

Chapter 15: Blow Hot, Blow Cold

Do This

Question 1:

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Have you warmed your hands in winter by blowing on them when they are cold? How does it feel?

Answer:

Yes, I have warmed my hands by blowing on them. It feels warm and comfortable.

[Students should mention their experience based on the above lines.]

Question 2:

Blow hard from your mouth onto your hands. How did you find the air from your mouth as compared to the air around? Was it hotter or cooler?



Answer:

I found that the air blown from my mouth was warmer than the air around me.

[Students should mention their experience based on the above lines.]

Question 3:

Now put your hands at some distance from your mouth and blow again. Does the air from your mouth feel warm? Why?

Answer:

When the hands are at a distance from my mouth, the air seems less warm. It happens because when the air travels for a distance, it gets mixed up with the surrounding air and becomes less warm.

[Students should mention their experience based on the above lines.]

Think and Tell

Question 1:

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Can you think of any other way in which you use the warmth from your breath?



Answer:

Yes, we can use warmth from our breath in the following situations—

- i) To soothe red eyes.
- ii) To soothe minor bruises and injuries.

Question 2:

Fold a piece of cloth 3-4 times. Now bring it close to your mouth and blow hard on it. Did the cloth become warm?

Answer:

Yes, the cloth becomes warm.

Question 3:

Balishtiyee saw that the woodcutter was trying to cool the hot potatoes by blowing on them. What would have happened if he had eaten the potatoes without cooling them?

Answer:

Eating hot potatoes would have burnt his tongue and mouth.

Question 4:

Have you ever burnt your tongue when you ate or drank something that was too hot? How do you cool some food when it is too hot?

Answer:

Yes, I have often burnt my mouth while sipping hot tea and milk. I blow air to cool food when it is too hot.

[Students should mention their experience based on the above lines.]

Question 5:

If you were to cool these three hot things—*dal*, *roti*, rice—in which ways would you do so?

Answer:

I would use the following methods to cool the above-mentioned things—

- i) *Dal*: Keeping it in a wide flat container so that it cools quickly.
- ii) *Roti*: Tearing it in pieces would cool it quickly, and it would allow the warm air to escape.
- iii) Rice: It can be cooled by spreading it in an open vessel.

[Students should mention their experience based on the above lines.]

Question 5:

Mini tried to cool her tea by blowing on it. Which do you think will be hotter—Mini’s tea or the air she blew from her mouth?

Answer:

Mini’s tea would be hotter than the air blown.



Question 6:

Sonu was feeling very cold. He kept blowing on to his hands. Now think and write, which will be cooler—Sonu’s hands or his breath?

Answer:

Sonu’s hand will be cooler.



Question 7:

For what other things do you blow air from your mouth?

Answer:

Some other activities which can be done by blowing air from the mouth are as follows—

- i) Inflating a balloon
- ii) Blowing off a candle
- iii) Whistling
- iv) Wiping spectacles

[Students should mention their experience based on the above lines.]

Blow in Different Ways

Question 1:

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Make whistles of the things given below. Write in a sequence—from the loudest to softest whistle.

- Wrapper of a toffee
- A leaf
- A balloon
- The cap of a pen
- Any other thing

Answer:

The sequence from loudest to softest whistle will be—

- i) The cap of the pen
- ii) By putting fingers in the mouth
- ii) Wrapper of a toffee
- iii) A balloon
- iv) A leaf

Question 2:

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Have you seen people playing different musical instruments like flute, dholak, been...guitar, mridang, etc. Can you recognise their sounds with your eyes closed? Find out more about these musical instruments. Collect their pictures too.

Answer:

Yes, we can identify the sounds of these instruments even if our eyes are closed. The instruments are described below—

i) Flute: It is a type of wind instrument. It is made of bamboo and played by blowing air into it.



ii) Dholak: It is a type of percussion instrument. It is a hollow cylinder where a membrane of leather is tied at both ends. The sound is produced by beating the leather membrane.



iii) Been: It is a kind of wind instrument used by snake charmers. It is made of hollow dry pumpkin.



iv) Guitar: It is a type of string instrument. The metal strings attached to the wooden base are used to produce sound.



v) Mridang: It is also a percussion instrument that is made of hollowed jackfruit wood.



[Students should mention their experience based on the above lines.]

Write

Question 1:

(Page 144)

Can you name some things which produce melodious or pleasing sounds when we blow into them?

Answer:

The following instruments produce melodious sounds when we blow into them—

i) Mouth organ, ii) Flute, iii) Banjo, iv) Bagpipe.

Do This and Discuss

Question 1:

(Page 144)

Have you seen someone blowing on their spectacles to wipe them clean? How does the air from the mouth help in cleaning the spectacles?

Answer:

As soon as the warm air touches the surface of the spectacles, it gets converted into water vapour due to the cold surface. The water vapour provides the required moisture to wipe the dirt off from the spectacles.

Question 2:

Take a glass. Bring it near your mouth and blow hard on it. Do these two or three times. Does the glass look hazy?

Answer:

Yes, the glass looks hazy because of the droplets of water vapour settled on it.

Question 3:

Can you make a mirror hazy in the same way? Can you tell by touching the mirror what made it hazy? Is the air you blew from your mouth dry or wet?

Answer:

Yes, the mirror can be made hazy in the same way. We can also relate it to the situation when we take a hot shower, and the mirror, in the meantime, becomes hazy. In both the situations, the mirror becomes hazy because of the water vapour droplets settled on its surface.

The air which I blew from my mouth was wet.

Question 4:

Put your hand on your chest. When you breathe in, does your chest come out or go in.

Answer:

Yes, while breathing in, my chest comes out, and while breathing out, it goes in.

Measure Your Chest

Question 1:

(Page 144)

Take a deep breath in

Ask your friend to measure your chest with a thread.

Measurement.....

Answer:

24 cm.

[Students should mention their experience based on the above lines.]

Question 2:

Now breathe out.

Again, ask your friend to measure your chest.

Measurement.....

Answer:

20 cm.

[Students should mention their experience based on the above lines.]

Question 3:

Was there any difference in the two measurements of your chest?

Answer:

When I breathe in, the measurement of my chest is more than when I breathe out. In this case, the difference was 4 cm.

[Students should mention their experience based on the above lines.]

How Many Breaths in One Minute

Question 1:

(Page 145)

Put your finger under your nose. Can you feel any air when you breathe out from your nose?

Answer:

Yes, I can feel the air when I breathe out from my nose.

Question 2:

Count how many times in one minute do you breathe in and breathe out.

Answer:

I can breathe in and out around 15-17 times in a minute.

[Students should mention their experience based on the above lines.]

Question 3:

Jump 30 times. Did you feel breathless?

Answer:

Yes. I felt breathless, and I got tired.

[Students should mention their experience based on the above lines.]

Question 4:

Now again count how many times in one minute you breathed in and out.

Answer:

I am breathing around 20-25 times in a minute.

[Students should mention their experience based on the above lines.]

Question 5:

What was the difference in your count before and after jumping?

Answer:

The number of breaths per minute increased after jumping. The difference was around 5-7 breaths per minute.

[Students should mention their experience based on the above lines.]

The Clock Inside You

Question 1:

(Page 145)

You have all heard the ‘tick tick’ of the clock. Have you seen a doctor using a stethoscope to listen to our chest? What do you think she hears? Where is the sound coming from? Is there a clock inside your chest that keeps ticking away?

Answer:

Yes, I have seen a doctor using a stethoscope to listen to our chest. She uses the stethoscope to hear our hearts. Our heart makes a sound of *lub-dub* while pumping blood which is heard in the stethoscope. There is no clock inside our chest; the sound we hear is that of our heartbeat.

Question 2:

Do you want to listen to your heartbeat? Take a rubber tube as long as the distance from your shoulder to your elbow. At one end of the tube fix a funnel. Place the funnel on the left side of your chest. Put the other end of the tube to your ear. Listen carefully. Did you hear a *dhak dhak* sound?

Answer:

Yes, I heard a *dhak dhak* sound. It is the sound of our heartbeat.



Snake Tells the Flow of Air!

Question 1:

Stand with this snake below a fan. Look in which direction it moves. Take this paper snake to different places and observe its movement.

Answer:

When the paper snake is held under a fan, it rotates in an anti-clockwise direction since the air moves downwards.

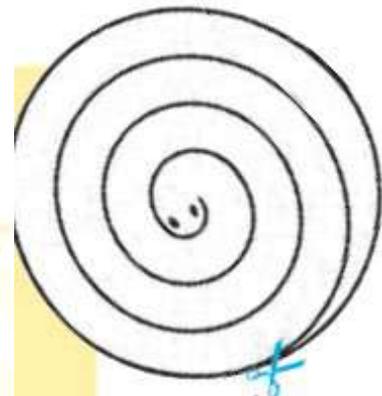
Question 2:

Can you understand from the movement of the snake—if the air is moving upwards or downwards?

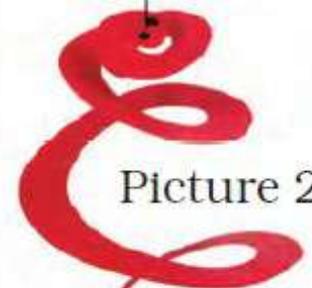
Answer:

Yes, the movement of the snake denotes the movement of air. The movement of the snake in the clockwise direction shows that air is moving upwards, and the movement of the snake in the anti-clockwise direction shows that the air is moving downwards.

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Picture 1



Picture 2

What We Have Learnt

Question 1:

(Page 146)

While playing, Amit hit a wall. His forehead was swollen. *Didi* immediately folded a scarf (4-5 times), blew on it and kept it on Amit's forehead. Why do you think *didi* did this?

Answer:

Didi did this as the warm air would help in reducing the pain and swelling on the forehead.

Question 2:

We blow to cool hot things as well as to warm them. Give examples of each.

Answer:

To cool things	To warm things
To cool beverages like tea and coffee.	Warm cold hands in winters.
To cool eatables like <i>chappati</i> , <i>samosa</i> , <i>kachori</i> , rice, <i>dal</i> , etc.	Warm a handkerchief to get relief from burning eyes or minor injuries.

[Students should mention their experience based on the above lines.]
