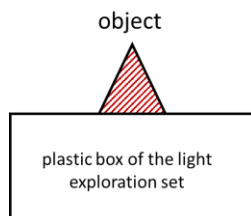


Light exploration set

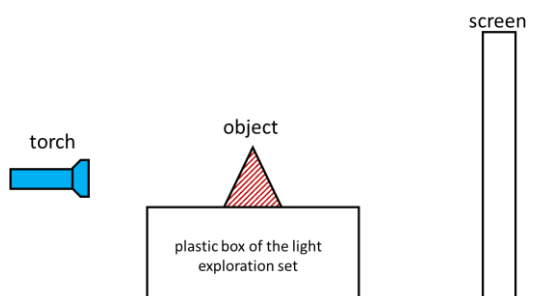
Activity 1 : Shape of shadow

Place the cone on the plastic box as shown. The cone is the object for this activity.

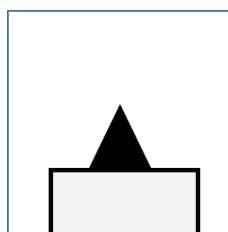


Use a book with a white cover as the screen.

Position the torch, object and the screen as shown below.



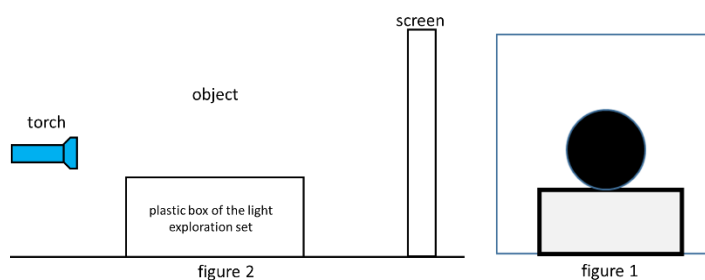
The shadow shown on the screen is a triangle.



Question 1 :

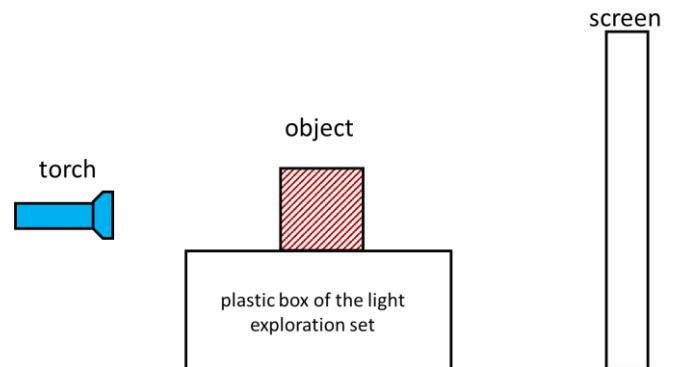
Rotate the cone and position it on the box with the help of some blue tac (or plasticine or wet tissue) to achieve the shadow shown in Figure 1.

Draw the position of the cone in Figure 2.



Activity 2 : Size of shadow (position of torch, object and screen)

Set up the experiment as shown below using a cube as the object.



Question 2 :

By moving the torch towards and away from the object, you should observe that the shadow becomes larger and smaller.

When the torch is nearer to the object, the shadow becomes _____.

When the torch is further away from the object, the shadow becomes _____.

Question 3 :

By moving the screen towards and away from the object, observe that the shadow becomes larger and smaller.

When the screen was nearer to the object, the shadow became _____.

When the screen was further away from the object, the shadow became _____.

Question 4 :

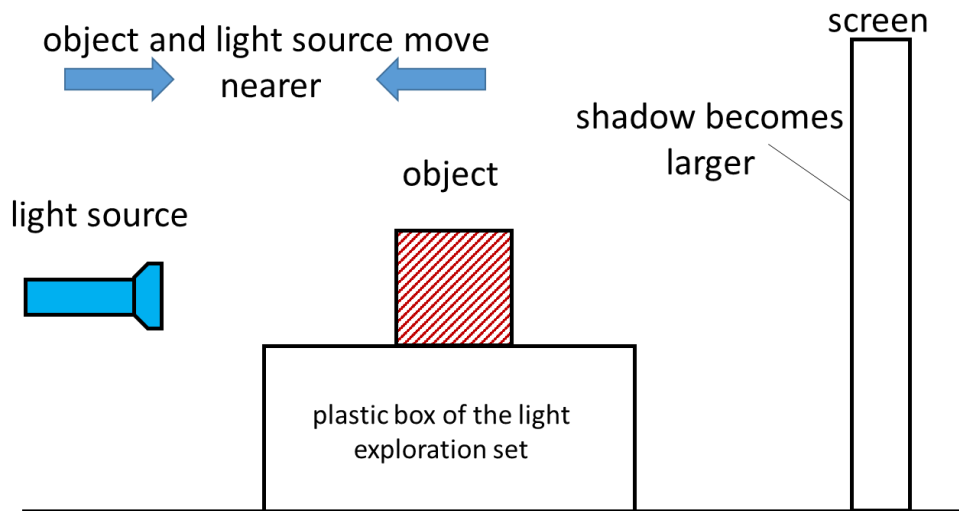
By moving the object towards and away from the torch, observes that the shadow becomes larger and smaller.

When the object was nearer to the torch, the shadow became _____.

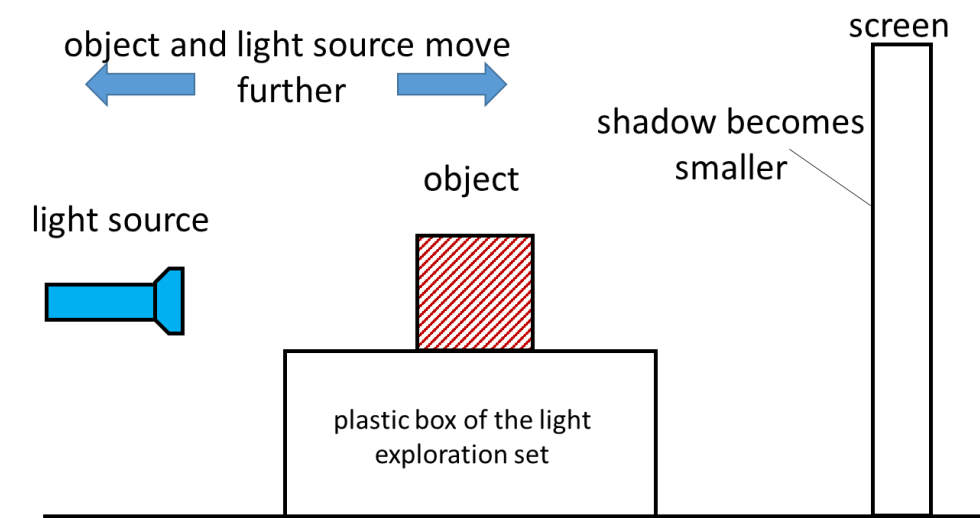
When the object was further away from the torch, the shadow became _____.

In conclusion

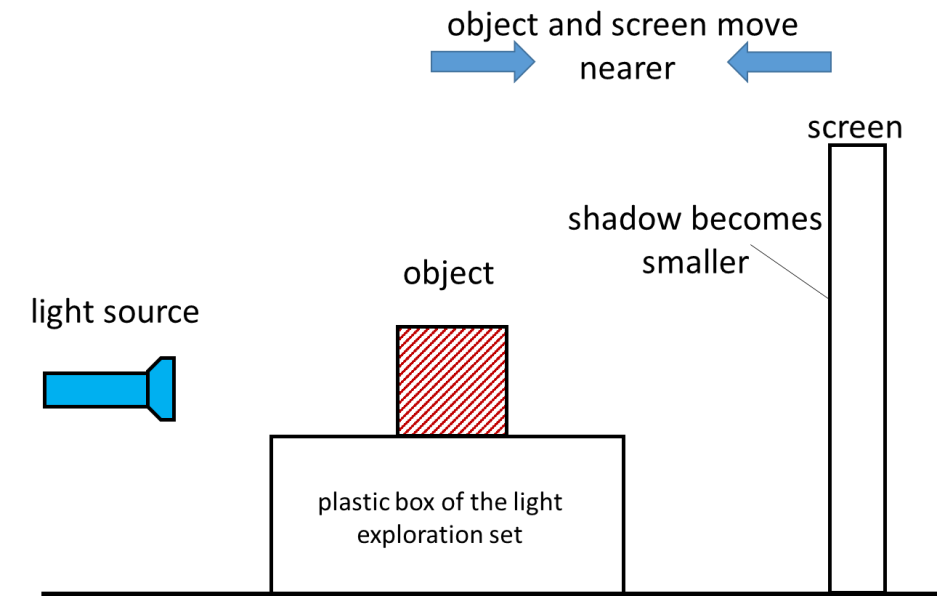
- (1) When the light source moves nearer to the object (or the object moves nearer to the light source) the shadow becomes _____.



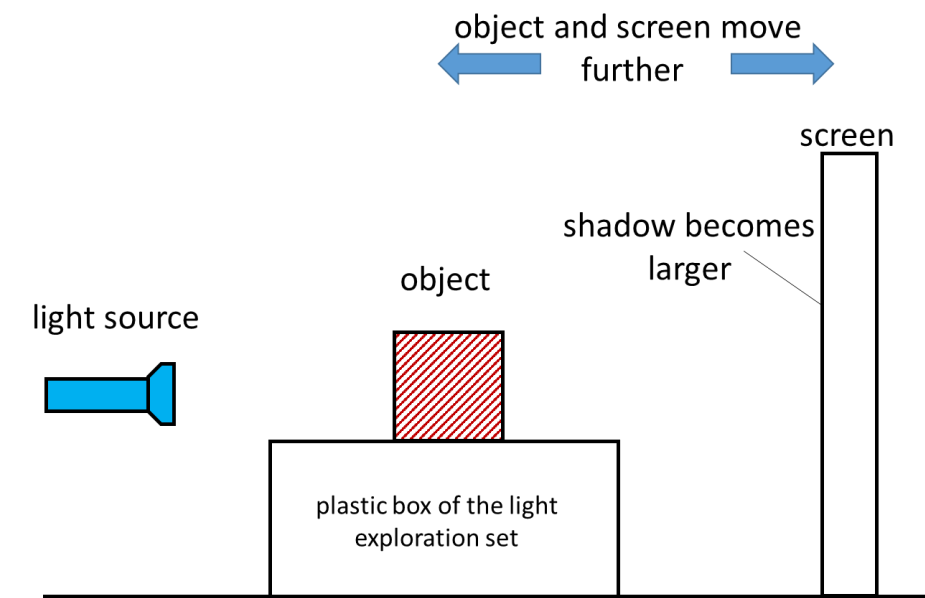
- (2) When the light source moves further away from the object (or the object moves further away from the light source), the shadow becomes _____.



- (3) When the object moves nearer to the screen (or the screen moves nearer to the object) the shadow becomes _____.

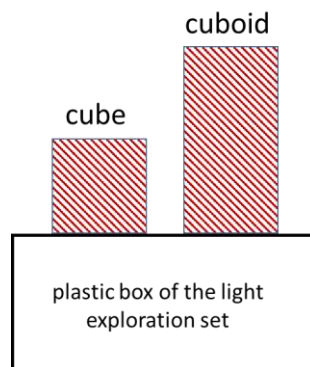


- (4) When the object moves further away from the screen (or the screen moves further away from the object), the shadow becomes _____.



Activity 3 : Size of shadow (size of object)

Place the cube and cuboid on the plastic box as shown.



Question 5 :

Switch on the torch and observe the shadow on the screen.

Draw the shadow of the cube and cuboid on the screen in the diagram below.

