

**Kingston  
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London

# **EDDLEY SEARCH TARGET**

## **CONSTRUCTION GUIDE**

A guide demonstrating how you can construct an  
Eddley Search Target from basic materials



[www.eddley.com](http://www.eddley.com)

# EDDLEY SEARCH TARGET

## About the Eddley Search Target

The Eddley Search Target is a cheap, robust and effective search target. It was designed for a research project, measuring the effectiveness of thermal imaging cameras for finding drowning people from lifeboats.

There are a number of features that make it superior to traditional rescue dummies for search training or further research:

- **Price:** it is considerably cheaper with the component parts being available for around \$5 (US) compared to \$1000 (US) for a typical 40-kilo rescue dummy.
- **External features:** Eddley is realistically coloured, shaped and sized. The classic Eddley Search target is made using a polystyrene shop mannequin head, although any shaped lump of polystyrene would suffice. The heads can therefore be shaped or selected to be the exact size and shape of the target required and can be painted as appropriate.
- **Realistic movement:** the Eddley has a 3 kilo weight suspended by a line underneath the target so that it sits at a realistic depth under the water. The swinging movement of the weight makes the target “bob” or “nod” as it swings, creating a movement similar to a person in the final stages of swim failure.
- **Attachment points:** it is possible to incorporate attachment points on the central pole, which can be used to attach lights, RFID transmitters, GPS or heatpads. This makes the Eddley Search Target useful for investigating tidal patterns, enables it to be tracked if lost, and able to demonstrate the action of currents on swimmers.

The Eddley Search Target provides an effective tool that can be adapted to suit almost any water safety purpose.

# Things you will need to construct an Eddley Search Target

The Eddley Search Target can be made with very basic tools and materials. You will need the items shown below although it is possible to improvise and experiment with alternative materials.

## Ideal Required Materials



Polystyrene Head



Wooden broom handle  
(or similar)



x2 screw bolts with nuts



x4 washers to fit screw bolts



x2 large washers that will fit around the Broom handle

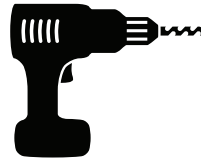


Strong thread, twine or cable ties.



Metal Weight

## Tools Required



Drill



Screwdriver



Spanner



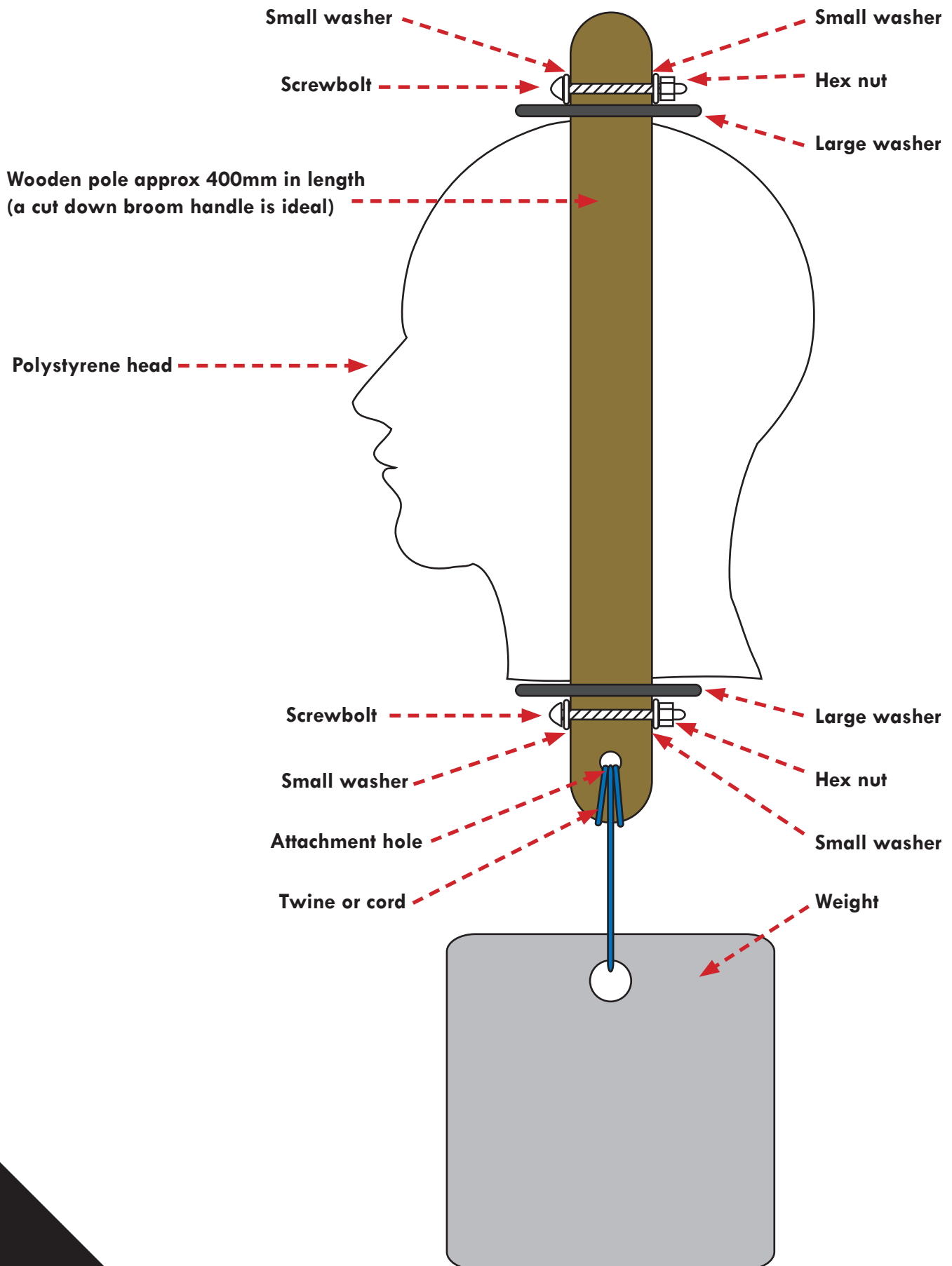
Hole cutting device



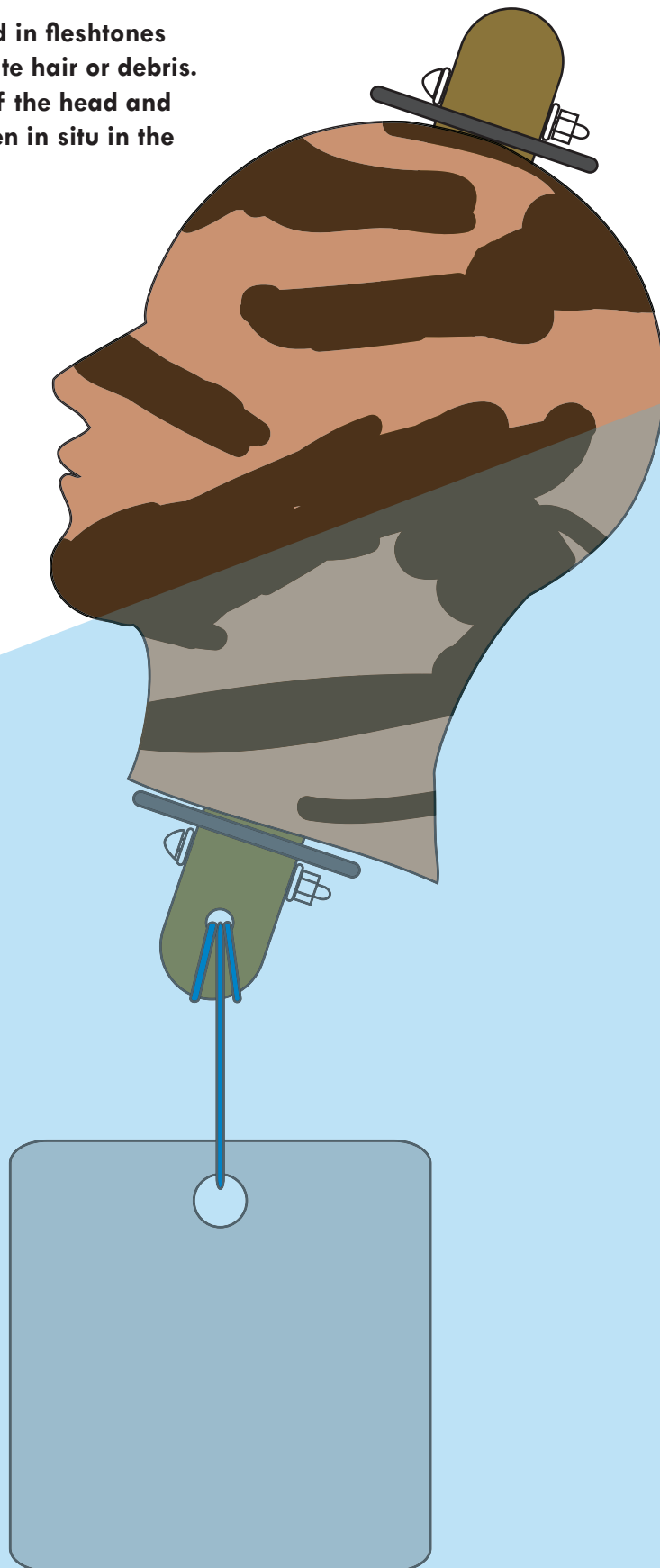
Saw

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## Construction diagram



The head should be painted in fleshtones and other colours to simulate hair or debris. This breaks up the shape of the head and makes it more realistic when in situ in the water



# EDDLEY SEARCH TARGET

## Step One: Drill a hole through the head



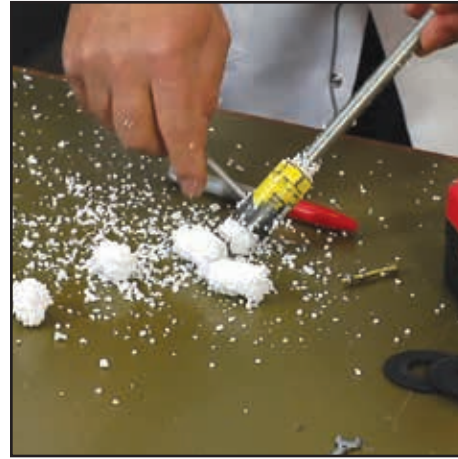
First of all, mark the top centre of the head where you want to drill.



Secure the head upright so it does not move. You can use a vice or get somebody to hold it steady whilst you drill down through the head.



Using the cutting tool, drill/cut down through the head starting from the mark you made at the top centre of the head.



Make sure that you regularly clear any excess polystyrene from your drilling tool as you progress through the head.



The result will be a hole through the length of the head.

## Step Two: Preparing the pole



If you have not already done so - cut the broom handle so it is approximately 400mm in length.



Check that it slides snugly through the hole that you have made through the head.



With the same amount of pole sticking out from either end of the head, mark the pole about 10mm above the top of the head.



Make a second mark on the pole about 10mm below the bottom of the head. Add a third mark approximately halfway between the second mark and the bottom of the pole for the attachment hole.



Remove the pole from the head and secure the post in a vice. Drill an attachment hole through the pole at each of the three marks.

# EDDLEY SEARCH TARGET

## Step Three: Affixing the head



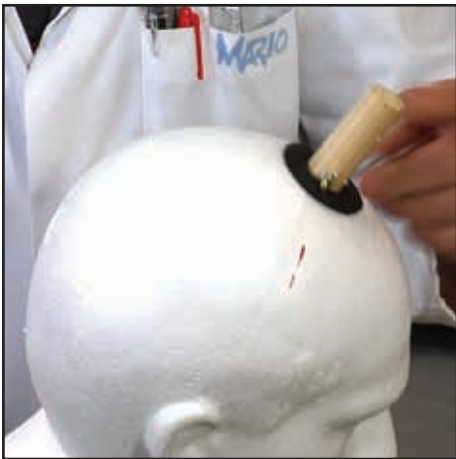
**A**

Screw the top bolt through the first hole that you drilled and fix the bolt in place with the nut.



**B**

Slide one of your large washers up from the bottom of the pole until it rests against the bolt.



**C**

Slide the head onto the pole until the top rests against the large washer.



**D**

Slide the second large washer up the pole until it rests against the bottom of the head.



**E**

Screw the second bolt through the hole underneath the head and fix the in place with the nut.



**F**

Using a spanner to secure the nut tighten the screws at either end of the pole with a screwdriver.



**Step Four:** Painting the head and attaching the weight



Paint the head in an approximation of a flesh tone. Add darker areas for hair or to simulate mud or debris. This will break up the shape and make for a more realistic object to search for.



Attach a weight to the bottom of the search target by threading twine, cable ties or similar through the attachment hole.



In the water your Eddley Search Target will look just like a real person with just their head above water.

