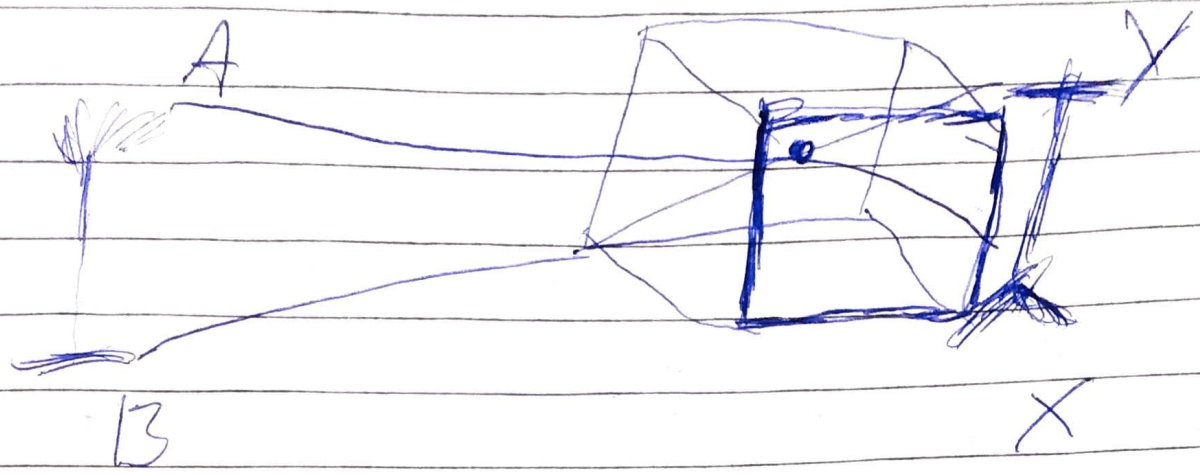


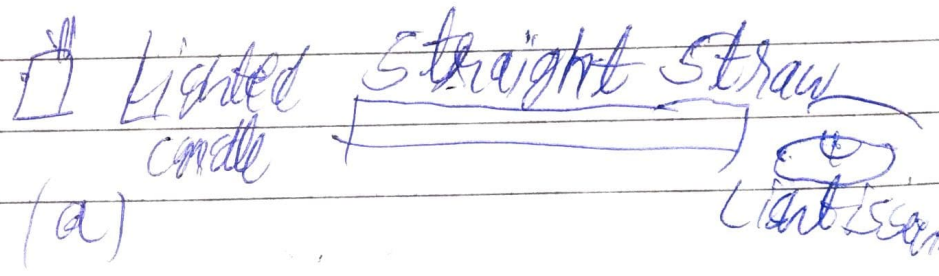
Activity 2

Pin hole camera

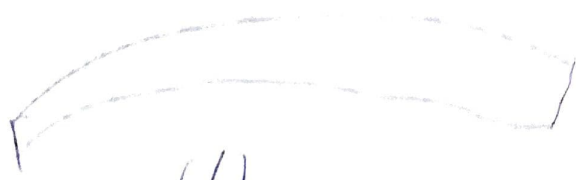


Activity 2

Place a lighted candle on a table.  
 Take a drinking straw. Close one eye and look at the candle through the straw from the other eye. The flame is clearly visible.



lit candle



(b)



NO light is seen

now bend the straw in the

middle and again look at the

The flame is not visible now. The

reason is that light travels in

a straight line path. When the straw

is bent, the light of the candle

flame does not reach our eye.

Conclusion: Light travels in a straight

line path.

## Principle of pinhole camera:

The pinhole camera, also known as camera obscura (Latin means dark room), works on one principle discussed below.

1) The image formed by the camera shows the rectilinear propagation of light, which means the pinhole camera acts on the fact that light travels in a straight line.

2) When we open the shutter or a window, light illuminates to form an image on photographic paper (as film) placed at the back of the camera.

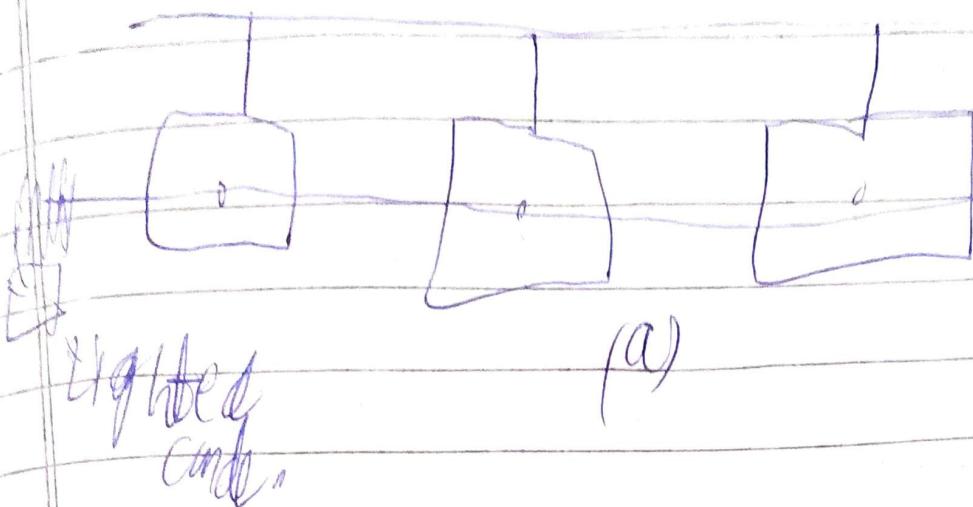
Activity 3

Take three square cardboard A B and C each of side about 5 cm. Take a pin and make a small hole in each cardboard at the same height. Suspend the cardboard

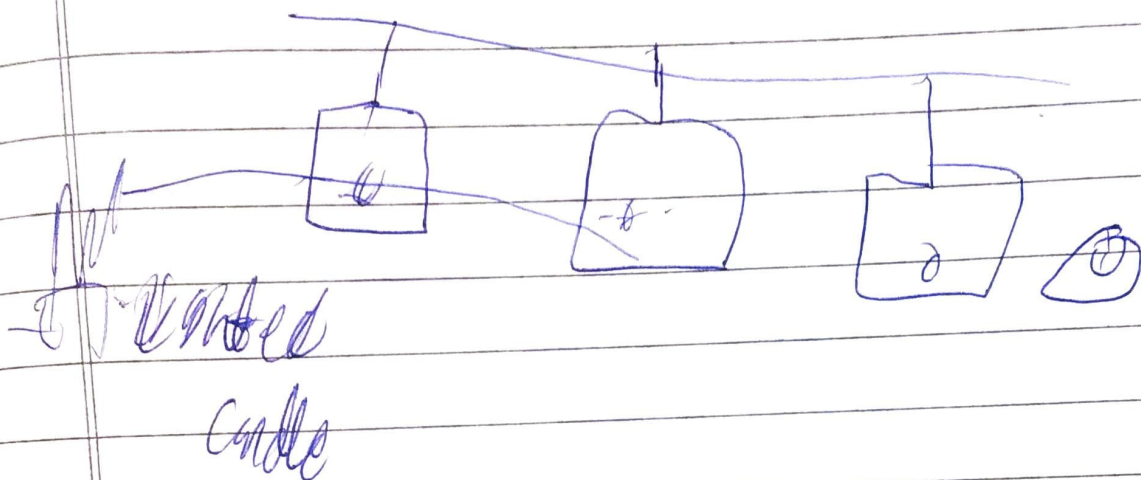
pieces by separate threads vertically from a support such that each hole is at the same height.

Pass a string through the holes and pull it tight. This makes the three holes to be in a straight line. Now take out the string.

Place a lit candle near one of the cardboard from side A. Look at the candle from the other side of the cardboard. Flame is clearly visible.



Light is seen  
6



Light is seen.

Now slightly displace one of the cardboard (say B) so that the holes are no longer remain in a straight line (b). Again look at the candle flame from the other side of the cardboard. You do not see the candle flame. The reason is that light

rays in a straight line and now the  
holes in the cardboard A, B and  
C are not in a straight line. Therefore,  
the flame is not visible.

Conclusion: Light travels in a straight  
line path.