

In this project I'm building a periscope.

The purpose of periscope:

The purpose of periscope is basically for the submarines to determine what is in their surroundings, and also to observe some chemical reaction. Their purpose in the military is to observe their hiding position and for tanks and armoured vehicles to check all around the area. Their use it's for to observe a farther vision without moving, and also get a closer view of things.

How it's work:

The periscope has two mirrors on them, one on top and one on the bottom placed by 45 degrees, the light on the object from the top mirror and it reflects the light on to the bottom mirror, which lets us see what is in our surroundings.

Material:

One or two box, two piece of mirror, hot glue gun, straw, scissor,

This experiment is to make a periscope:

By first finding a perfect box or make a box the same width of your mirror and high enough for your mirror to fit in by 45°.

I make a box to fit inside of the other one, because the one that I make you can pull it up or down.

One of my boxes has a long hole in one side of the box. You can cut it or find one.

After calculus a measurement of a triangle to make sure the mirror doesn't fall.

Cut the triangle out.

For the box that I make, there's two layers, so I make sure the layer inside is shorter than the one outside by the measurement of the triangle, because this will help me by easier to stick the mirror on.

After, I glue three sides together and try to make it work by holding the mirror on to the box, one of the mirrors is facing down 45° and at the top of one of the boxes, and the other one facing up 45° at the bottom of the other box.

Then if it works, glue the triangle one at the top of the first box, and the other one at the bottom of the other box.

After gluing the triangle make sure they are not falling and glue the mirror on to it, make sure it is not falling also.

Next test it does it work again, after cut a straw by the side you want the handle to be, cut eighth legs(like octopus) on one side of the straw and cut a hole in the other box that doesn't have a long hole in the middle(for the straw to fit in) at the oppies side of the mirror and also the same side as the long hole on the other box.

After cutting a hole, put the straw inside the eighth legs inside and the side you didn't do anything outside.

Stick the eighth legs on to the box, it is kind of just for attaching to the other box, because it's too heavy, so you can't actually use it.

Finish the final touch by gluing the fourth side onto the box that you haven't finished yet.

And finally put the box with straw to the other one, put the straw in the hole first, after trying to stuff the box in, and here it is finished.

Try to look through it, see if it works.

How it work:

The light reflect in to the first mirror on top and that mirror reflect things on to the other one, that why we need to put it in 45 angle point, because if you don't put it like that it's gonna be hard for you see, you can try it by just holding two mirror look through the bottom one and see can you the top one and try to look in to it, can you see somethings that you are reflecting.

