)!

A large, empty rectangular box with a black border, intended for drawing a water tower design.



Make a traditional Norfolk Vinegar cake (really!)

Don't scoff! You'll see a chemical reaction in front of your eyes when you prepare the ingredients!

Here's a simple recipe for you to try. You will probably need the help of an adult.

Ingredients

225g butter
450g self-raising flour
225g caster sugar
225g raisins
225g sultanas
180ml milk, plus 1 tablespoon
2 tbsp (30ml) vinegar
1 tsp (5ml) bicarbonate of soda

Method

- Preheat the oven to 180 deg C/Gas 4.
- Cut the butter into small cubes and put in a large mixing bowl. Rub the butter cubes into the flour with your fingertips. They will form crumbs.
- Add the sugar and dried fruit. With a wooden spoon, stir to mix well.
- Now for the science bit: In another bowl or large jug, mix the bicarbonate of soda with the milk and vinegar. Take care as it will froth up!
- Carefully pour the liquid into the flour mixture. Mix well with your wooden spoon.
- Spoon the mixture into a greased sandwich or cake tin.
- Bake in the oven for 30 minutes. Then reduce the heat to 160 deg C/Gas 3 and bake for a further 1-1 ¼ hours (check after 1 hour). Cover with foil if it starts to brown too much.
- It's done if you insert a knife into the middle and it comes out clean. Allow to cool on a wire rack. Enjoy!



Make a woodland origami fox

Woodlands have lots of different animals living in them from rabbits, mice and insects to deer, birds and foxes. Have a go at making your own origami fox with the paper on the next sheet.

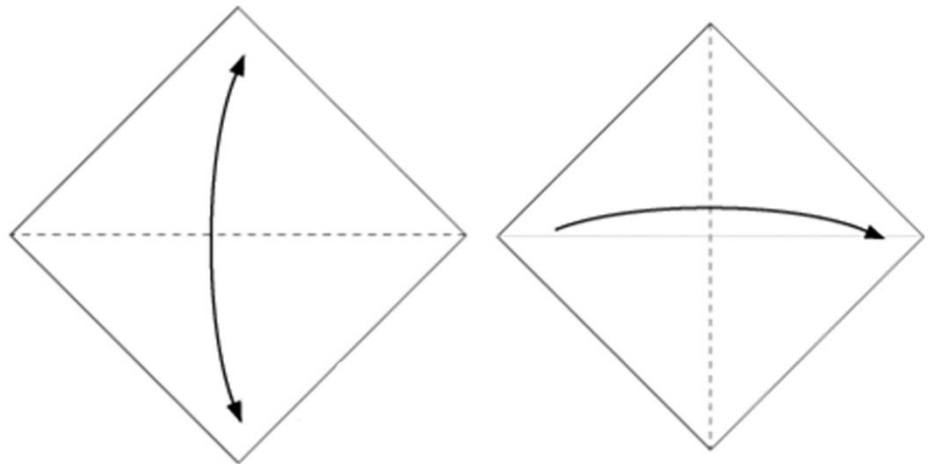
You will need:

- Paper
- Scissors
- Colouring pencils

Fact: Origami (say orr-ee-garmi) is the Japanese art of paper folding.

Step One:

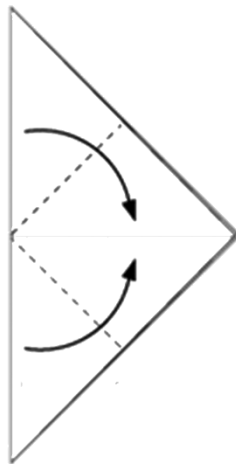
Cut the A4 piece of paper into a square. Follow the dotted lines on the sheet on the next page.



Then fold in half one way to make a crease, then open it up and fold it in half the other way.

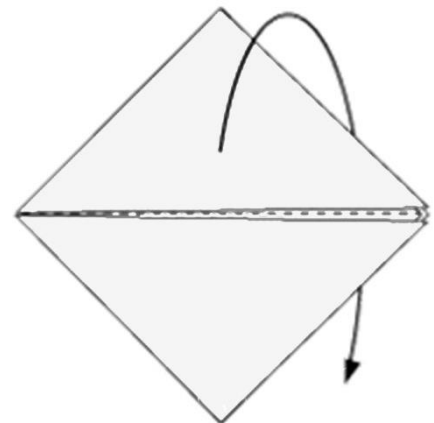
Step two:

Fold both sides in to make a diamond shape.



Step three:

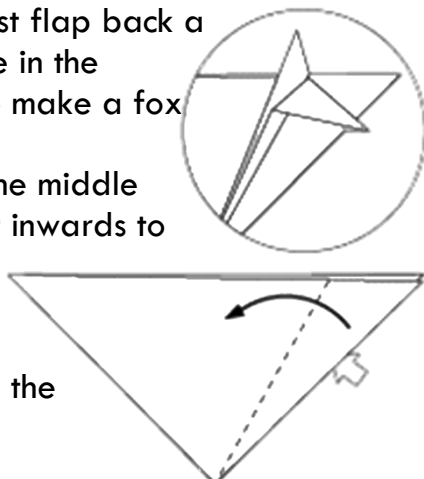
Once you have the diamond shape, fold the paper in on itself in half again so that all the flaps are on the outside edge.



Step four:

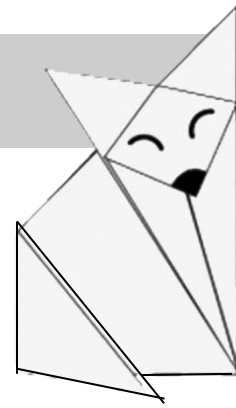
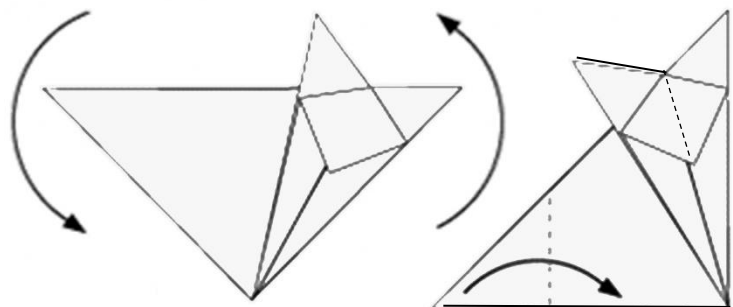
Fold the first flap back a little bit like in the diagram to make a fox ear.

Then with the middle flap push it inwards to make a Diamond shape that will be the fox's face.



Step five:

Turn the paper round so that it is at a right angle. Then fold the other corner inwards to create the fox's tail. Then colour and draw in the fox's face!



CUT OUT TO MAKE YOUR ORIGAMI FOX

