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A Stone Age Building

Name of the object	D-shaped building from the Stone Age.
Recommended ages (from…)	From 12 years depending how you build it. The model shown is the easiest to build.
Thematic areas combined (STEAM)	Science: building a Stone Ager hut based on archaeological knowledge Technology: Triangle constructions Arts: History: The Mesolithic Era Mathematics: Geometry, circle, diameter, measuring angles, fractions
The history	Archaeological: The D-shaped shelter is based on finds made at Tågerup in Skåne, Sweden., which have been much discussed as it contained 6 fewer post holes, but a huge, preserved dirt layer. Another D-shaped shelter at Aarup was dug into the ground so that the cottage floor became flat and later a semi-circular shelter construction was built. Subsequent periods are also known for soft-jawed or D-shaped structures, which grew enormous during the Neolithic period. The material is not too good, but since there are few cabins from the Ertebølle period, we choose to make an educated guess as to what this huge construction might have looked like. There is an added wall post in the centre of the Stone Age Ertebølle's construction, as it ensures us a cabin with an extended lifespan, as well as a cabin that deals with today's people's inability to sit on the ground. Wall posts are rarely recognized in Mesolithic settlements and are not always present in later periods, therefore we need to take the interpretations far.[1]

[1] Villadsen, Louise: Director of The Stone Age Center, Ertebølle. Litteratur: Andersson, Per Karsten, Bo Knarrström og Mac Svensson 2004. Stone Age Scania, Significant places dug and read by contract archaeology. Riksantikvarieämbetet. Karsten, Per & Bo Knarrström. Stockholm, Riksantikvarieämbetet 2003. THE TÅGERUP EXCAVATIONS. (Skånska spår. Arkeologi längs Västkustbanan). ISBN: 9172093021.

The image below shows the prevalence of D-shaped cabins

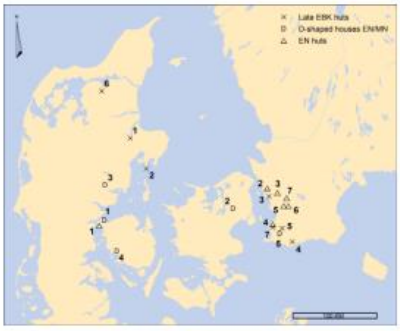


Fig. V. 159. Distribution of Late Ertebølle huts and D-shaped houses and huts from the Early Neolithic in southern Scandinavia. Late Ertebølle huts: 1. Egehøj, 2. Vængesø, 3. Tågerup hut, phase 2, 4. Skateholm I, 5. Bökeberg II, 6. Vegger 2, 7. Burlöv 20 B. Early Neolithic/Middle Neolithic D-shaped houses: 1. Lindalslund, K3, 2. Holmegård I-IV, 3. Hanstedgård, 4. Sarup, western and eastern, 5. Tangshög. Early Neolithic oval huts: 1. Lindalslund, K2 & K5, 2. Glumslöv, hut 5, 3. Kvärlöv, hut 1, 2, 3 & 4, 4. Dagstorp, hut 54 & 73, 5. Stävie, hut 1 & 2, 6. Lackalänga, 7. Örtofta. Data after Table 28.

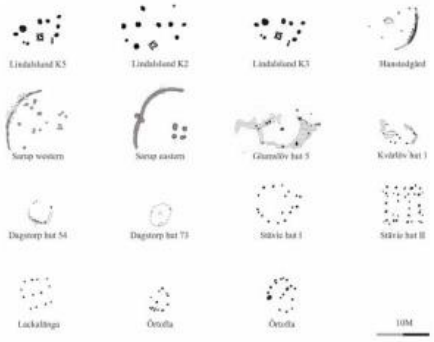
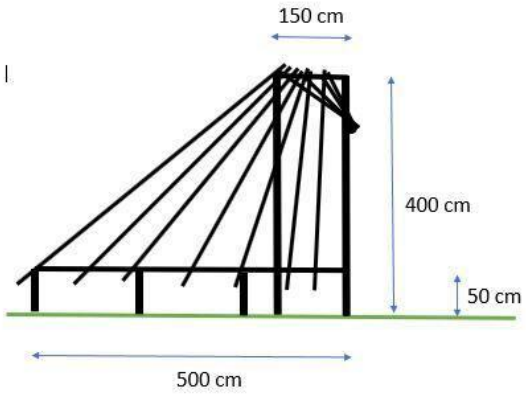


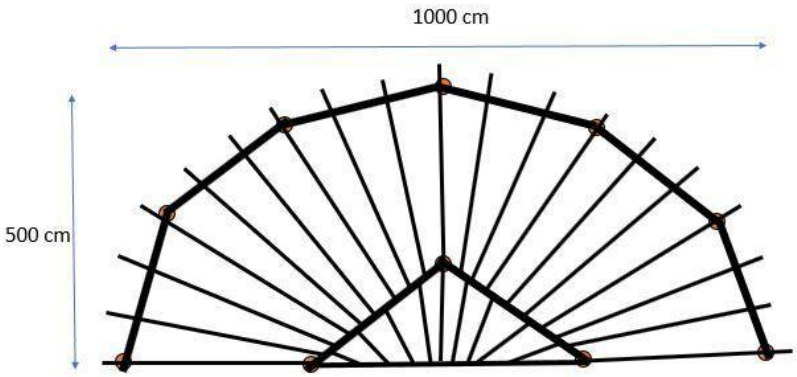
Fig. V. 160. Well preserved Early Neolithic huts of oval or D-shaped construction in southern Scandinavia: 1. Lindalslund K5, 2. Lindalslund K2, 3. Lindalslund K3, 4. Hanstedgård, 5. Sarup western, 6. Sarup eastern, 7. Glumslöv hut 5, 8. Kvärlöv hut 1, 9. Dagstorp hut 54, 10. Dagstorp hut 73, 11. Stävie hut I, 12. Stävie hut II, 13. Lackalänga, 14. Örtofta and 15. Örtofta. After Eriksen & Madsen 1984; Andersson & Pihl 1997; Andersen 1999; Michaelsen 2002; Artursson et al. 2003; Andersson 2004.

The construction:

Design:
Semicircle
-Three main poles
-Bottom and top strap

Dimensions:
-10m (semicircle)
-Height 4m





Materials needed	• A plate plywood, e.g., 32 x 39 cm • Round sticks of 5 mm: 13 pieces of 14 cm, 7 pieces of 3 cm and 7 pieces of 5 cm, and 1 piece of 12 cm • 3 round sticks of 6.5 mm of 9 cm • 2-3 mm thin sticks for battens (in the proposal wood grill skewers are used • Glue gun and glue • Drill or hand drill with 5mm drill and 6.5mm drill. Notice: Hand drill for the younger students and the electrical for the older ones. Caution: Do the children know how to use the tools? • Sharp hobby knife • Fits • Angle • Compass • Ruler or empty stick

	• A fine-toothed saw • Marker or pencil • Material for crocheting: Birch bark? Reed? Seaweed?
Instructions step by step	**Step 1**: Find materials and the size of the cottage **Step 2:** Find the centre and baseline **Step 3**: Set aside the semicircle **Step 3a**: and the 3 bearing post holes **Step 3b**: and the 3 bearing post holes, continued… **Step 4**: Set aside post holes at the low side **Step 5**: Mounting strap on the low side and rafters **Step 6**: Mounting rafters on the front **Step 7**: Installation of battens **Step 8**: Roofing? **Step 9:** Other Stone Age cottages

Step by step: how to build the “D-shaped building from The Stone Age”

Step 1: Find materials and tools

Time needed: 5 minutes

Now you need to find out how big your cabin should be. In this task, we selected a cabin size as follows: 1 cm = 50 cm in fact.

Step 2: Find the centre and baseline

Time needed: 3 minutes

Select a centre point on the wooden plate (Figure 1).

Figure 1

Draw a line using the angle (Figure 2).

Figure 2

Step 3: Set aside the semicircle

Time needed: 3 minutes

Put the compass on the radius of 10 cm. You must use the ruler to measure. Insert the compass in the centre point and draw a semicircle from one side of the baseline to the other. If you haven't tried using a suit before, you might want to practice on a piece of paper.

Step 3a. and the 3 bearing post holes

Time needed: 3 minutes

1: Set aside a point about 4 cm to the right of the centre point and then a point about 4 cm to the left on the baseline.
2: Place the angle to follow the edge and set a point in the middle of the semicircle circle
3: Place a point about 3 cm inside the line, and then three other points on the three edges.

Step 3b: and the 3 bearing post holes, continued…

Time needed: 5-15 minutes

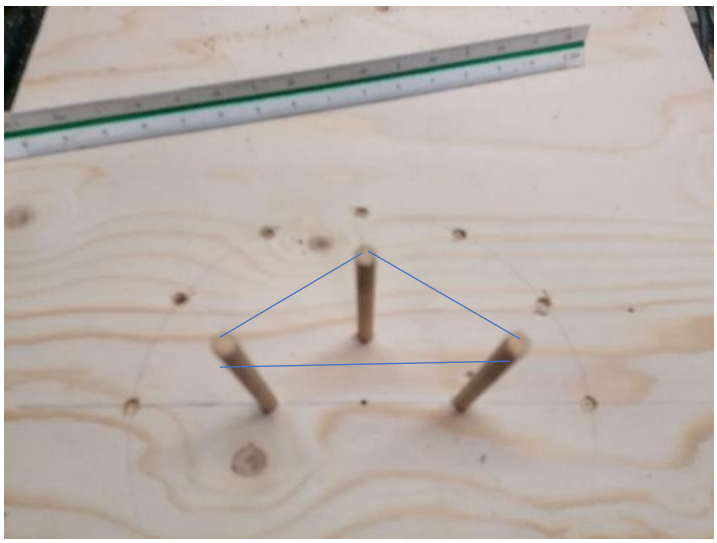
1**:** You must now mark 5 post holes on the semi-circle. There must be an equal distance between them.
Consider how you will do it.... You can figure it out or use the compass.
Experiment, how did you do it?

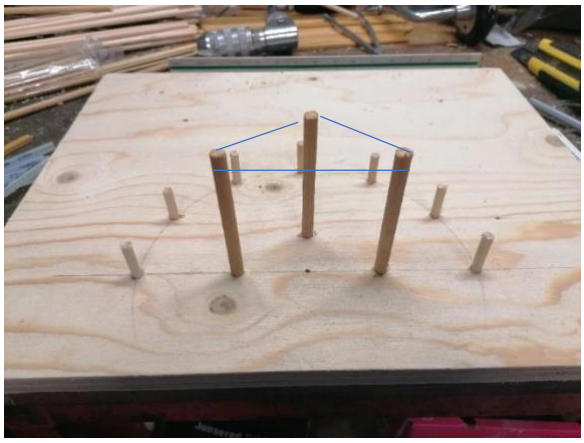
2: Saw 3 pieces of 6.5 mm thick stick in the length of 9 cm each.
3: Drill the three holes in the triangle with 6.5 mm drill. The hole must be no more than 1 cm deep. If you are nervous about drilling too deep, you can put a piece of tape 1 cm on the drill.
4: Drill the holes - remember to do it quietly.
5: Glue the posts firmly.

Step 4: Set aside post holes at the low side

Time needed: 10 minutes

1: Drill seven 7x 5mm wide holes on the points of the semicircle circle.
2: You must saw 7 pieces of 5 mm dodge sticks, each 4 cm long.
3: Glue the 7 pieces in each hole with the glue gun.
4: Connect the 3 long posts with 3 pcs of 5mm round stick so it forms a triangle at the top (The blue lines on the pictures below).





Step 5: Mounting strap on the low side and rafters

Time needed: 15 minutes

1: You must saw 6 pieces of 5 mm thick to about 4.5 cm in length. BUT MEASURE each strap BEFORE SAWING.
2: Glue them to the posts.
3: Saw 13x 5 mm round stocks about 14 cm in length.
4: If you want it to look more Stone Age-like, you can sharpen them at one end. These will be the cabin rafters.
5: Glue the rafters onto the triangle strap and the low strap. Start as follows: Glue first so that they rest on the low posts on the entire semicircle circle. Glue so they last so they sit in the middle of 2 of the low posts.

Step 6: Mounting rafters on the front

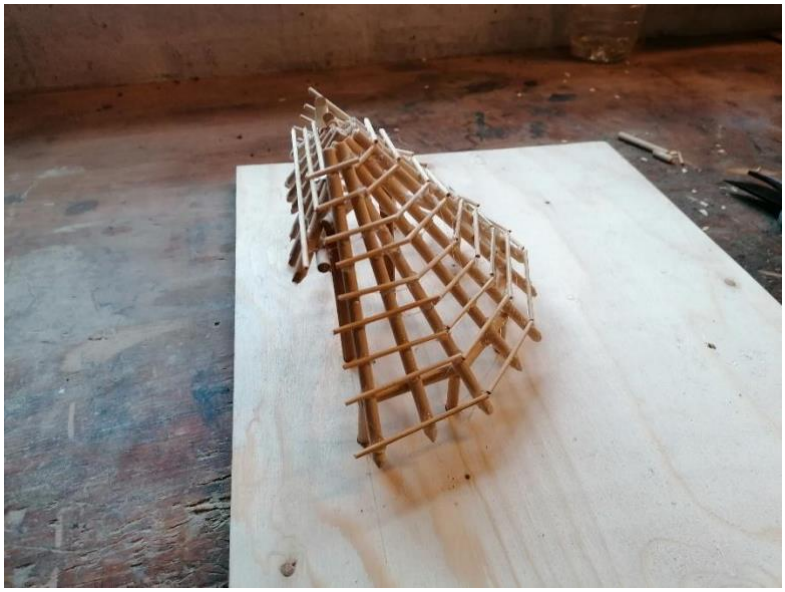
Time needed: 10 minutes

1: Cut/saw 7 pcs 5mm round sticks in length 5cm each.
2: You can sharpen them at one end.
3: Glue them on the front of the house.

Step 7: Installation of battens

Time needed: 15 minutes

You must now mount battens on the rafters:
1: Measure from rafter to rafter and cut the pieces.
2: Start from about 1cm from the skewer and glue them all the way to the semicircle
3: Glue the next layer about 2.5 cm higher. Continue until you are close to the top. On the model shown there are 9 rows of rafters.

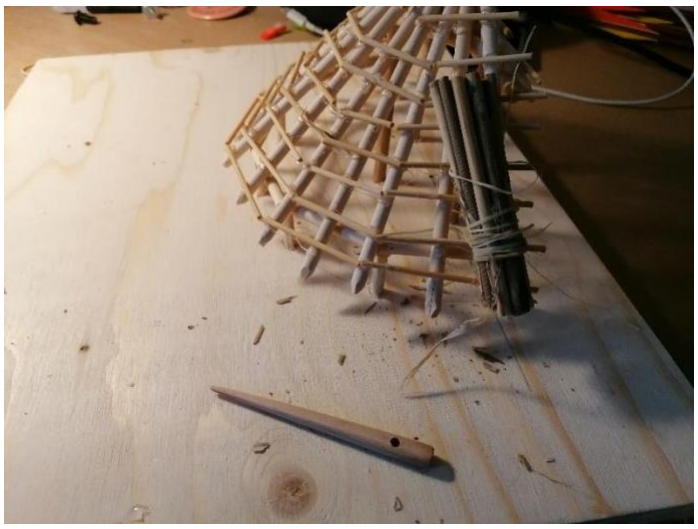


Step 8: Roofing?

Time needed: ? minutes

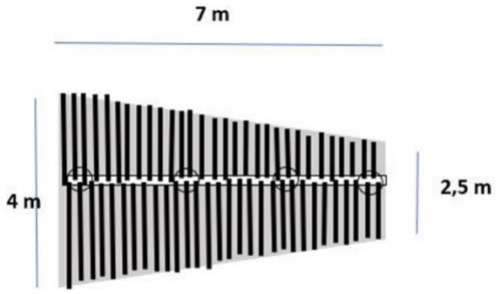
Roofing: If you want to put a roof on it, do this:

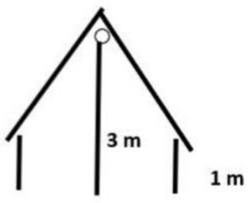
Reeds: Glue the pipes individually until the roof is covered or make small bundles you sew firmly.
Birch bark: Cut into small chips that are glued/sewn deliberately so that it cannot rain in.
Seaweed: Twisted and wrapped around the rafters. Pleats may be omitted. It is A DIFFICULT process that is not recommended for beginners.



Step 9: Other Stone Age cottages

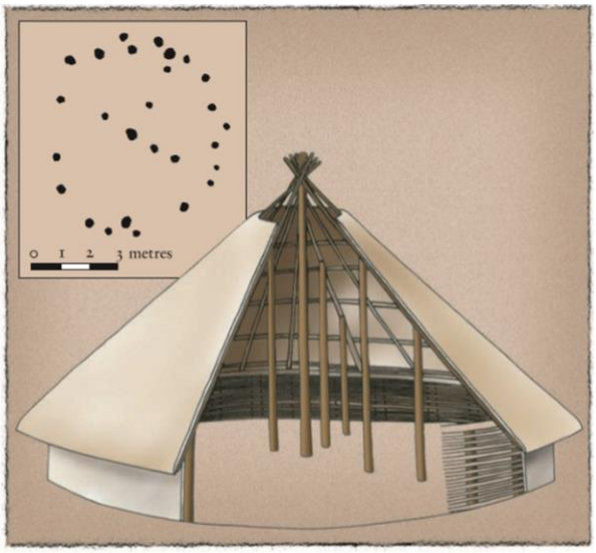
Hunters Hut from Taagerup, Skåne, Sweden[2]



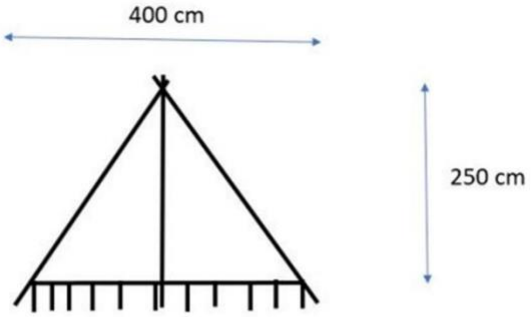


[2] Karsten, Per og Bo Knarrström 2001 Tågerup Specialstudier: husesyn. Andersson, Per Karsten, Bo Knarrström og Mac Svensson 2004. Stone Age Scania, Significant places dug and read by contract archaeology. Riksantikvarieämbetet

The circular hut



THE ROUND HOUSE (PHASE 2) AT TÅGERUP. [3]



[3] Andersson, Per Karsten, Bo Knarrström og Mac Svensson 2004. Stone Age Scania, Significant places dug and read by contract archaeology. Riksantikvarieämbetet