

## The Magical circle

<p><b>Respective blueprint</b></p>	<p>A Stone Age building</p>
<p><b>Description</b></p>	<p>Students learn about the circle through the construction of a Stone Age building</p>
<p><b>Learning Objectives</b></p>	<ul style="list-style-type: none"> <li>-Students learn to draw a circle in a simple way and with the help of a compass</li> <li>- Students become familiar with the concepts of radius and diameter</li> <li>- Students learn to work with simple tools such as hand drills/ electrical drill, hacksaws, knives, and glue guns</li> <li>- Students acquire knowledge of materials</li> <li>-Pupils become familiar with triangular structures</li> <li>- Students gain an insight into the construction of houses in the Stone Age</li> </ul>

**Related curricular  
subject(s)**

Science: Archaeology

Technology:

Engineering: Triangular  
construction

Arts: History, The Stone Age

Math: Geometry, radius, and  
diameter

## Prerequisites / preparatory actions for teachers

- It is always good if the sequence is in context, e.g., that the students have knowledge of the Stone Age. In this way, it makes sense to the students.
- The teacher needs to know if the students are used to using simple tools. If pupils are not used to it, it would be useful to make a prior lesson where pupils drill holes, saw, use hobby knives, etc.
- Consider whether the room is suitable for the activity?
- It may be a good idea for the teacher to build a model in advance so that they have an idea of where the challenges might be, and the students will have a model to build from.
- Consider whether they should be allowed to build more models?
- Consider whether the course could lead to a visit to the local museum to talk to the archaeologists about local house

<b>Prerequisites / preparatory actions for students</b>	None – If students are used to handling simple hand tools
<b>Age of students</b>	From 10 years old
<b>Duration</b>	2 hours
<b>Level of difficulty</b>	Medium

## Step by step description of the tasks

1: Skills: If students are not familiar with using simple hand tools e.g., small sawing and cutting exercises, try using a glue gun and drill holes with a hand drill or an electric drill. Use a whole lesson lasting 45-60 minutes for this.

How to make the perfect circle?

2: Making a circle:

- Go outside and teach the students how to make a circle with a piece of string and a stick. They must set the radius and make a circle. Students should work together in pairs.



## Step by step description of the tasks

If it isn't possible to go outside,  
you can do it this way with a string  
and a pencil

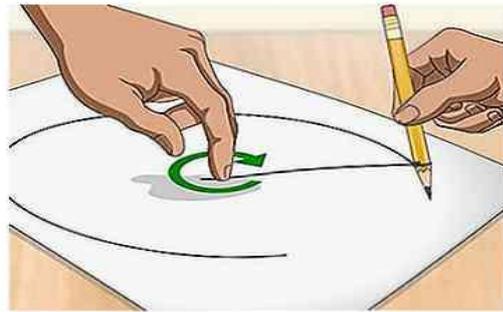


Figure <https://www.wikihow.com/Draw-a-Circle>

Or here:

<https://www.youtube.com/watch?v=JtqBrtqWN9E>

Here is an example how to draw a  
circle:

[https://newsbreak.dk/a-historier/web-tv-sadan-tegner-du-den-perfekte-cirke/565287/!](https://newsbreak.dk/a-historier/web-tv-sadan-tegner-du-den-perfekte-cirke/565287/)

Talk with the students about:

- **Radius**
- **Diameter**
- **Circumstance**

### **How to make the perfect circle with a compass?**

3: Making a circle with a compass.

<https://www.youtube.com/watch?v=xFVJAEcSM7o>

If students are not familiar with using a compass, it may be a good idea to let them experience the tool. Let the students experiment with the tool, let them move the compass around the circle, etc.

Exercises may be found here:

[https://www.youtube.com/watch?v=r\\_ByAAGBHLE](https://www.youtube.com/watch?v=r_ByAAGBHLE)

or here:

<https://www.youtube.com/watch?v=Q5dl1esizM8>

### **Building the Blueprint:**

4: Tell them about the D-shaped house they are going to build. (The blueprint)

	<p>5: Build the house according to the building instructions, possibly in pairs.</p>
<p><b>Assessment activities</b></p>	<p>Let the students review the model in relation to the given criteria.</p> <p>Does the model meet the goals? If not, what has happened?</p>