

**Let's pave the way for learning and  
Move Forward**

**Standard - 7  
Basic Science**



**State Council of Educational Research and Training  
(SCERT), Kerala  
2022**



Dear students,

The evaluation of the answer scripts of the First Terminal Examination 2022 and the classroom experiences shared by the teachers concerned, have brought to light the fact that our children have suffered some serious learning gap due to the non-availability of proper learning experiences as a result of the unprecedented situation created by the Covid Pandemic from 2019 to 2022. An activity book has been designed to assist children internalize the concepts which they ought to have mastered in the previous classes and with the intention to facilitate further learning. Necessary explanations and activities are included in the booklet to help children bridge the gap. It is hoped that this package will facilitate the learners for self-study or for studying with the help of their teachers and I wish them success in their endeavors to move forward with confidence.

**Director**

SCERT

# Std - 7 Basic Science

## WORK SHEET 1

1. Have you prepared hibiscus paper to identify acids and alkalis? What is its colour?

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2. Soak the paper with some lemon juice. What change in the colour do you see?

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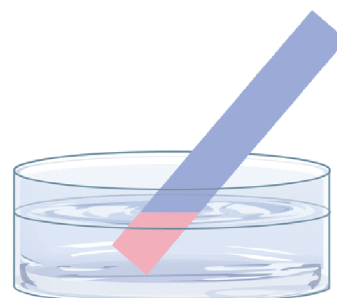


3. Prepare hibiscus paper in both two colours. Observe its colour changes in the following substance.

**Tamarind water      Soap solution      Orange      Lime water**  
**Buttermilk      Baking soda      Vinegar**

Note down the colour change. How can we write down the observations? Lets us draw a table. What are the factors to be included in the table?

- Substance used
- Colour of blue hibiscus paper
- .....
- Chemical property of the substance



Now draw the table including all these.

Do the experiment and tabulate your observations.

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Have you done the experiment?

Did you complete the table? What did you understand from the observations?

4. Which substance turned blue hibiscus paper in to red?

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5. What are their common properties?

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6. Which substances turned red hibiscus paper blue?

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7. What are their common properties?

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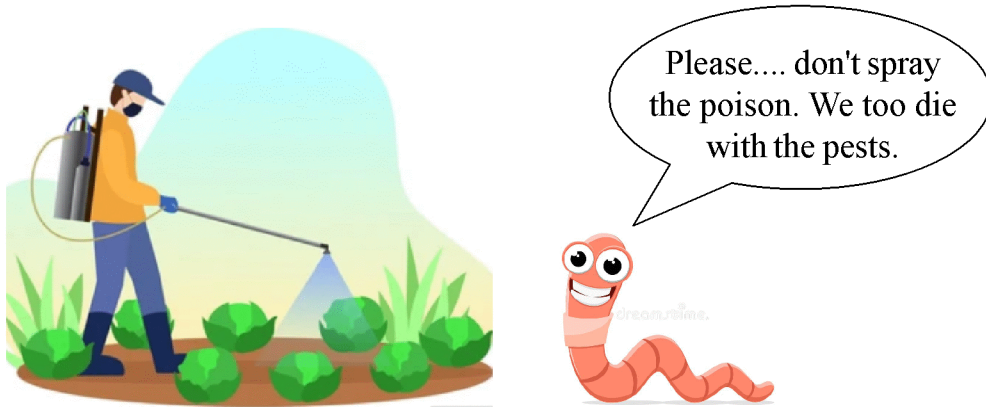
8. Analys is the given table. What type of substances are A, B and C?

Write down your findings.

<b>Substances</b>	<b>Colour of blue hibiscus paper</b>	<b>Colour of red hibiscus paper</b>
A	red	red
B	blue	blue
C	blue	red

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## WORK SHEET 2



1. Observe the Cartoon. What does the farmer do?

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2. Why is he covering his mouth and nose?

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3. How does this affect earthworms?

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4. What are the other organisms found in the soil?

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### Soil

There are many microorganisms in the soil. They breakdown (decompose) the organic matter in the soil and make the soil fertile. Earthworms stir the soil. There are many other insects in the soil. If these are destroyed the structure and fertility of the soil will be lost. Chemical pesticides are harmful to humans, soil and all organisms. Organic pesticides are generally less harmful. Chemical fertilizers help to grow plants quickly but they gradually destroy the soil. But organic fertilizers can increase microorganisms in the soil.

5. How do excessive use of chemical pesticides and fertilizers harm the soil, humans and other living organisms?

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# WORK SHEET 3

Observe the picture



1. How many surfaces does a plane mirror have?  
.....
2. In which surface can we see our image? Look at the image in a mirror and write.  
.....
3. How is the reflecting surface of plane mirror? Put ✓ against the correct one.

Plane

Not plane



Picture 1



Picture 2

4. Which of the two figures shows the side of reflecting surface and the opposite side clearly? Why?  
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Plane mirror is the mirror having the reflecting surface plane. It is used

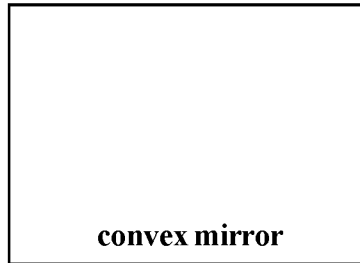
Convex mirror is the mirror having the reflecting surface curved outward. Convex mirrors is used as rearview mirror in vehicles.

Concave mirror is the mirror having the reflecting surface curved inward. Concave mirror is used as shaving mirrors.

5. How is the reflecting surface of convex mirror? Put ✓ against the correct one.

plane       bent inward       bent outward

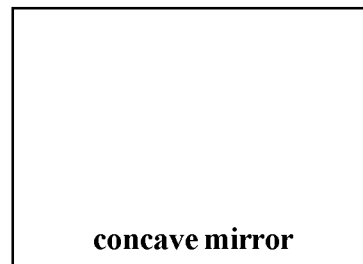
6. Draw the convex mirror clearly showing the reflecting surface.



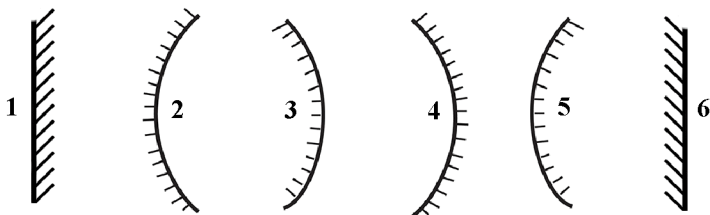
7. How is the reflecting surface of concave mirror?

plane       bent inward       bent outward

8. Draw the concave mirror clearly showing the reflecting surface.



9. Observe the given pictures. Identify which among these are plane mirror, convex mirrors and concave mirror.

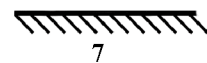


Plane mirror

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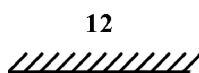
Convex mirror

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Concave mirror

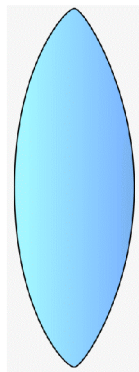
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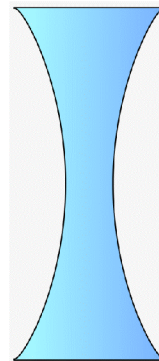


## WORK SHEET 4

Observe the picture



Lens 1



Lens 2

1. Name the lenses.

Lens 1 ..... Lens 2 .....

2. What is the difference between the two lenses?

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3. What happens to the light rays falling on these lenses?

Passes through the lenses.  Falls on and reflect.

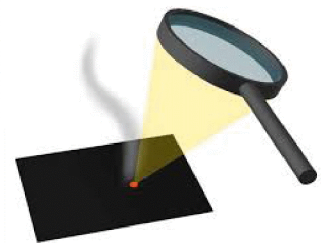
4. Have you seen burning paper pieces in sunlight with lenses? Which type of lens is using here?

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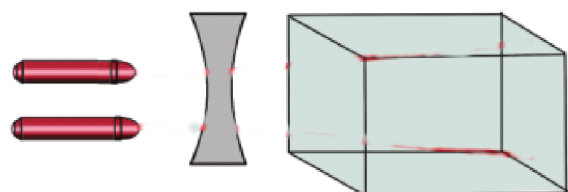
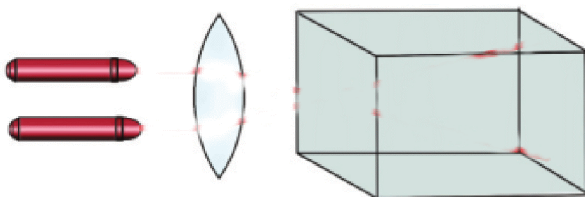
5. Do this activity with the two types of lenses. What difference do you see? What may be the reason?

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We can find the change in the light rays falling on the lenses by doing an experiment. We can use concave lens, convex lens, water, laser torches, dettol and a transparent vessel.



6. Observe the picture. Write the method of doing the experiment (procedure).

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7. Do the experiment. Write down your observations. Can we see the path of light if we use a normal torch instead of laser torch?

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8. Suppose the laser torches are not held in parallel. Will there be any error in the result of experiment?

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9. What is the benefit of using a transparent vessel?

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10. What do we do to see the path of light rays clearly?

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11. What are the things to be taken in care to get correct findings?

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