FOR CHILDREN
EXPERIMENTS
SET OF

MARIATI VIDYANAM PARAMSHAD
FOR CHILDREN

EXPERIMENTS

SET OF

Marathi Vidyanak Parishad

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Marathi Vidyanak Parishad
THE STRIP THAT LIFTS UP

Experiment no. 2

Purpose:
Can you increase or decrease the speed of the flying arrow?

What will you do to fly the arrow in opposite directions?

Why does the arrow spin round instead of rolling forward?

What will you do to stop the arrow from spinning?

Can you increase or decrease the speed of the flying arrow?

Question:
Why does the arrow spin round instead of rolling forward?

To perform the experiment, take a strip of paper and roll it into a cone. Take a pencil and mark the end of the cone. Place the pencil at the center of the cone and spin the cone in a circular motion. The cone will spin round instead of rolling forward.

Procedure:
1. Take a strip of paper and roll it into a cone.
2. Place the pencil at the center of the cone and spin the cone in a circular motion.
3. The cone will spin round instead of rolling forward.

Apparatus:
A strip of paper, a pencil, a cone.

FLYING PAPER ARROW

Experiment no. 1

Purpose:
To demonstrate the aerodynamic properties of a flying arrow.

To perform the experiment, take a strip of paper and roll it into a cone. Place the cone on a flat surface and release it. The cone will fly through the air and land on the surface.

Procedure:
1. Take a strip of paper and roll it into a cone.
2. Place the cone on a flat surface and release it.
3. The cone will fly through the air and land on the surface.

Apparatus:
A strip of paper, a cone.
3. If you hold the pin against the iron bar of the window, you will
notice it.

PROCEDURE
1. Bring the pin slowly towards the hole and see that it becomes
visible at a distance.
2. Hold the card in one hand and hold it in front of your eyes. See
whether the hole is visible.
3. Try and make a small hole somewhere in the middle of the card paper (the
ingredients of the experiment must be used).
4. Place the pin in the paper measuring 8 cm. Place the pin in the
hole. The pin should not be big.

APPARATUS: Card paper and a pin

CARD PAPER AND PIN

EXPERIMENT NO. 5

Questions: * Why is the card required? * Why was the hole made using a
mill? * What will you do to see a hole in your card paper?

PROCEDURE
1. Take a piece of card paper measuring 5 x 8 cm. Place the pin in the
hole. The pin should not be big.
2. Hold the card in one hand, and hold it in front of your eyes. See
whether the hole is visible. If no, then try to see the hole in your
right eye from one end of the card paper. The card paper should be
about 5 cm away from your eyes. Hold a piece of card paper facing the
direction of the light. The light is coming from the opposite direction.
3. Close the left eye and keep the neck straight. If you see the + sign
on the card paper, then you can see the + sign.

APPARATUS: A piece of card paper, + mark and a similar rule.

TO FIND OUT THE BLIND SPOT IN YOUR EYE

EXPERIMENT NO. 4

Questions: * Why was the experiment done? * What will you do in
your other eye? * Why did you hold the pin in any other non-transparent
hole on your palm?

PROCEDURE
1. Hold the card paper on your palm. The card paper should be
5 cm away from your eyes. Hold a piece of card paper facing the
direction of the light. The light is coming from the opposite direction.
3. Close the left eye and keep the neck straight. If you see the + sign
on the card paper, then you can see the + sign.

APPARATUS: A piece of card paper, a cylinder and a hole

A HOLE IN YOUR PALM

EXPERIMENT NO. 3

Questions: * Why was the experiment done? * What will you do in
your other eye? * Why did you hold the pin in any other non-transparent
hole on your palm?

PROCEDURE
1. Hold the card paper on your palm. The card paper should be
5 cm away from your eyes. Hold a piece of card paper facing the
direction of the light. The light is coming from the opposite direction.
3. Close the left eye and keep the neck straight. If you see the + sign
on the card paper, then you can see the + sign.
When burnt

The fibre that does not get cut even

Experiment no. 6

Question: Why does the pin appear to move in reverse?

Procedure: Take a few pieces of the cotton

Apparatus: A reel of thread, cotton

The pin that reverses

Experiment no. 6

Question: Why does the pin appear to move in reverse?

Procedure: If you see the pin separately, why does it not appear thicker?

Apparatus: A bundle of thread, cotton, candle and matchbox

And that the pin appears thicker that the hole of the window.
Which Is the Boiled Egg?

**Experiment no. 12**

In the concentrated solution of salt, the egg sinks in ordinary water but why does it not now floating on the surface of water when released in the glass and you will see the same egg sink in the glass. Now mix a spoonful of common salt in the water and you will see the egg sink to the bottom of the glass. **Apparatus**: A glass, common salt, spoon and an egg.

**Theory**: The egg floats on water.

**Questions**
1. Why did the balloon glide upwards?
2. Pull the thread tight and open the balloon. The balloon will glide. **Procedure**: Cut one straw into two pieces. Take a balloon as shown in the figure, stick the straw in the balloon by a piece of cell-o-tape. Place the glass near the balloons and release gently an egg into it. **Procedure**: Take some water in the glass and release gently an egg into it. **Procedure**: Take some water in the glass and release gently an egg into it. **Procedure**: Take some water in the glass and release gently an egg into it.

**Apparatus**: A balloon, a straw, a cup of water, a cup of salt.

**Questions**
1. Why did you see the paper drop through the second piece of straw?
2. Pull the thread tight and open the balloon. The balloon will glide. **Procedure**: Place one piece of the glass. **Procedure**: Place one piece of the glass. **Procedure**: Place one piece of the glass. **Procedure**: Place one piece of the glass.

**Apparatus**: Part of scissors, glass, a few straws.

**Questions**
1. Why did you see the paper drop through the second piece of straw?
Observe this lens. You will see the image of eyes expanding. Then

Close your eyes. Open your eyes in dim light room.

**Procedure:**
- Place your index finger in front of your eye. (Your index finger should be less than 1 cm away.)

**Apparatus:** Fingertip

**PUPIL OF THE EYE**

Experiment no. 17

**Pupil of the Eye**

**Question:** How does your hand appear through the

**WATER**

**Procedure:** Fill the dish with water. See your hand through the water. (In the dark)

**Apparatus:** Empty electric bulb, dish, water

**AIR LENS**

Experiment no. 16

**Air Lens**

**Question:** What is the reason for the changes seen in the image of letters?

**WATER**

**Procedure:** From the bulb, how will the letters appear when observed from a distance of 2-3 cm?

**Apparatus:** Electric bulb, dish, water

**AQUATIC LENS**

Experiment no. 15

**Aquatic Lens**

**Question:** Which is the reason and principle involved in answers?

**WATER**

**Procedure:** Remove the water from the bulb.

**Apparatus:** Burning electric bulb, water, dish

**THE STRAW THAT BREAKS AT THE SURFACE**

Experiment no. 14

**Straw that Breaks at the Surface**

**Question:** Why do you see the candle burning in water?

**Procedure:** If you hold a glass with water, you will see a glass sheet. If the glass sheet is perpendicular to the horizontal plane, the water will break through the glass sheet. Keep a burning candle in front of the glass sheet. On the other side of the glass sheet, keep a glass with water. Hold the glass sheet vertically by supporting with wooden blocks. (See the Figure)

**Apparatus:** Wooden blocks (see the figure), glass, candle, water

**THE CANDLE THAT BURNS IN WATER**

Experiment no. 13

**Candle that Burns in Water**
**TOTAL INTERNAL REFLECTION**

Experiment no 18

1. As shown in the figure, keep the flash tank on the table.
2. The room should be dim lighted.
3. Throw the light from the torch in the direction in the tank and observe
   - The path of light passing through water
4. If you touch the bottom of water, the flash will not be seen.
5. If you throw the light from the torch in the direction in the tank and observe
   - Where has the pin

**Apparatus:** Flash tank, water, pen torch.

**THE INVISIBLE PIN**

Experiment no 19

[Diagram of a pin submerged in water]

**Question:** What will you see if you look in the direction of pin?

**Apparatus:** A thick non-transparent disc of plastic (like a flash tank), a flash pin.

**Procedure:**

1. Take a flash tank of 4 to 8 cm.
2. Hold the disc on the bottom side of the tank.
3. Place it in the water.
4. If you throw the flash tank in the direction of pin, you will see the flash pin.

**Apparatus:** Flash tank, water, pin, flash tank.

1. Press the flash tank in the bottom of the non-transparent disc of plastic.
2. And hold the pin (in the water) in the direction of flash tank.
3. If you throw the light from the torch in the direction of pin, you will see the flash pin.

**Procedure:**

1. Take a flash tank of 4 to 8 cm.
2. Place it in the water.
3. Hold the disc on the bottom side of the tank.
4. Place it in the water.
5. If you throw the light from the torch in the direction of pin, you will see the flash pin.

**Apparatus:** A flash tank of 4 to 8 cm, water, pen torch.

1. As shown in the figure, keep the flash tank on the table.
2. The room should be dim lighted.
3. Throw the light from the torch in the direction in the tank and observe
   - The path of light passing through water
4. If you touch the bottom of water, the flash will not be seen.
5. If you throw the light from the torch in the direction in the tank and observe
   - Where has the pin

**Question:** What will you see if you look in the direction of pin?

**Apparatus:** A thick non-transparent disc of plastic (like a flash tank), a flash pin.

**Procedure:**

1. Take a flash tank of 4 to 8 cm.
2. Place it in the water.
3. Hold the disc on the bottom side of the tank.
4. Place it in the water.
5. If you throw the light from the torch in the direction of pin, you will see the flash pin.
**Experiment no. 24**

**Question:** Why does the piece of chalk come out?

**Procedure:**
1. Fix a handle of a match box.
2. Fix a burning candle at a piece of a narrow metal tin. Place a candle, match box, and piece of chalk.
3. Now while you are blowing, increase the distance between the candle and the piece of chalk. It will bend the flame towards the bottle.

**Apparatus:** Glass funnel, candle.

**The Flame That Bends Towards the Funnel**

**Experiment no. 21**

**Question:** Why is it that the flame bends in both directions?

**Procedure:**
1. Hold the match box in the middle. Move the piece of a narrow metal tin slowly up and down to increase the distance between the candle and the piece of chalk.

**Apparatus:** Glass funnel, candle.
AIR FOR DRINKING WATER

Experiment no. 27

Question: Why does the balloon not blow up?

Procedure: Blow up a balloon in a bottle. If the balloon blows, it is difficult to
        blow a balloon in a bottle. If the balloon does not blow up, it is easy to blow a balloon in a bottle.

APPARATUS: One balloon, one bottle.

POURING AIR

Experiment no. 26

Question: Why does the balloon not blow up?

Procedure: Fill a balloon in a bottle. If the balloon blows, it is easy to
        blow up. If the balloon does not blow up, it is difficult to blow up.

APPARATUS: One balloon, one bottle.

HANDKERCHIEF REMAINS DRY UNDER WATER

Experiment no. 25

Question: Why does the handkerchief remain dry?

Procedure: Take a handkerchief. Dip the handkerchief in water. Now dip the handkerchief in water.
        The handkerchief remains dry. Take a handkerchief. Dip the handkerchief in water.

APPARATUS: A handkerchief, water.
**Question:** Why does the ruler not fall down from the table?

**Procedure:**
1. Place the ruler on the table and mark a point on the table.
2. Place the ruler on an inclined surface.
3. Observe the motion of the ruler as it slides down the incline.

**Appearance:** Ruler, incline, table.

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**Question:** Why does the water not fall when the tube is tilted?

**Procedure:**
1. Place the tube on a horizontal surface.
2. Pour water into the tube.
3. Tilt the tube and observe the water level.

**Appearance:** Tube, water.
**Catapult Car**

Experiment no. 37

**Materials:** Wooden board, valve tube, nails, large size used battery

**Procedure:**
1. Pass the soft wire thread through the tube of the valve tube.
2. As shown in Figure 5, move the tube in a circular manner. The inner part of the tube is up. The upper end of the tube is kept through the hole of the mill at one end.
3. Pass the soft wire thread through the tube so that the head of the wire is kept inside.
4. Washed in cold water to remove the thread. 4. After washing 50 to 100

**Lifting Weight by the Centrifugal Force**

Experiment no. 35

**Questions:** Why will the heavier weight go up at the other end? Why the heavy weight at the other end is lifted up?

**Procedure:**
1. As shown in Figure 5, the pipe is kept at one side. The water tube is kept at the other side. The pipe is closed and placed at the other side. The water tube is closed.
2. Once the water starts flowing into the open end, the water tube (40 cm) in length)

**Centrifugal Spray**

Experiment no. 34

**Questions:** How the liquid remains dipped in water while doing it see the other end of the pipe. When doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe. While doing it see the other end of the pipe.

**Procedure:**
1. Pour one end of the valve tube in the glass. 2. Using a plastic pen or needle, plunge which has been prepared in the glass. 3. Using a plastic pen or needle, plunge which has been prepared in the glass. 4. Using a plastic pen or needle, plunge which has been prepared in the glass. 5. Using a plastic pen or needle, plunge which has been prepared in the glass. 6. Using a plastic pen or needle, plunge which has been prepared in the glass. 7. Using a plastic pen or needle, plunge which has been prepared in the glass. 8. Using a plastic pen or needle, plunge which has been prepared in the glass.
**ELECTRIC CRACKER**

**Experiment no. 40**

**Question:** How does the ampoule sink by more pressure?

**Apparatus:** Test tube with water in it.

**Procedure:** Get some used injection ampoules.

**Result:** Test tube with water in it.

**Conclusion:** "The level of water rise or raise, but why?"

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**DOES THE STONE RAISE THE LEVEL OF WATER?**

**Experiment no. 38**

**Questions:** a) What will happen if the pebble is heavy? b) When the water is stirred, the pebbles sit down again while board moves along with the cells in the opposite direction. c) How keep the celebration point? d) Where place a small pebble?
Experiment no. 43

**GALVANOSCOPE**

Procedure: As shown in figure 1A, wind copper wire around a cardboard box. The cardboard box must be placed on the inner box, facing the black end of the needle so that the end of the needle is on the left.

Question: Even if you turn the galvanoscope to another position, will the needle remain in the same direction? Why?

Answer: Magnetic needle; 22 gauge winding wire, used in galvanoscope.

**SIMPLE MAGNETIC NEEDLE**

Experiment no. 41

**Question:** What will happen if you substitute a new magnetic needle for the copper wire used in experiment no. 41? Will the effect of the needle be changed?

**Procedure:** Take the copper with the needle used in experiment no. 41. Wind copper wire around a cardboard box. The cardboard box must be placed on the inner box, facing the black end of the needle so that the end of the needle is on the left.

**Question:** How was heat produced in the wire? If the cells are new, why will the electrical circuit of the thermal battery cells? If the cardboard box used in the experiment no. 41 is used instead of the cardboard box used in experiment no. 41, will the needle remain in the same direction? Why?
Experiment no. 47

**Question:** Why the paper is not easily removed?

**Apparatus:** Weight, cardboard under the weight, piece of cardboard under the rubber band.

**Procedure:** Place a weight (stone) at the center of the rubber band, and then place the cardboard under it. Place the weight on the cardboard.

**Result:** The weight is still there, but it is not easily removed.

**Conclusion:** The cardboard provides support for the weight, making it difficult to remove.

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Experiment no. 48

**Question:** Why there was increase in the length of the bulb when a weight was added?

**Apparatus:** Two small metal strips, a rubber and a card, cardboard, brick.

**Procedure:** Fix the two metal strips 4 cm apart in the cardboard box as shown in the figure. Then, place a weight on the rubber band and observe the length of the bulb.

**Result:** The length of the bulb increases when a weight is added.

**Conclusion:** The weight applies pressure on the rubber band, causing the bulb to expand.
HEAT LIGHTS UP THE WORDS

Experiment no. 50

The领袖 are added?

Question ♠ Why the sugar burns with a flame when substances
sugar will burn with a flame.
Now add碘度 of salt with sugar. Heat by a candle. Now the
sugar burns but without a flame. Wash the spoon clean and dry.

Procedure: Heat the sugar in the spoon by the flame of the candle.
Apparatus: Spoon, candle, match-box, sugar, iodine.

BURNING SUGAR
Experiment no. 49

Question ♠ How was circuit broken when heat was applied?

Procedure:


Experiment:

27

26

Lighting a Bulb. Heating a Starter

Experiment no. 48

Question ♠ Why the bulb gets heated when heat is applied?

Procedure:
Apparatus: Z.2 will bulb, holder. Z. cells, wire, globe, light starter.

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Procedure: Z.2 will bulb, holder. Z. cells, wire, globe, light starter.
WATER COLUMN THAT GOES UP AND DOWN

Experiment no. 55

What will happen if the bottle is half filled?

Procedure: Pass a plastic straw through the mouth of the bottle, then place the bottle of the mouth of the bottle, then place the column of water high above the mouth of the bottle. The water column must be with a hole in the middle, the cork must be placed on the bottom, a cork should come out of the cork. Dip this part of the straw hole in the cork. Ask one part of the straw.

Appearance: Liquid empty, empty bottle, a cork.

Question: Did the fountain start due to any pressure applied on a cork?

Experiment no. 29

COLUMN WILL automatically go further up, and hold the bulb in your hands. The water will be pushed up. Dip your hands in the mouth of the bottle, then keep it in the liquids, and let the water column go up further.

Procedure: Pass a plastic straw through the mouth of the bottle.

Appearance: Liquid empty, empty bottle, a cork.

Question: Why did the column go up further?

Experiment no. 52

COPPER PLATING

Procedure: Take some copper sulphate solution of copper sulphate in a vessel. Keep a small amount of the solution in the solution for 2-3 minutes. Take out the vessel. Keep a small amount of the solution in the solution for 2-3 minutes. Take out the vessel. Keep a small amount of the solution with copper powder. It will be plated with copper powder. It will be plated with copper powder.

Appearance: Liquid, vessel, and metal.

Question: Why did the metal get copper colour?

Experiment no. 51

AMMONIA

Question: Why the smell of ammonia is experienced when small amount of ammonia is expelled from the hand.

Procedure: Take some ammonia in a test tube. Place the test tube in the mouth of the bottle. Ask the hole of the cork. Dip this part of the straw.

Appearance: Liquid empty (ammonium chloride) and tube.

Question: Can we see the words if a hot iron is pressed over the paper?

Procedure: By a candle flame to paper. The written words will appear.

Appearance: The written words will appear.
31

Water in the glass rises up to the top of the candle. When the glass is empty, the water in the glass falls back down to the bottom of the glass.

Procedure: Take a piece of candle which is little shorter than the height of the glass.
33

**DIRECTIONS**

(v)

**Apparatus:** Two bottles of one litre capacity each.

**Procedure:** Place the stones at the bottom of one of the bottles. 

**Questions:**

Why does the bird move its beak?

Why can you see any other sugar candy?

Why did the sticks get stuck in between the match sticks? The sticks

touch each other. Now pull a crystal of sugar candy

Put two match sticks parallel to each other. One can see the coin at the bottom of the bowl. Why can we not see the coin?

**Apparatus:** Glass, glass, sugar, candy, match sticks

**Procedure:** Place some hot water in the glass. Pour the cold water on the surface of the hot water. The cold water will form a cap on the hot water. After a few minutes, the picture will be seen in the glass where the picture is.

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Why does the bird move its beak?

Why can you see any other sugar candy?

Why did the sticks get stuck in between the match sticks? The sticks touch each other. Now pull a crystal of sugar candy

Put two match sticks parallel to each other. One can see the coin at the bottom of the bowl. Why can we not see the coin?
PENCILS THAT DO NOT MEET

Experiment no. 67

The pencils near each other by keeping your hands straight or

Procedure: Take a pencil in each hand. Bring the sharp ends of

Two sharpened pencils

Water rises in the glass

Experiment no. 65

If you do not see the effect repeated.

The colours used should be very light.

Blue gelatin paper and red gelatins.

Paper

Apparatus: Paper and blue pencil. Red and blue coloured gelatins

INVISIBLE FACE

Experiment no. 66

Why does water rise?

Throw away the burn paper and put the glass with bottom up in

A glass

Apparatus: Plain shallow vessel, water, matchbox paper etc.

Procédure: Burn a few paper in a glass.

Water rises in the glass.

Why is line of the pencils not same?

Why is line of the pencils not same? why from each other at the same time. Now move the bottle is same. (fig. c.) Now move the bottle. Now hang both the bottles on the book of the door. See to it that the length of lines in both.

SHORT CIRCUIT

Experiment no. 71

When a bulb lights

Question: Why does the bulb light up when the circuit is completed? Why after the holder and the Weird light the bulb gets lit? Note it one of the points. Does the bulb light? Fill all the points like this one.

When the circuit is completed the bulb gets lit. We have joined the holder at the holder end of the wire to the other end of the bulb holder at d.

Apparatus: 2 vol bulb with holder copper wire. Day cells, screw

WHEN A BULB LIGHTS

70

Experiment no. 70

Same area but different volumes

Experiment no. 69

The blooms that differ

Volume of the cylinders are different Why?

The area and size of the cans are same. Still the blooming will be empty spaces.

When the narrow canister will fall into the broad canister the bulb will fall into the broad canister. Fill the narrow canister with sand and open the bulb.

The bulb holder is kept at the narrow canister. By cella nap. Do not overlap the edges of the cans near each other and sink into the other edge. While diving the bulb only the edges of the post cards from its reach and smear.
What kind of circuit is used in houses?

Circuit in series
Circuit in parallel

Note down the differences between the circuits in

 Procedure: Connect the bulbs, cells and wires. Draw a diagram of what is happening. Label wires A, B, C and D. Use two different bulbs. Label them bulb 1 and bulb 2.

Procedure: Connect the bulbs, cells and wires. Draw a diagram of what is happening. Label wires A, B, C and D. Use two different bulbs. Label them bulb 1 and bulb 2.

The bulb gets brighter with only certain things. Why?

Procedure: Remove the bulb and the cell from circuit A and put them in circuit B. Do the bulbs get brighter? Why?

Procedure: Remove the bulb and the cell from circuit A and put them in circuit B. Do the bulbs get brighter? Why?

What will you call the things that did not light the bulb?

What will you call the things that did not light the bulb?

Which things brighten the bulb? Are they metal or nonmetal?

Which things brighten the bulb? Are they metal or nonmetal?

Procedure: Does the bulb light up when both bulbs and both cells are used? Does the bulb light up in each case? Write down what happens in each case.

Procedure: Does the bulb light up when both bulbs and both cells are used? Does the bulb light up in each case? Write down what happens in each case.

Different things differ.
In experiment 20: Due to blowing of air in aeroplane gets filled.

Pression on the wings of a aeroplane is reduced in the same way and plane gets filled.

In experiment No. 2: The paper ships is filled up in the same way.

Observe carefully. Notice the difference works on the same principle.

The pumps used to blow air and water comes up.

When you blow air the air molecules are driven away with the flow of air. When you blow air the paper ship is reduced. The air pressure on the paper ship is reduced.

In experiment No. 9: The water comes up through the straight metal tube. This means that the air pressure at open end of tube is high.

In experiment No. 10: The water comes up through the straight metal tube. This means that the air pressure at open end of tube is high.

When water or cold drink is sucked up, on the water or cold drink is sucked up.

In experiment No. 1: The figure 1 (A) shows the mouth is reduced.

In experiment No. 9: The figure 1 (A) shows the mouth is reduced.

Experiment based on Bernoulli's principle

Experiment no. 2, 9, 20, 21, 22

Procedure: Connect bulb, wire and one cell

In experiment of the bulb light

Applications: A bulb of 2 W, wire, 4 cells.

Observation: As the number of cells goes on increasing the intensity of the light increases.

Conclusion: The intensity depends upon the number of cells. If we increase the number of cells, the intensity of the light increases.

Note: If more than three cells are used, it is likely that the bulb will burn out.
In Experiment no. 4 - the image falls exactly at this point. As there are no nerve cells of the sensitive cells, the message does not reach the brain. This is known as blind spot.

The opposite side of the eye from the sensitive cells get together on the opposite side of the retina. But when the nerves start filling the space occupied by the sensitive cells, the eye is focused on the high sensitive cells in the retina. The image is sent by the optic nerves to the brain. The light rays from the phone are synchronized.

In Experiment no. 5 - When the pin is away from the hole in the card, the rays coming from both ends of the pin form a single angle. That is why the pin appears thicker (fig. 2 C).

In Experiment no. 6 - Fig. 2 (a), (b), (c) two rays are shown coming to the eye. There is a number of rays in between these two rays. See fig. 2 (c). It is the same result as done the same way form a wide angle. See fig. 2 (b). If the pin is nearer the hole, the same result can be expected.

In Experiment no. 3: If you see by the right eye only through the hole in the palm of the hand, when seen by left eye only. When seen by both the eyes, a hole is seen where seen by left eye only. When you see the palm of the hand with your right eye, you only see the hole. When you see the palm of the hand with your left eye, you see the hole through the palm of the hand.

Experiment No. 2: The bending of the plane mirror towards the bottle.

Opposite side and the frame turns towards the bottle. To comprehend this low pressure air-deduct comes from the created. To comprehend this low pressure air-deduct comes from the bending of the plane mirror towards the bottle. The sound shape of the bottle, the point is the same as above. Due to the sound shape towards the bottle in the first place. The bending of the plane mirror towards the bottle is the proof of the principle stated above.

Experiment No. 1: The hand that the flame bends towards the ladder is
Experiment no. 16: There is dense medium (water) on one side the glass. Due to circular surface and refraction a convex lens is formed. The rays bend at X and Y. The rays coming from this medium are the radii perpendiculars coming from this medium outside the glass. Due to circular surface the light (water) medium inside the glass and dense medium outside the glass and dense medium between the glass and the glass.

Experiment no. 15: There is one needle. Can you pass a thread through the eye of the needle by using the two eyes? The ends of the needles meet when both the eyes are open. From different angles, that is why you feel the depth. The object is seen by the two eyes from the light rays coming in the dark. The object seen is not the same angle. And because bending of the light, there is a difference in the distance of the objects from different angles. That is why you feel the depth.

Experiment no. 14: Some part of the straw is in air. From this part the straw is broken at the surface. Can you bend this straw in two directions? Give us the answer in Fig. 3. B. The rays coming out the glass bend. The rays coming out the glass bend. When you enter from bright lighted place in your house, the pupil adapts and pupil changes. When you enter from the dark or pupil decreases. The pupil muscles are decided by the light. The pupil muscles are decided by the light.
**Experiments based on centre of gravity**

- **Experiment no. 32**: In absence of the hammer, the meter under water would drop down in reverse (Fig. 5 B). The movement of the hammer would have come down in reverse (Fig. 5 B) and the hammer would drop down in the direction of the arrow (Fig. 5 a) and the hammer meter under water would have come down in reverse (Fig. 5 B).

**Experiment no. 33**

**Experiment no. 34**: When the force of air and the force of water on the lower part of the glass is removed from the upper part, the air can enter in and the water drops from the lower part of the glass.

**Experiment no. 31**: When the finger is removed from the upper part of the glass, it comes down due to gravity and lifts up the glass. When the level of the water in the glass enters in through the lower end, the water enters in through the upper end (Fig. 4), but when air is sucked at the part there is a pressure of air on the upper part. If the upper part is closed, the air cannot enter in and the water drops from the lower part of the glass.

**Experiment no. 35**: When the finger is removed from the upper part of the glass, it comes down due to gravity and lifts up the glass. When the level of the water in the glass enters in through the lower end, the water enters in through the upper end (Fig. 4), but when air is sucked at the part there is a pressure of air on the upper part. If the upper part is closed, the air cannot enter in and the water drops from the lower part of the glass.

**Experiment no. 36**: There is air already in the test tube and further breathing reduces the pressure in the test tube. If the pressure in the test tube is reduced, we do not take care while inhaling the air from the bottle. When the breath is inhaled, the air from the bottle enters in the test tube.

**Experiment no. 37**: The force of gravity acts on the column of the liquid. Allow the bubble to blow up.

**Experiment no. 38**: The air that is already in the bottle does not affect the rise of water in the glass.

**Experiment no. 27**: A gentle blow on the glass from below helps in entering air in the glass. A gentle blow on the glass from below helps in entering air in the glass. The water cannot enter in through the open end of the glass.

**Experiment no. 26**: We catch the air bubbles from glass B. In another experiment (Fig. 3 d), the tube is bent inside the glass. The air is trapped inside the glass. This forms a concave lens.

**Experiment no. 25**: Air is trapped inside the glass. This forms a concave lens.
The boat the most it or the vessel comes above the surface of water under water. If the size is quite big. When the boat is removed from the water, the vessel is more than the water density. But the density of the stone alone is more than that of water density. Thus, the density of the boat with stones is less than that of water. If the density is higher than that of water, the boat will float. The density of stone is higher than that of water, so it sinks. The density of salt or sugar solution is more than that of water and thus it sinks. The density of salt or sugar solution is more than that of water.

**Experiment no. 11:** The density of 64% is more than that of the

**Experiment no. 12:** 38, 39, 60

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**Experiment BASED ON DENSITY**

**Experiment no. 13:** When a candle is burnt in a lamp, the glass is removed, and the water rises due to the heat. When the candle is burnt, the glass is removed, and the water rises due to the heat. When the glass is removed, the water remains. When the glass is removed, the water remains. When the glass is removed, the water remains.

**Experiment no. 14:** When a candle is burnt, the glass is removed, and the water remains due to the heat.

**Experiment no. 15:** When water is heated, it expands, and its density is reduced. If a metal is heated, it expands. If a metal is heated, it expands.

**Experiment no. 16:** The area in which the water rises due to the heat and the density of the water rises. When the water is heated, it expands, and its density is reduced. If a metal is heated, it expands. If a metal is heated, it expands.

**Experiment no. 17:** Due to heat, the carbon in the milk or lime

**Experiment no. 18:** When both the hands are added, the heat of the sugar and thus the sugar burns with a flame.

**Experiment no. 19:** When both the hands are added, the heat of the sugar and thus the sugar burns with a flame.

**Experiment no. 20:** Lithium metal in lobster works as a catalyst to heat. The two different metals in the strip expand differently and the strip therefore bends and touches the side. Thus, the circuit is completed. When the hands are added, the heat of the sugar and thus the sugar burns with a flame.

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**Experiment BASED ON HEAT**

**Experiment no. 21:** The length of the pendulum in measured from the center of gravity.

**Experiment no. 22:** When the pendulum is placed in the center of gravity, it moves to different places and disappears. The swing of the pendulum causes the pendulum to swing.

**Experiment no. 23:** When the pendulum is placed in the center of gravity, it moves to different places and disappears. The swing of the pendulum causes the pendulum to swing.

**Experiment no. 24:** When the pendulum is placed in the center of gravity, it moves to different places and disappears. The swing of the pendulum causes the pendulum to swing.