

OPITEC

Hobbyfix

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R a i n m a k e r



Please Note

The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology.

These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

***Rainmakers*®**

Rainmakers are ritual musical instruments that have been produced over centuries. Initially they were made from dead cactus stalks, filled with small stones. Live plants could not be used because the plant would die when parts were cut off.

To protect various species of cactus from being over used, the trade with cactus has been protected under the Washington Accord for the protection of the environment.

1. Product Information:

Article: Music / rhythm instrument in project pack form

Use: In Design Technology, Key Stage 1

2. Material Information

- 2.1 Material:** Pine (Coniferous) softwood
Wood should be relatively dry before working
- Joining:** Slotting together
- Finishing:** Wax (Liquid or solid)
Wood varnish (Undercoat and top coat)
Staining (Colour, water based finished with varnish)
- 2.2 Material:** Card tube (Wound)
Pre-made part
- Working:** Nails
- Joining:** Glue
- Finish:** Painting (Base and top coat)
- 2.3 Material:** Nails (Steel)
Ready made

3. Tools:

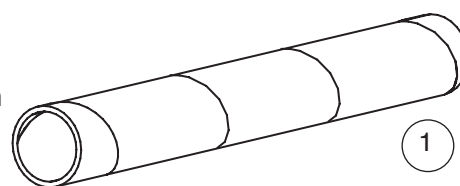
Nailing with a hammer: Make sure the work does not move when nailing.

Note: Hold the hammer handle tightly!

4. Parts List

Part	Material	Quantity	Size	Diagram
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Card tube	wound	1	ø58/50 x 500 mm
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Wood disc	pine	2	50 mm
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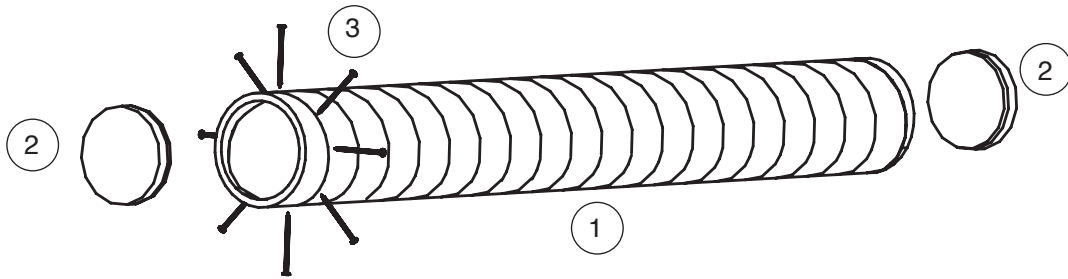


Nails	steel	ca. 110g	30 mm
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Granules	ceramic	ca. 100 g	
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5. Exploded diagram



6. Planning Overview

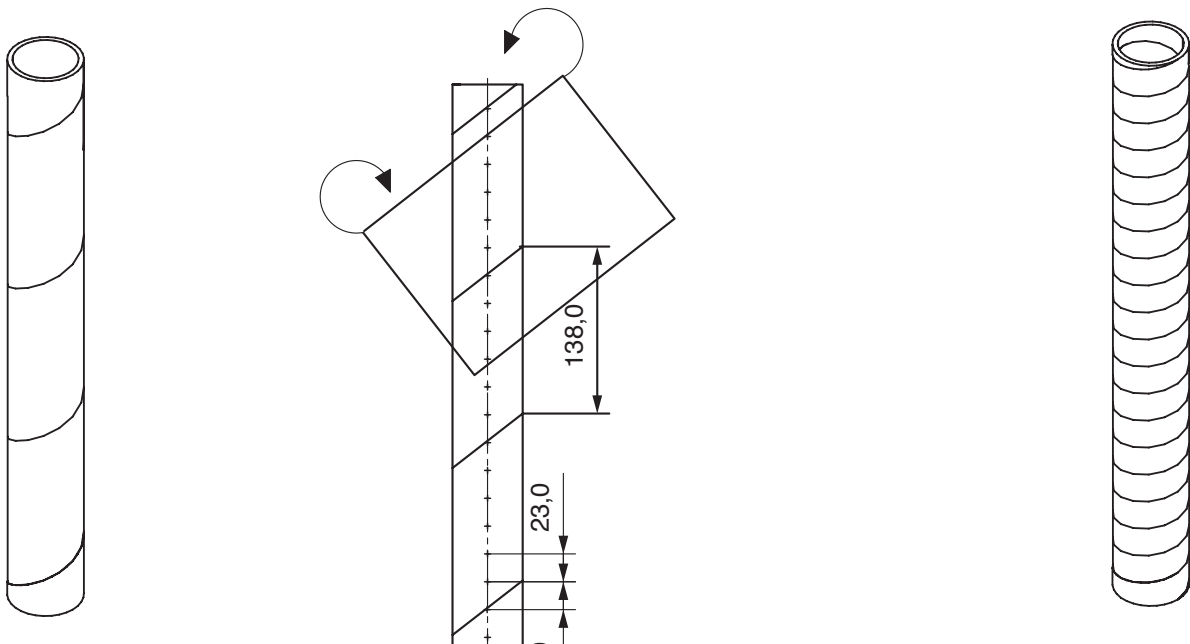
6.1 Preparing the cardboard tube

6.2 Assembly

6.3 Final decoration

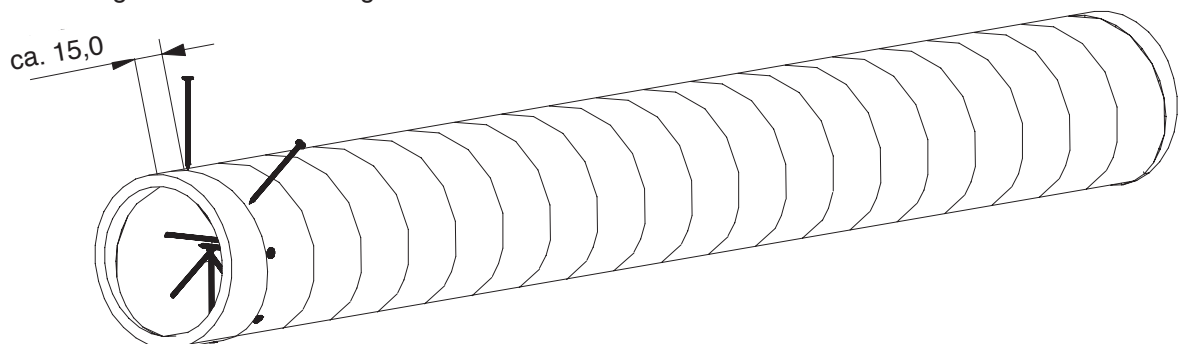
6.1 Preparing the cardboard tube

6.1.1 The cardboard tube (1) is wound so that each spiral section is 90mm wide. These sections should be divided into 6 and marked so that they are 22,5mm wide (See diagram)



6.1.2 Now lay the tube on a bench. So that the tube does not roll, insert tiny wedges or work in pairs with one pupil holding the tube as the other hammers the nails. Insert the nails along the spiral you have marked out leaving a gap of 20mm between each nail.

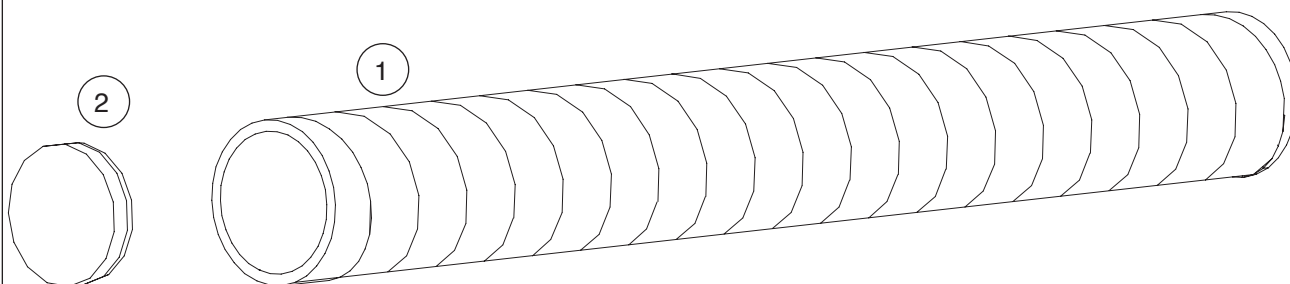
Note! Leave approximately 15mm free at the ends of the tube so that the caps can be glued in at a later stage.



6.2 Assembly

6.2.1 Glue one of the wooden discs (2) in the end of the tube

Note: The tapered side of the disc should be inserted inwards to the tube!



6.2.2 Pour the ceramic granules into the tube and insert the second disc in the end (Do not glue at this stage) check that the rainmaker works properly

6.2.3 When the sound is correct glue the second disc (2) in position the same way as the first.

Tip: Using different materials such as small stones or gravel the sound will be different

6.3 Decoration

In order to disguise the nail heads we suggest that you decorate your rainmaker using ethnic patterns. You can print the patterns on paper and cover the tube.

