

SATISH CHANDRA MEMOTIAL SCHOOL

Class-VII

Science: Ch-8(Winds, Storms & Cyclones)

CASE-STUDIES

1. Rounak was very happy that there was his birthday. His friends came to celebrate and they were decorating the room by flowers and blowing balloons. One of his friends Sourav was wondered that most of his balloons get burst. He then asked the reason to Rounak that is there any fault in the balloon or not. Rounak asked his father about that.

(a) Can you explain the reason that why his balloons get burst?

(b) What can be the conclusion from the condition mentioned?

(c) Give some other examples of the same condition?

2. Ritu was drinking juice using a straw. She wondered how the juice was coming into her mouth through the straw. She asked her teacher on the next day. The teacher told her that it was due to the air pressure.

1. How did the juice reach her mouth when she was drinking through the straw?

2. Does air exert pressure in all directions? Justify your answer

3. "Air has a very high amount of pressure." --- If air has a very high amount of pressure, then why don't we get crushed by the huge amount of air pressure?

4. Give two daily life examples where we can find that air exerts pressure.

3. Rohan's one of the neighbour lives in a house with a tin shade. One day a thunderstorm came on and blew off the tin shade of the house. After a day when the school reopened, Rohan asked his teacher about why the shade blew off.

1. Why did the tin shade blow away by the thunderstorm?

2. Thunderstorms develop in which areas very frequently? Why?

3. Explain how a thunderstorm produces.

4. Munna wanted to do an experiment. He took a tin can and poured hot water into it. Then he emptied the can and immediately capped it tightly and placed the bottle under running water.

Q.1) What will be his observation after this activity?

Q.2) Why this happens? Give reasons.

Q.3) 'Air Exerts Pressure '. Prove this line by some daily life examples.

Q.4) What we Can Learn form this above experiment/activity.

5.Ravi has gone to a doctor to get the vaccine for Covid-19 . Before Giving Vaccine he saw that The medicine enters the syringe when a piston is pushed out. And while giving the vaccine the piston is pushed in. After returning home he asked his father about this . His father told this is due to air pressure.

1) How does this process involve air pressure ? Give reasons.

2) From this case which property of air can you conclude?

3) State an other example where this property of air is used?

6. Amit was returning home after playing cricket from his school sports club with his mother and suddenly thunderstorms appeared. Amit tried to ran towards a mettalic shed to take the shelter. But her mother stopped him to do that and told that 'it's not safe'.

1. Why is it dangerous to hide in a metallic shed? Explain.

2. What precautions do we need to follow in a thunderstorm?

3. What is a thunderstorm?

4. Have you any idea to make the building safe from the lightining of thunderstorm? If yes, what is it?

7. In 2020, We experienced the cyclone Amphan, it had wind speeds of over 200 kmph and affected the whole West Bengal and Odisha. An effective hazard occurred in mankind.

1. What is a cyclone called in Japan and Philippines?

2. How we should take precaution for a cyclone?

3. What equipment measures wind speed?

4. What are the technologies that meterological department use to predict cyclone?

8. Ritesh and his family had a trip to Manali, there he has seen the hot air balloon and people were riding on it to take the views from top which seemed exciting to Ritesh. Then he asked his grandfather about how it is flowing in the air.

A) Why the name of the balloon is hot air balloon?

B) Explain the reason why the hot air balloon can float in air.

C) If we fill hot air in car wheels what will happen?

D) Write some uses of hot air?

9. At the time of Diwali Priti flies a sky lantern . She fires the camphor and then she saw the sky lantern is looking like a balloon, and then rises up in the sky.

a) What is the reason behind the sky lantern rises up in the sky?

b) If suddenly the sky lantern burns, will it be able to fly in the sky?

c) State another example where the same phenomenon can be seen.

10. Sanju was riding his bicycle. Wind was blowing heavily. He felt difficulty as it was blowing in opposite direction. After reaching home he asked his mother why it happened to him. His mother explained him about the properties of air.

Q. What is the property of air mentioned here according to you?

Q. Why did Sanju feel difficulty?

Q. Can you relate his experience with one of your experiences? Why did it happen?

Q. What is referred as wind?