

# The Ancient Tree Hunt

## UNIT 1: TEACHERS SHEET

(Suggested time: 1–4 hours)

### General Introduction:

#### The Woodland Trust Ancient Tree Hunt

The Woodland Trust is engaged in a nationwide project to discover and record our ancient trees.

Examine the content of The Woodland Trust, Ancient Tree Hunt web site [www.ancient-tree-hunt.org.uk](http://www.ancient-tree-hunt.org.uk). Study the objectives of this site – the need to encourage people of all ages to become aware of the need to preserve and value our ancient trees, in woodlands, parks, countryside and towns. Discuss students attitude and thoughts concerning the value of our trees and countryside.

Help The Woodland Trust to find and map all the old, fat trees across the UK. Use these lesson plans as part of the Art and Design KS3 curriculum to learn, discover and participate in the discovery of these special trees.

The Ancient Tree Hunt web site and these lessons are intended to encourage youngsters to actively engage in looking for ancient trees and recording information using cameras, paints and drawing materials to create exciting works of art which can be used to create more awareness and publicity for the Ancient Tree Hunt while fulfilling curriculum requirements.

#### Learning Objectives – for all 4 Parts

Study and learn about the growth and structure of an ancient tree. Observe, sketch and convey through emotion and design the size and strength and fine detail of roots, trunk, branches, twigs, leaves and bark.

Relate this knowledge to other structures such as architecture, motorways and other man made designs. Consider the balance between construction and nature in our own environment.

Use this information to draft ideas and then design your own structures and sculptures using a variety of materials to demonstrate structure, strength and delicate fabrication.

# KS3 Art and Design

## Structure and form in 4 parts

### ANCIENT TREES

#### Key Concepts met by this Unit

##### 1.1 Creativity

- Producing imaginative images, artefacts and other outcomes that are both original and of value.
- Exploring and experimenting with ideas, materials, tools and techniques.
- Taking risks and learning from mistakes.

##### 1.2 Competence

- Investigating, analysing, designing, making, reflecting and evaluating effectively.
- Making informed choices about media, techniques and processes.

##### 1.3 Cultural understanding

- Understanding the role of the artist, craftsperson and designer in a range of cultures, times and contexts.

##### 1.4 Critical understanding

- Exploring visual, tactile and other sensory qualities of their own and others' work.
- Engaging with ideas, images and artefacts, and identifying how values and meanings are conveyed.
- Developing their own views and expressing reasoned judgements.
- Analysing and reflecting on work from diverse contexts.

Work both individually and as groups to develop ideas and concepts considering how different cultures, climates and environments can affect our designs and decisions.

Discuss, listen, question and develop the nature of this project through activities and research using the Internet.

Study other architects, artists and illustrators to look at style, function and concepts. (Andy Goldsworthy is a good example of an artist who works with nature and 3D. Van Gogh, Cezanne, Turner, Graham Sutherland and Constable all had their own unique styles to express their understanding of the landscape).



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These sheets have been designed to be shared. Feel free to photocopy and provide to colleagues. The Woodland Trust is the UK's leading woodland conservation charity dedicated to the protection of our native woodland heritage. [www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk) [www.AncientTreeHunt.org.uk](http://www.AncientTreeHunt.org.uk)

# The Ancient Tree Hunt

## KS3 Art and Design

### Resources to support all four parts of this project

#### Photographic:

The Ancient Tree Hunt website has a wide selection of images and information available [www.ancient-tree-hunt.org.uk](http://www.ancient-tree-hunt.org.uk).

The Dickens Oak at Chigwell in Essex, age 3-400 years old. It is reputed that Charles Dickens used to frequent the local public house and would have known this tree.



Swiss Re bank (the Gherkin), London



The Dickens Oak, Chigwell, Essex



Willow tree



Elm leaves



Leaves of the Hornbeam tree

#### Outdoor Activities resources list:

- Suitable clothing, footwear and waterproofs
- Rucksacks and suitable food and drink
- Long cloth measuring tapes and string for determining the girth and size of the tree
- Magnifying glasses for examining fine details of seeds, leaves and buds
- Viewfinders
- Cameras
- Clip boards and sketch books
- A ranges of pencils, 1B – 9B, Graphite or Conté pencils and crayons, charcoal; wax crayons and felt tip pens.
- Local OS maps
- Collection bags for leaves twigs and seeds (Please ensure that trees are not damaged)

#### Indoor Activities resources list:

- Notebooks and sketchbooks
- A ranges of pencils, 1B – 9B, Graphite or Conté pencils and crayons, charcoal; wax crayons and felt tip pens.
- Pens and inks (various colours).
- A3 or larger cartridge paper for producing final designs
- Glues and paste
- Paints and brushes small and large, (household paint brushes for larger work areas) for painting final structures
- A range of thin and thick wire and mesh of different thickness for constructing framework and structures
- Paper Mache
- Wooden plinths for supporting structures, staples and tools – hammer and pliers
- Internet access

# The Ancient Tree Hunt

## UNIT 1: TEACHERS SHEET

### Part 1 Study and Investigation:

#### Learning objectives

- Understand and use IT and the Internet as a method of research, looking at trees, the environment, artists and 3D design.
- Use group discussion to share ideas and feelings about the environment, conservation and how we can protect or damage this balance.
- Make written notes and observations to collect this information for use in the next stages of this project.

#### Questions to promote thinking and discussion using The Ancient Tree Hunt web site

Look through some of the pages and information on the Ancient Tree Hunt web site [www.ancient-tree-hunt.org.uk](http://www.ancient-tree-hunt.org.uk) and use this to discuss with your students some of the following questions:

- **Why are trees important to our future?**  
Discuss the environment and the need to care for our future, our trees and wildlife.
- **How do they play a role in our survival?**  
A large tree can provide oxygen for eight people, clean pollutants from our atmosphere, create a supply of sustainable forests for construction and in the past provided fuel.
- **How many different species of tree can you name?**  
Think how each species has its own unique character, the shape and colour of the leaves, the bark has different textures, buds and branches grow differently. Look at the Woodland Trust web site to find links to different articles on leaf identification, how to measure trees and much more.
- **What was the wood of these trees used for in the past?**  
For example, fuel, shipbuilding, house building, furniture,

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## Structure and form ANCIENT TREES

#### Equipment needed:

- Internet access
- Note books and pens
- Photographic image resources

and tools. What crafts existed and still exist? Examples are: pollarding, coppicing, chair making, charcoal burning, and hedge laying. Can you list things that are made from special woods? Willow for cricket bats and aspirin, Oak for ships and Holly for walking sticks and Christmas decorations.

- **How does the structure of the tree emulate itself in modern day architecture?**

Buildings have infrastructure – corridors, rooms, stairways, services such as plumbing and electricity, windows to give light. What are the trees pathways? It's branches xylem and phloem. Motorways have junctions and carry lorries and cars transporting food and goods

- **How is the design of our towns and cities affected by trees and countryside?**

A natural balance creates harmony for our wildlife, trees and population. Planners are more conscious now of the need for balance in our design of buildings and towns. Parklands, woodlands and town trees all help to maintain a healthy environment for us to live and work.

**Ask your students to make a summary of the information learned so far.**

**Discuss that this knowledge will be important to remember so that it can be used in the outdoor activity in Part 2 – Making a series of sketches and studies of an Ancient Tree.**

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## UNIT 1: TEACHERS SHEET

### Part 2 Sketches and Investigation:

#### Learning objectives

- Explore and develop ideas using discussion and observation.
- Improve observational skills using photography, notes and sketches to record detail of trees.
- Look, listen and observe the wildlife around the tree you are studying, consider its age and historical value.
- Learn about the structure and evolution of an ancient tree.
- Learn to discuss and articulate ideas and to work individually and as a group to relate these concepts to the tree being studied.
- Learn to observe the country code and respect and care for the environment and be considerate to others.

#### Questions for discussion with your students

These questions are intended to be an extension of the earlier discussion in Part 1 but are designed to be used as part of a field trip to an ancient tree either in the school grounds or a local park or nature reserve.

Look at how a tree grows; everyone knows that an acorn, the fruit of the Oak tree, can grow into a massive tree over many hundreds of years. Each tree has its own way of propagating either by seeds or layers.

Make a series of sketches and photographs using the information gained from the discussion and study of your tree. Use your ideas as studies for your next classroom project.

- **Look at the structure and design of the seeds of trees**  
The cone has a most intriguing design of spirals, which fascinates artists and mathematicians alike. Looking at your tree use magnifying glasses to see the fine detail and make sketches of both seeds and leaves looking carefully at the way their structure gives them strength, support and protection. Notice that some leaves have fine veins that

# KS3 Art and Design

## Structure and form

### ANCIENT TREES

#### Equipment needed:

Suitable clothing, footwear and waterproofs

Rucksacks and suitable food and drink

Long cloth measuring tape and string for determining the girth and size of the tree (visit the Woodland Trust site for information on measuring trees and identification of species where these are available as downloadable PDF documents)

Magnifying glasses for examining fine details of seeds, leaves and buds

Viewfinders for judging size and composition

Cameras for recording information, details, long shots pupil activities

Clip boards, notebooks and sketchbooks

A ranges of pencils, HB–9B, Graphite or Conté pencils and crayons, charcoal; wax crayons and felt tip pens.

Local OS maps

Collection bags for leaves twigs and seeds (Please take care not to damage any trees)

spread out to form its own structure almost like a miniature version of the tree. Good examples of this are the Beech, Oak, Elm and Sycamore trees.

- **How are seeds, buds and leaves protected from the elements like sun, frost and rain?**

The design of the leaves enables the tree to survive through winter and summer, hot and cold, droughts and floods. Some trees adapt themselves to their environment by shaping their leaves. An example of this is the Pine tree which has needle shaped leaves adapted to allow snow to slip off in Winter and also to cater for dry conditions by having less area to evaporate moisture through. Deciduous trees however lose their leaves in winter and go into a form of hibernation to protect them during the winter.

- **Discuss the different leaves and the shape of trees and branches to find out more about their structure.**



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# The Ancient Tree Hunt

## Part 2 (cont)

- **Look at the shape of your tree, much of it lies beneath ground with an enormous root support system.**
- **Why does it need these roots, what purpose do they serve?**  
The roots travel deep into the ground and help to stabilise the tree, which often weighs many tons and has a huge canopy of branches blowing in the wind. The root structure also supplies vital water and nutrients to the tree, essential to stimulate growth and feed young buds and new leaves.
- **How does this compare with the design and architecture of modern buildings?**  
The cone geometric shape is similar to the shape of the Swiss Re bank building in London (see picture).
- **Imagine the canopy of leaves as the roof of a building what examples can you think of?**  
The trunk of the tree carries water (thousands of litres just as a building has water and electric pipes and cables running throughout its structure. Talk about the Lloyds building, the Pompidou Centre, the Eden Project and other interesting creative designs. Research some of your local architecture as part of the next lesson.
- **Ancient trees are by their nature and age often hollow inside, making a home for wildlife, animals, insects and plant life.**
- **Imagine a lighthouse standing on a cliff, weathering the elements, hollow inside. A home for the lighthouse keeper and supplying a power source of light to warn ships at sea of the rocks below. In what ways does the lighthouse simulate an ancient tree?**  
It has a strong hollow structure rather like an ancient tree, firmly rooted to the ground to withstand strong winds. A safe home inside for living, insulation, and electricity and plumbing and a light source at the top.
- **Another important factor which affects a trees growth is what?**  
Light – trees all grow towards the light, their structure towering above other plants each fighting to gain maximum light. Light combined with the leaves photosynthesis creates energy that flows throughout the tree. Leaves are there to capture this energy and feed the tree.

Solar panels used in buildings act as energy savers catching

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the sunlight and converting it into energy. Buildings use glass to provide light and insulation.

#### • What does light provide?

The sun provides a source of energy that enables the tree to grow. Leaves are there to capture this energy and feed the tree. Collect leaves and twigs and other material for use in the classroom.

#### **Ask your students to make a series of sketches using this information and their ideas as studies for their final work project.**

Using different materials try and create an impression of the strength of the tree trunk compared with the delicate size and shape of the leaves. Imagine how small a leaf is held in your hand compared to a tree of some 20 metres in height. Use paints, washes or Conté to show the size and strength of the tree and fine pencils or pen and ink to add detail such as the leaves.

Use pen, ink and wash or hard and soft pencils with conté or charcoal to make detailed drawings of leaves, twigs and branches.

Using the pens or hard pencils to draw fine detail and the wash or conté to build up large areas make a series of observational sketches of leaf structure, seeds buds and twigs. Draw an outline structure of your tree using washes and conté to create the bulk and strength of the trunk.

Study detailed drawings of plant illustrations to study techniques and styles. Use the Internet to research more information about trees and building construction.

Use cameras to take photographs of your tree to show scale and details. Try using wide-angle views to obtain unusual views, looking up the trunk of the tree, through leaves and with colleagues around the tree to show scale and size. Try lying on the ground for a different view point.

**When the class has done sufficient research start using their knowledge in a creative way to explore the idea of how to sketch ideas for a sculpture or building design for their final work.**

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## KS3 Art and Design

### Structure and form ANCIENT TREES

#### UNIT 1: TEACHERS SHEET

### Part 3 Producing a final artwork as a concept for 3D design:

#### Learning objectives

- Students will learn how to translate notes, photographs and sketches from Part 2 into more constructive drawings, piecing together information to produce a finished drawing or painting for a 3D sculpture or design.
- Learn how to scale sketches to larger sizes and to add creative thought into their interpretation when they translate these observations to larger paper.
- Translate visual organic information into architectural shapes and forms.
- Work together to achieve a wider range of ideas and results using different individual skills.
- Learn to draw in 2D with 3D objects in mind using a variety of mixed media to achieve this.

#### Structure and Form – Producing a final artwork as a concept for 3D design.

At this stage students will have a series of notes, drawings and sketches prepared on their outdoor visit to their tree. Using these ideas use this lesson to prepare detailed drawings and paintings for Part 4, the final work. This can be on a range of sizes to suit the idea. It can also be a team or group project, which can be linked to other groups or an individual concept.

Working individually on your own sketches and ideas and as a group to share information between each other.

Use A3 or larger paper to transfer your sketches to a larger scale. Use grids to increase the size of your sketches or photographs.

Use a variety of media such as pencils and conté to build your drawings. Add colour to show depth and form or to contrast the skeleton of the tree and to add shape.

#### Equipment needed (for indoor activities)

A ranges of pencils, HB–9B, Graphite or Conté pencils and crayons, charcoal; wax crayons and felt tip pens

Sketchbooks from previous lesson

A3 or larger cartridge paper for producing final designs

Water based paints and brushes

Paint or draw freely to express movement and shape while retaining the information you have learned about the structure. This is about using knowledge and feelings to produce creative results. Look to discover new shapes and forms with the information you have learned in your earlier lessons.

In this lesson any part of the tree can be used to develop your final work, leaves, buds and twigs, branches and trunk. Imagine a spiral of twigs and buds becoming a beautiful sculpture, a leaf becoming a roof or a mosaic of branches and leaves. Use your imagination to expand on these ideas.

#### At this stage students will have now produced a series of artworks for their final project – to produce a sculpture or 3D design.

Discuss with them the results of their work and evaluate how successfully their observations have transformed to ideas that can be constructed. Consider the implications of making things in 3D and help them to convert their ideas into an achievable project.

Use group discussion to encourage students to engage with the technicalities and methods of producing the desired results.

To prepare for the next lesson look at the materials and tools required for making the 3D work and ensure that these will be available.

**Alternative lessons – Consider how this may also be used in future lessons as designs for murals, magazine covers, CD covers or printmaking.**



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## UNIT 1: TEACHERS SHEET

### Part 4 Producing a final work in 3D:

#### Learning objectives

- Learn to analyse and interpret organic form into 2D observations and then to produce a 3D sculpture or design.
- Learn to use a range of materials and tools to achieve the results they desire.
- Collaborate together to design both functional and abstract ideas.
- Learn to consider and value the environment and see it has a source of inspiration to explore techniques and express feelings and knowledge using 3D materials.
- Participation in a nationwide scheme with the Woodland Trust with work can be shown on Blogs and web sites and shared with other schools.
- Other subjects such as Science and History will have been learned in the development of this project.
- Other artists and designers will be studied to understand their techniques and concepts.
- Knowledge of infrastructure in design and environmental landscapes will have been studied.
- Possibilities to extend this project to many other areas by way of Art and Design, other curriculum subjects, sharing with others through the internet and the involvement of local residents and groups.

#### Structure and Form – Producing a final work in 3D.

At this stage students should have acquired knowledge of the structure and function of an ancient tree. They will have looked at the Ancient Tree Hunt web site and understood the importance of protecting our heritage and learning how

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#### Equipment needed (for indoor activities)

A ranges of pencils, 1B–9B, Graphite or Conté pencils and crayons, charcoal; wax crayons and felt tip pens

Glues and paste

Paints and brushes small and large, (household paint brushes for larger work areas) for painting final structures

Paper Mache materials

A range of thin and thick coils of wire and mesh of different thickness for constructing framework and structures

Wooden plinths for supporting structures, staples and tools – hammer and pliers

to incorporate this message into present day design and living in towns and cities.

Their studies of the detail and infrastructure of trees in relationship to architecture will be better understood. Their sketches and observations will have given them a deeper understanding of the detail of trees, the contrasts between large and small, rough and smooth and the differences between species.

*They now need to employ this knowledge and experience into thinking both constructively and creatively to produce an imaginative 3D work of art. Use the following to help to further stimulate and inspire the class.*

Work as groups or individually to build a series of sculptures that may work together or as a single piece of work.

From drawings and sketches using the materials available: wire, wooden bases, and paper maché start to construct the work.

This could be in the form of leaf like domes, tall slender shapes that bend in the wind or even honeycomb networks that grow and twist. Use imagination to even create abstract shapes and



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## Part 4 (cont)

forms. Many artists and architects use nature as a source of inspiration.

Allow emotions and feelings as well as knowledge to explore these new and exciting shapes and forms.

Imagine the texture of the bark, the delicate shape of a leaf, even the colours, browns, reds, greens and much more.

The work can also be in colour to reflect the beauty and elegance of the tree or the stark and strong structure.

Remember how the elements have shaped the tree, the wind, sun and rain.

Use scale to further improve designs. Leaves can become large dome like canopies acting as giant umbrellas or roofs. How can the small skeleton of the leaf become a structure for windows and glass capturing the light?

Colours can be used to paint sculptures - subtle greens and browns can be used as camouflage, bright reds and greens can become beautiful abstract symbols.

On a large scale a whole tree environment could be constructed as a group project. Imagine living inside a tree with a roof and seats. Use the skeleton framework as the inspiration and allow the freedom to develop this concept.

Finally take photographs of the work and submit these to The Woodland Trust as examples of your project. Email [learning@woodlandtrust.org.uk](mailto:learning@woodlandtrust.org.uk).

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#### Review the project

Discuss whether the aims and objectives of the project as a whole have been successful.

Look at how ideas began and how they have transformed – have they evolved in the ways you imagined?

How has functionality and creativity worked together?

Are there new projects that can be developed from this one? Does it merit more publicity in the school or with the community, perhaps by way of an exhibition?

Can photographs be taken to provide a news article for the web sites discussed?

Expand on this lesson by using the information gained to create motifs and design for ceramic tiles, clay reliefs and further 3D work.

**It may be possible to develop this project alongside other core subject(s).**

**Consider how this project might work in conjunction with Maths, English, History and Science projects.**

**Look for more lessons on Ancient Trees in this series.**