# Housing

LESSON 1

## No Place Like Home




BACK TO CONTENTS

**Aim(s)** To give the students an understanding of housing as a basic human need.

**Objective(s)** To examine the change in the form of houses in Ireland in the transition from a hunter-gatherer society (Mesolithic) to a settled farming society (Neolithic).

**Time Period** **Time Period:** Mesolithic to Neolithic (8,000 BC - 2,000 BC)

## KEY INFORMATION

### Lesson

- A house is a building which functions as a home.
- People have been living in Ireland and building houses for some 10,000 years.
- The introduction of farming into Ireland in the Neolithic had an influence on house design.
- Houses have changed over time, adapting to different needs, technologies and fashions.

### Context

- The provision of a home is a basic human need.

## METHODOLOGY & MEDIUM

- Instruction
- Discussion
- Worksheets
- Text

- **Requirements:** Flower pot filled with sand; wooden stick, spoon, small stones, container for removed sand.
- **Worksheet 1** Reconstructing a Mesolithic House
- **Worksheet 2** How Many People?
- **Worksheet 3** Reconstructing a Neolithic House.
- **Factsheet** Houses in Ireland throughout the Ages.

## SECTIONS:

**Section 1** What is a Home?
**Section 2** Features of a House
**Section 3** Mesolithic Houses
**Section 4** Reconstructing a Mesolithic House
**Section 5** How many will fit?
**Section 6** Farmers' Houses
**Section 7** Understanding Post Holes
**Section 8** Reconstructing a Neolithic House

**Key Question(s)** How does the design of houses fulfil basic human needs?

*'Mid pleasure and places though we may roam, be it even so humble, there is no place like home'.*
John Howard Payne

**Teacher Instruction**
Ask the students what their idea of 'a home' is and what 'a home' means to them. Record the answers on the board.

**Functions of a home:**
*(key terms)*
To provide:

| | | | |
|---|---|---|---|
| Safety | Protection | Comfort | Shelter |
| Place to live | Place to sleep | Place to eat | |

**Maslow's Pyramid of Human Needs**
This theory was put forward by the psychologist Abraham Maslow in his 1943 book *A Theory of Human Motivation.* It sees human needs in the shape of a pyramid. At the base are our most basic needs–food, water and warmth. When these needs are satisfied we move on to the next level–our need for security and shelter. And so on up the pyramid until we fulfil our ultimate need for self-actualization.


**A house is designed to fulfil basic human needs at 1st, 2nd and 3rd levels on Maslow's pyramid.**

| | Need | House |
|---|---|---|
| 1st level | **Food** | A place to store and cook food. |
| | **Warmth** | Built of solid insulating materials with a fire place/hearth. |
| 2nd level | **Water** | Available for drinking, cooking, washing. |
| | **Shelter** | Built of water and wind-proof materials. |
| | **Security** | A solid safe structure. |
| 3rd level | **Family** | A place for family to live together. |

**Key Question(s)** What are the key elements of a house?

### In order to work properly all houses have the same basic features

- A basic structure of walls and a roof.
- Windows and doors.
- The interior divided into designated areas.
- A fireplace to provide warmth.

**Teacher Instruction**
Explore with the students why all houses are not the same, and discuss the various factors that influence this variety in house design.

### Climate

- In Ireland we have a moist temperate climate and this influences the way we build our houses. Keeping out damp and cold is a key function of Irish houses.
- Compare Ireland with a country with a much warmer climate. In very hot countries houses are often painted white, have flat roofs and very small windows–why? (white reflects heat; flat roofs release heat; small windows keep interiors cool and keep out excessive glare).
- Compare Ireland with a country with a much cooler climate. In very cold countries some roofs have a much steeper pitch than they do in Ireland–why? (steeply pitched roofs don't let snow accumulate to become a dead weight).

### Technology

- For thousands of years in Ireland wood was the basic material used to build houses.
- Technological advances in the medieval period (12th century onwards) introduced stone and mortar to make walls and slate to cover roofs.
- Today most houses are built of concrete blocks, steel beams, uPVC windows etc.
  These materials influence the design and appearance of houses.

### Wealth and Status

- The size of a house reflects the wealth of the owner. Large houses are often built to display wealth and status.

### Security

- In times of strife or war, houses may need to be built so that they can withstand attack and are safe against thieves and outlaws.

### Custom and Fashion

- Traditional societies have a distinctive form of house and builders are trained in a vernacular craft.
- In more modern times houses are often designed by architects who will be influenced by current architectural fashions.

### Social Organisation

- Some societies have special needs when it comes to housing. For example, nomads are constantly on the move so their houses have to be able to move with them, like the yurts of Mongolian herdsmen which can be put up or taken down very quickly.

### Teacher Instruction

Prompt the students to identify the constant key influence by asking them

**A key influence on house design in this country has remained constant over time –what do you think it is?** Climate

The climate in Ireland 10,000 years ago was similar to today's–warm, moist summers and cold, wet winters. Therefore, a key function of all houses built in Ireland over time is to protect the occupants and their belongings from rain and dampness.

## SECTION 3 Mesolithic Houses

**Key Question(s)** What kind of houses did our Stone Age ancestors build?

### Teacher Instruction

Briefly recap how Stone Age people lived and when.

- The Middle Stone Age, or Mesolithic period (8,000 – 4,000 BC) is when people first came to Ireland.
- These people were hunter-gatherers. They lived off the land, hunting animals and birds, catching fish in the rivers, lakes and along the shore. They also collected wild fruit, nuts and berries.

### What factors influenced the kind of houses they built?

**Technology**

- Stone tools: stone axes, scrapers, knives.

**Building Material**

- Wood.
- They also had a supply of pelts (furs) from the animals they hunted. These were used to make clothes and also as covering for shelters.

**Social Organisation**

- Most of their time was devoted to sourcing food in the wild.
- They hunted wild animals, birds and fish.
- They gathered wild plants, nuts & berries.
- They managed their food resources by moving around–depending on the season: forest edge in autumn; on banks of rivers and lakes in spring and summer.

**Climate**

- The climate in Mesolithic times was similar to that of today: warm, moist summers and cold, wet winters.

- It was important for Mesolithic people to be in the right place at the right time in order to source their food. For example, they followed the migration of fish in the rivers. Though not constantly on the move like nomads, Mesolithic people had to move a number of times during the year in order to maximise their food supply.

- The image of our distant ancestors as *Cave Men* is still popular. One of the main reasons for this is that much of the archaeological evidence from the earlier periods of human life has been discovered in cave deposits. This is not so much that people preferred to live in caves than outdoors, but that the last Ice Age has erased all trace of human occupation from the landscape except where it is buried deep in caves and so protected from the erosion of the ice sheets. No cave excavation in Ireland has yet produced any evidence for human occupation before the last Ice Age. This is surprising because people were living as near to Ireland as the coast of Wales at that time. A cave can function as a home but it is not a house.

- *What is the difference between a house and a hut?* In archaeological terms a 'hut' is usually reserved for a smaller less-substantial structure than a house. Huts usually contain just one room and are often circular in plan. The term 'hut' does not necessarily imply human occupation but could be applied to a shelter for animals or a storage place.

**Key Question(s)** How can we discover what a Mesolithic house looked like?

**Teacher Instruction**

Distribute **Worksheet 1** to the students and ask them to research the archaeological evidence from Mount Sandel (see Supplementary Information) and then sketch their idea of what a Mesolithic house looked like. On completion look at the drawings and discuss the different designs that the students have come up with. Ask the students what evidence of these houses would remain after eight thousand years.

- These houses rot away quickly once abandoned. No trace of them above ground would exist after a short period of time.

**What artefacts and food-remains will survive?**

- Stone tools like arrowheads and scrapers do not rot away. The discovery of these stone tools in large concentrations can lead archaeologists to the site of a Mesolithic settlement. Archaeologists search for Mesolithic settlements by walking across freshly ploughed fields looking for concentrations of stone tools in the soil.

Once the site of a Mesolithic settlement is identified, the next step in the archaeological process is excavation

- What will the archaeologists expect to discover?
- If a wooden stake has been stuck into the ground will it leave any trace?

Archaeologists are trained to carefully uncover evidence of past activity. Beneath topsoil is natural boulder clay (laid down by the last Ice Age). If a wooden stake was driven into the ground deep enough then its impression will remain in the boulder clay. Archaeologists call these impressions *stake holes.*

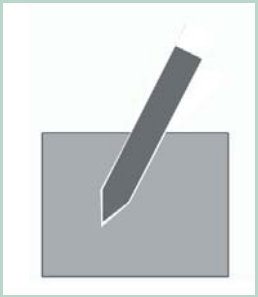
**Teacher Instruction**

- Fill the flower pot with sand.
- Take a stick to represent a timber stake.
- Stick one end into the sand so it stands up.

Ask the students what will happen to it over a long period of time.

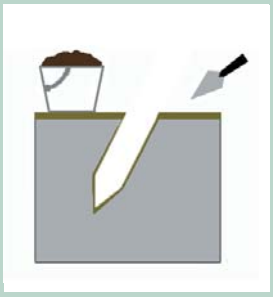
- The wood rots away turning into compost-enriched soil.
- This soil is dark and loose in contrast with the solid orange boulder clay.
- During an archaeological excavation the stain of the dark *stake hole* is revealed against the background of the lighter coloured boulder clay.
- This is called a stake hole.
- When the loose organic soil is removed from the stake hole by an archaeologist with a small trowel, the depth and diameter of the stake can be calculated.
- A structure built of a number of wooden stakes will leave a recognisable pattern of stake holes (see **Worksheet 1**).
- This is how archaeologists discover the remains of Stone Age houses built of wooden stakes.

**Story of a Stake Hole**



*Stake inserted into ground*


*Stake rots away*



*Archaeologist excavate the stake hole*

## Excavation Evidence

The most important archaeological excavation in Ireland of a Mesolithic settlement is Mount Sandel, Co. Derry which was excavated in the 1970s. The archaeologists found remains of a series of circular houses. The evidence for these houses was

- A circle of stake holes, 6m in diameter.
  (**Teacher Instruction** draw the shape on the board).
- Each stake hole was c. 30cm deep.
- Each stake hole was inclined inwards.

**What does that tell us about these houses?**

- They were circular in plan.
- They were 6m in diameter.
- The walls were made from timber stakes and were not very strong.
- The stakes were stuck into the ground at an angle, therefore the walls inclined inwards.

## Interpretation

The circle of stake holes suggests two basic possibilities

A *tepee* type structure or a *dome-shaped* hut

Both interpretations fit the facts.

*Tepee* *Dome*

**The stake holes give us the basic structure but what about the 'walls'? What material was available to Mesolithic hunter-gatherers to cover their houses?**

- Vegetation–leaves, grass, bark, sod.
- Animal skins sewn together.

**Why do archaeologists think that these circular structures were houses? Why not some other function?**

- In the centre of the house they found a hollowed out area where the soil had been reddened due to very high temperatures. This was a hearth or fireplace (diameter 1m).
- A fireplace or hearth is an important feature used by archaeologists in determining whether a structure is a house or some other type of building. Most prehistoric houses had a hearth/fireplace sunk into the ground in the centre of the floor.

## SECTION 5 How many will fit?

**Key Question(s)** How many people lived in a Mesolithic house?

**Teacher Instruction**
Distribute **Worksheet 2**. Ask the students to calculate how many people could live comfortably in a Mount Sandel house. Take feedback from the worksheet.
Discuss how much space we need in a modern house to live comfortably and contrast this with the amount of space allowed in a Mount Sandel type house– would the students be comfortable living in a house like that?

In Mesolithic times most of the activities of everyday life took place outdoors. These houses did not have individual rooms. The most important feature of the house was the central hearth. **Why was this so important?** Cooking food and providing warmth.

Summarising the facts

- The Mesolithic people lived in Ireland between 10,000 and 6,000 years ago.
- They were hunter-gatherers.
- They had seasonal camps as they needed to move around with the seasons.
- Through careful archaeological excavation we have some evidence of what their houses were like.
- Their houses were circular huts with a central hearth.

## SECTION 6 Farmers' Houses

**Key Question(s)** What factors influenced the type of house built in the Neolithic period?

**Teacher Instruction**
Ask the students if they know what new technology arrived in Ireland around 4,000 BC which changed everything?

Mesolithic people were the only inhabitants of Ireland for over 4,000 years. Then everything changed around 4,000 BC with the onset of farming. Farming has been described as man's most important invention. Why?

- Farming creates a reliable and abundant food supply.
- It is no longer necessary for people to spend their lives hunting and collecting wild food. They can now settle in one place and control their own food supply.

- Mesolithic people lived off the land as it was. Neolithic people changed the landscape and recreated it for their own purposes. The great native woodlands were replaced by stone-fenced fields (e.g. The Céide Fields, Co. Mayo).
- Neolithic farmers kept domestic animals: cattle, sheep & goats.
- Neolithic farmers grew cereals: wheat and barley.

**What type of houses did these Neolithic farmers build?**

- There are no surviving upstanding examples of these houses so archaeologists have to conduct excavations in order to find out about them.
- A Neolithic house was discovered at Tankardstown, Co. Limerick, by archaeologists monitoring the construction of a gas pipeline in 1986. One of the key features by which the archaeologist recognised this house was by the presence of a group of eight *post holes.*

Neolithic society is sophisticated. People now have the energy and the time to build large Megalithic Tombs for the dead, like Newgrange in Co. Meath.

Over 50 Neolithic houses have been discovered in Ireland by archaeological excavation in the past 20 years.

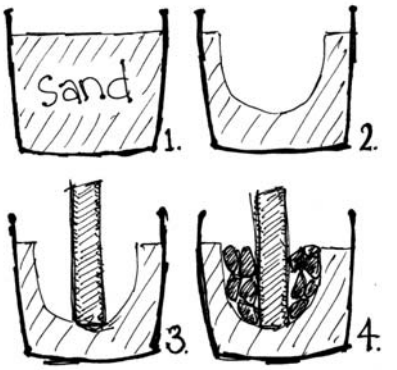
**Key Question(s)** What will survive of a wooden post after 4,000 years?

We have already looked at the archaeological evidence for stake holes. Now we are going to look at *post holes.*

### Teacher Instruction

Demonstrate a post hole for the students as follows

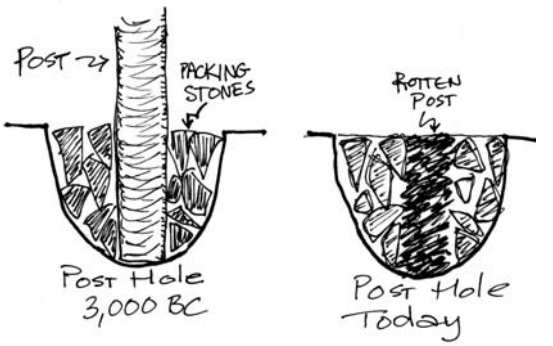
- Place the flower pot filled with sand on the desk.
- Take the stick to represent a large post.
- Using the spoon, first dig a hole larger than the post to a good depth so the post will not fall over.
- Place the post in the centre.
- Place some small packing stones around post (to give extra support).
- Backfill and make firm.




This is how Neolithic people erected the large posts for their houses.

**What will survive of the post hole after 4,000 years?**

- Similar to the stake, the wooden post decomposes in the ground and forms a compost of dark soft soil.
- The soil in the post hole will be softer and darker than the boulder clay around it.
- The packing stones will survive.
- The shape of the post hole itself will be evident when its fill is removed.




The house is relying on these posts to stay strong and firm –particularly on a stormy night! You can't drive a large post straight into the ground by hand or by hammering, like a stake. Hence the need for a post hole to hold it in place.

### Slot Trench

As well as stake holes and post holes, archaeologists often find slot trenches as evidence of Neolithic houses. In this case a narrow trench is dug along the line of the walls of the house. Into this trench wooden planks are set upright, between the posts, to form walls. Such walls are for shelter only and would not be strong enough to support a roof (see ***The Big Dig***, T3,U2,L2).

**Key Question(s)** How can archaeological evidence help us in reconstructing a Neolithic house?

**Teacher Instruction**

Distribute **Worksheet 3.** On completion look at the drawings and discuss the different designs that the students have come up with.

Discuss the excavation results

- What shape was the house?
- How big was it?
- What is the evidence for posts supporting the roof?
- Is there anything left of the roof?

**Teacher Instruction**

Distribute the **Factsheet** and review Neolithic houses.

The introduction of farming into Ireland influenced house design and construction

- Rectangular timber houses were being constructed in the Neolithic from 4,000 BC onwards.
- The size varies ranging from c. 7m to 15m long by c. 5m to 6m wide.
- The first farmers used more sophisticated techniques than their Mesolithic forbearers, like thatched roofs supported by posts and walls of split timber planks. They were skilled craftsmen.
- In some cases up to three houses have been found in close proximity. This means people are living in communities.
- Some of the houses show evidence of internal divisions, indicating special areas or rooms. This implies a growing sophistication in family and social organisation.

- Since the discovery of the Neolithic house at Tankardstown in 1986 a number of other similar houses have been discovered by archaeologists monitoring topsoil removal during development projects like new roads (see ***The Big Dig***, T3,U2,L2).
- After the Neolithic period, houses continued to be built in a similar fashion using wooden posts set in post holes.
- In the Bronze Age the circular house becomes popular and it continues in popularity down to Early Christian times.

*See Projects section:* ***Buildings of Ireland: Compare and Contrast***

## WEB LINKS www.

| | |
|---|---|
| National Monuments Service | **www.archaeology.ie/** |
| National Inventory of Architectural Heritage | **www.buildingsofireland.com/** |
| Mesolithic Ireland | **www.wesleyjohnston.com/users/ireland/past/pre_norman_history/mesolithic_age.html** |
| Neolithic Ireland | **www.wesleyjohnston.com/users/ireland/past/pre_norman_history/neolithic_age.html** |

Draw a reconstruction of a Mesolithic house and he scene around it based on the evidence from the archaeological excavation at Mount Sandel listed below.

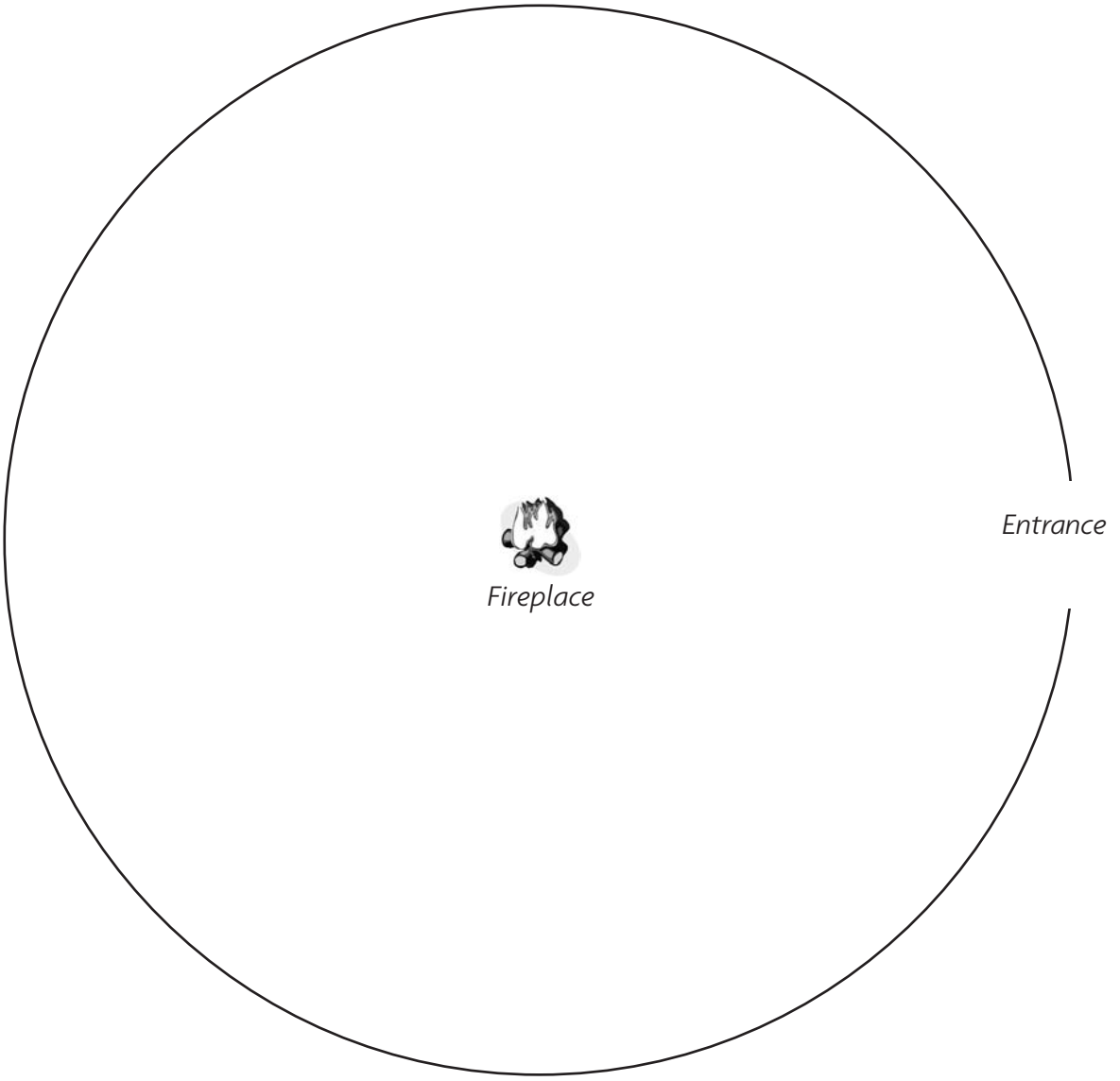
**Context**

- A climate similar to today, much of the land covered in deciduous forest.
- A hunter-gatherer economy depending on wild food.
- The settlement follows the food supply in seasonal movements.
- The settlement is on a low hill overlooking a river.

**Archaeological Evidence from the archaeological excavation of a Mesolithic house at Mount Sandel, Co. Derry**

- Series of stake holes, set in circle, diameter circa 6m.
- Each stake hole 30cm deep and roughly 15cm apart.
- Each stake hole inclined inwards.
- Hearth in centre of house–sunken into floor (diameter 1m).
- Stone tools –flint microliths, blades, arrowheads and stone axes.
- Nearby scatter of flint waste from making tools.
- Rubbish from meals: bones of salmon, trout, eel, sea fish, wild pig, hares, also hazelnut shells and apple cores.

Calculate how many people could live comfortably in this house.





*Each person will need 2m x 1m*

Read the results of the excavation of a Neolithic house and draw a ground plan of the house based on that evidence. On the back of the sheet draw a reconstruction of the house.

**Excavation results**

Slot trench, 0.6m wide and 0.65m deep, dug into the ground around a rectangular area 7.4m x 6.4m.
Eight post holes:

Six of these were set into the foundation trench

- One at each corner.
- Two evenly-spaced along each long side.

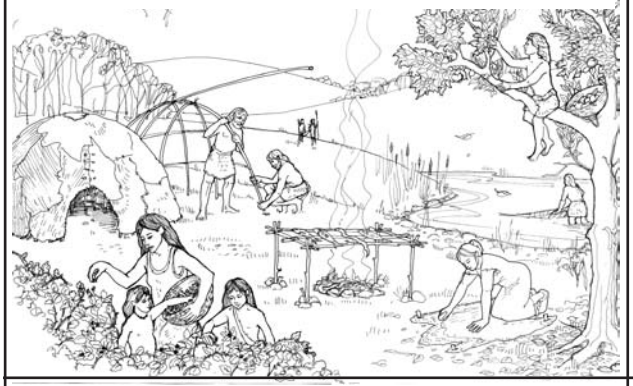
In the slot trench, between the posts, upright timber planks were set. The soil at the centre of the house was reddened due to burning–showing the location of the hearth.

A number of artefacts were found

- Sherds (broken pieces) of pottery from round-bottomed bowls.
- Flint arrowhead.
- A lump of charred grain–this had caught fire when being dried near a fire and then thrown away. The grain was later analysed and found to be emmer wheat.
- Charred fragments of hazel shells and an apple core. It is a wild apple–*malus sylvestris.*
- Some fragments of animal bone: cattle, sheep/goat and pig (it was impossible to distinguish between the bones of primitive sheep and goats).

*Note: Most food items were found near the central hearth.*

### Mesolithic Hunter-Gathers (8,000 BC – 4,000 BC)



- Food source: in the wild.
- Hunted wild animals and gathered wild fruit/ berries/plants.
- Hunter-gatherer lifestyle.
- Seasonal camps.
- Circular hut (diam. 6m).
- Framework of bent-over stakes.
- Covering of animal skins.
- Hearth in centre of floor.
- Evidence: hearth, and circle of stake holes.

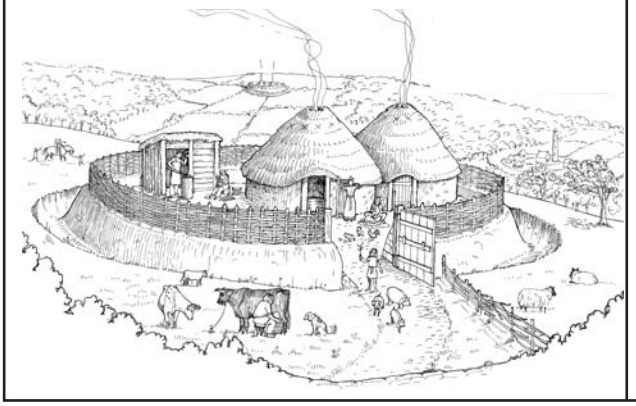
### Neolithic (4,000 BC – 2,000 BC)

- Rectangular timber houses.
- Settled farming communities.
- Rectangular houses (7–15m x 5-6m).
- Thatched roof (straw).
- Large posts hold up roof.
- Slot trench for wall timbers.
- Hearth in centre of floor.
- Evidence: post holes, slot trenches and hearth.

### Bronze and Iron Age (2,000 BC – 400 AD)


- The houses are usually circular in plan.
- Knowledge of metalworking (Copper and Bronze).
- Enclosed settlements.
- Circular houses (diam. 5-9m).
- Conical thatched roof.
- Large posts hold up roof.
- Wattle-and-daub walls.
- Hearth in centre of floor.
- Evidence: post holes and hearth.

### Early Christian (400 AD - 1000 AD)



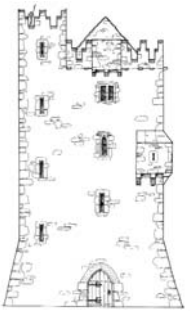
- Arrival of Christianity.
- Circular settlements (ringforts) enclosed by bank with palisade on top.
- Circular houses (diam. 5-9m)
  - Conical thatched roof.
  - Large posts hold up roof.
  - Wattle-and-daub walls.
  - Hearth in centre of floor.
  - Evidence : post holes, hearth.

### Medieval Timber-Framed Houses

- Timber-framed buildings introduced by the Normans.
- Main type of building in walled towns.
- No intact examples survive today in Ireland.
- Houses of this type were also built during the 17th century Plantations.

## Introduction of Stone Construction 11th century

### Tower House 15th/ 16th Century



- Stone castles built by Norman lords from 1180s.
- Castles are residences of the nobility as well as military enclosures.
- Majority of population still lived in timber houses, like the timber-framed buildings (see above).
- Castle-building tradition continues into Later-Medieval times with 15th and 16th century tower houses.

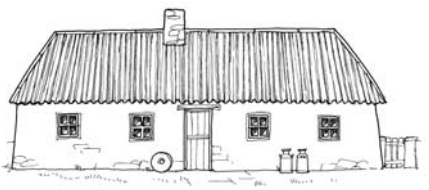
### Fortified Houses 1580-1640

- Towards end of 16th century larger and more comfortable houses built by some Irish lords in place of tower houses.
- Called 'fortified houses' because they still retained defensive features (machicolations; bartizans; battlements; gun loops).
- Contained more private rooms, larger windows and more fireplaces than earlier castles.

### Country Houses 18/19th century

- Built by new landowning Protestant elite in 18th and early 19th century.
- Designed by architects in neo-Classical style (balanced and proportioned elevations).
- Surrounded by private demesne.
- Neo-Gothic style introduced in late 18th century.
- Most built of stone walls with carved details of cut-stone.

### Vernacular Houses 18/19th century



- Houses of majority of population.
- Built by local builders using local materials.
- Thatched roofs (straw, reeds, etc).
- Very few more than one storey.
- Walls often built of clay (mud) or rubble stone.
- Rectangular in plan.
- Few rooms: kitchen, parlour, bedroom(s).