



Master Lesson Plan

For

A Treat for Mosquitoes

Board	Standard	Subject	Chapter	Language	Reference Link	Creation
CBSE	STD V	EVS	A Treat for Mosquitoes	English	A Treat for Mosquitoes	2020-11

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A Treat for Mosquitoes

1. MS_Objectives_A Treat For Mosquitoes

To enable the students to:

- discover different procedures involved during blood testing
- deduce health problem through blood reports
- describe the causes, symptoms and cure for malaria
- recognise the type of mosquito that causes malaria
- list out various precautionary measures to keep environment free from mosquitoes
- survey and bring about the awareness and causes of malaria

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Anaemia- Cal Cure & Precautions Malaria Symptoms, Cure & Precauti Causes Symptoms, Cure &

2. IQ_Blood Test

INSTRUCTIONS: The teacher can show the video to show how blood is drawn using a syringe, if time permits before discussing this asset. The video can be shown up to 3 minutes.

https://www.youtube.com/watch?v=Obu_E92zclE

Question 1: What is blood test?

Suggested Answer: A blood test is a laboratory test performed on a blood sample that is usually taken from a vein in the arm using a needle or pricking the finger.

If only a few drops of blood are needed, the finger is pricked to take blood instead of drawing blood from a vein.



Question 2: Why is the blood test done?

Suggested Answer: The blood is tested to find out the blood group of the person or to diagnose disease in the body.



Question 3: From which part of the body is the blood sample taken in the below picture?



1. FROM THE FINGER TIP
2. FROM THE VEIN NEAR WRIST
3. FROM THE VEIN NEAR THE ELBOW
4. NONE OF THE ABOVE

Suggested Answer: (1) From the finger tip

Question 4: Why is an elastic band tied on the upper arm before taking the blood sample?

Suggested Answer: An elastic band is tied on the upper arm before taking the blood sample to swell the vein .



Question 5: Why is a disposable needle used for taking blood sample?

Suggested Answer: A disposable needle is used for taking the blood sample to prevent the transfer of germs.

Question 6: Why do we make a fist during blood test?

Suggested Answer: We make a fist during blood test as it makes the vein more visible and improves blood flow.

Question 7: How are the components of blood observed during a blood test?

Suggested Answer: *The components of blood are observed by using a microscope.*

**Question 8: How do the doctors distinguish among the blood sample of various patients?**

Suggested Answer: *By labelling the blood samples.*

**Question 9: Given below are steps of drawing blood sample in wrong order .Arrange them in correct order.**

- Disinfect the area where the needle is to be inserted.
- Put a bandage on the puncture site after the bleeding has stopped Make
- a fist.
- Tie an elastic band around the patient's arm above the vein puncture site. Insert the
- needle into the vein. Allow the tube to fill.

Suggested Answer: Correct Order

1. Tie an elastic band around the patient's arm above the vein puncture site.
2. Make a fist.
3. Disinfect the area where the needle is to be inserted.
4. Insert the needle into the vein. Allow the tube to fill.
5. Put bandage on the puncture site after the bleeding has stopped.

Image Source:

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<https://www.publicdomainpictures.net/en/view-image.php?image=286661&picture=blood-test>

<https://pixabay.com/photos/diabetes-blood-finger-glucose-777002/>

<https://pixnio.com/science/medical-science/blood-extracted-from-vein-during-a-phlebotomy-procedure>

<https://pixabay.com/photos/microscope-research-scientific-lab-3184432/>

<https://pixabay.com/photos/blood-sample-lab-laboratory-4944424/>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Inquisitive Questions	Micro organisms: Friends & Foes	Principles of treatment, Prin treatment

3. MS_Malaria - A disease

Causes of Malaria:

- An infected female anopheles mosquito bites a person.
- The infection is due to a micro-organism called Plasmodium Parasite.
- Plasmodium parasite is the malarial parasite present in the mosquito.
- When this Plasmodium enters into a human being, it causes malaria.
- Blood report shows the presence of malarial parasite.
- Human activities affect the breeding of larvae.

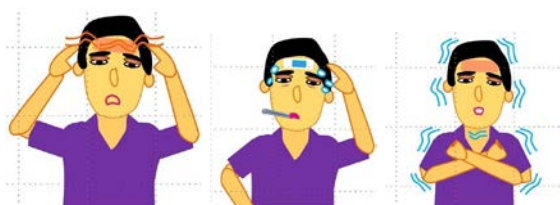
The human activities that cause the breeding of larvae are:

- unclean water tanks, pots and coolers
- water stagnation around the house
- open pits, swamps and ditches



Symptoms of Malaria:

1. Fever- rise in body temperature
2. Shivers and Rigors- feel unusually chill and cold
3. Nausea and Vomiting- feel uneasy and throw up whatever eaten
4. Tiredness- feel weak and cannot do any activity
5. Body ache- pain in the whole body especially back, leg, hand and head



Cure for Malaria:

- a. In olden days, dried and powdered bark of cinchona tree was used as medicine
- b. Infected person was given this bark powder boiled in water and strained, to drink as home remedy
- c. Now a days, antibiotics and anti-parasitic medicines are given to cure
- d. Antibiotics and anti-parasites kill the malarial parasite in the body
- e. All the fresh fruit juices are very good for fighting malarial infection and regaining strength in the body

**Image Source:**

<https://pixabay.com/photos/bucket-water-green-lawn-garden-3395702/>

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Boy - Original image - sridevankarthik@gmail.com

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<https://www.publicdomainpictures.net/en/view-image.php?image=187755&picture=tea-and-autumn-decorations>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Malaria- Caus Cure & Precautions

4. SA_Is your Haemoglobin count less?

Aim: Students will be able to deduce health problem through blood reports.

Materials required: notebook, pencil/pen, two blood reports (one with normal hemoglobin count and other one anemic)

Setting: classroom

Procedure:

1. Teacher shows the first blood report which has normal hemoglobin count.
2. Teacher asks students to note down the points shown in the report.
3. Teacher instructs the students to write the answers for the questions given below the first report.
4. After a given time, teacher shows the second report having deficiency.
5. Now teacher instructs the students to note down the points in the report.
6. Students note down the points and answer the questions given below.
7. Teacher leads the class for a discussion.
8. Teacher makes each group to answer two questions each.

Instructions to teacher:

- Teacher divides the class into five groups.
- All five groups are given time to observe the report and answer the questions.
- Teacher gives 5 mins to observe the first report and note down the points.
- Teacher gives 10 mins to write down the answers to the questions given.
- Same instructions follow for the second report.

Test Name	Test Result	Normal Values	Units
<u>Hematology</u>			
RBC Indices			
Hemoglobin (Hb)	: 13.0	Women : 12.0-15.0	g/dl
RBC count	: 4.97	Women : 3.8-4.8	10 ⁶ /cu.mm

Question 1. What is hemoglobin in red blood cells?

Suggested Answer: Hemoglobin is the iron-rich protein in red blood cells that carries oxygen to the body.

Question 2. What does it mean by a normal report for women?

Suggested Answer: A normal report is that when the hemoglobin count for women is between 12 and 15.

Question 3. This is Mrs. Veena's blood report. What does this report say about her blood count? Why?

Suggested Answer: This report tells that Mrs. Veena's blood count is normal as it shows hemoglobin count as 13.

Question 4. What is RBC? Write the count.

Suggested Answer: RBC is Red Blood Cells. The number of RBCs is 4.97.

Test	Observation	Normal Range
HAEMATOLOGY		
Haemoglobin	11.2 gms %	Male: 13.5 - 17.0 Female: 12.0 - 15.5 Children - 3 months: 9.5 - 13.5 3 months to 1 year : 10.5 - 13.5 1 year to 6 years: 12.0 - 14.0 6 years to 12 years: 11.5 - 14.5 Cord Blood: 13.5 - 19.5

Question 5. What is anemia?

Suggested Answer: Less hemoglobin or iron in blood is anemia.

Question 6. This is Mr. Anoop's report. Write the normal range required for a man and a ten year old child.

Suggested Answer: The required normal range for a man is 13.5 to 17 and for a ten year old child is 12 to 14.

Question 7. What is the hemoglobin count shown here? Is it normal?

Suggested Answer: The hemoglobin count shown here is 11.2 gms. It is not normal.

Question 8. What does this report tell about Mr. Anoop's condition? Why?

Suggested Answer: This report tells that the Mr. Anoop is anemic as his hemoglobin count is less than the normal range given.

Question 9. Give two causes and two symptoms of anemia.

Suggested Answer: Iron and vitamin deficiency and less red blood cells causes anemia. Weakness, less growth, low energy levels, dizziness and headache are symptoms.

Question 10. What should you eat to regain iron and red blood cells in your body?

Suggested Answer: Iron-rich food like Leafy vegetables, jaggery, nuts, seeds and beans.

Beetroot, pomegranate to increase red blood cells.

Conclusion:

Students are able to read the blood report.

Students are able to deduce the health problem through blood report.

Students learn the causes, symptoms and treatment for anemia.

Both reports - Original contribution - bdarshu@gmail.com

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Suggested Activity	Micro organisms: Friends & Foes	Principles of treatment, Principles of treatment

5. IA_Anopheles I am!**Note to teacher:**

Teacher may divide the class into three groups named as Anopheles, Culex and Aedes and make them sit together representing each group.

Teacher may allow each student from each group to read the dialogue as it occurs on the slide. Teacher may write down the highlighted points on the board as the reading is done.

Teacher may conclude the class by discussing the highlighted points about Anopheles.

Some commonly found mosquitoes in India are Anopheles, Culex and Aedes. One day, the female mosquitoes of these three types have a conversation.



Anopheles Culex Aedes

Culex mosquito: "Hey, how are you?"

Anopheles mosquito: "Hi, I am fine. How about you and your family?"

Culex: All are doing well. Last night we had a treat!

Anopheles: Wow that's great! Where was the treat?

Culex: Near the pond around the corner.



Aedes: There's a place where we found many humans. Anopheles: Tonight I will take my family there. I also need more blood to strengthen my eggs.

Culex: The pond nearby would be useful to lay eggs.

Aedes : It is warm there and filled with fresh water.

Anopheles: I love to lay eggs in fresh water.

Aedes: Are you new to this place? You also look different and slightly bigger than us.

Culex: You also are different in colour unlike us. Tell us more about yourself.

Anopheles: I feel energetic and active at dawn and right after darkness sets in.



Aedes: What's special in that?

Anopheles: I can suck blood and also transfer a dangerous parasite into humans.

Culex and Aedes: Parasite?

Anopheles: Yes, you see my resting position is slightly pointing upwards from my stomach.

Culex: Yes that's true!

Anopheles: I have a special parasite growing inside my intestine.

Aedes: What happens after that?

Anopheles: The humans fall sick and stay indoors.

Culex: Why does the human fall sick?

Anopheles: Because the parasite is very dangerous. It is called Plasmodium parasite. This micro-organism causes vomiting, fever and body pain in humans. So they fall sick.

Aedes: What do they call the illness?

Anopheles: It is called MALARIA. Only us female anopheles can transfer malaria to humans, not male anopheles.

Anopheles: It's time now I will go for my blood meal. Only after that I can lay eggs.



Aedes: Hey, look at the eggs of Anopheles on water; they are separate from each other not like ours which are glued together.

Culex: There are around 200 of them and those Anopheles larvae are floating parallel on water surface.

Culex: That's amazing!

Source for images:

<https://freesvg.org/male-and-female-mosquito>

<https://pixabay.com/vectors/cartoon-mosquito-spreading-2023316/>

https://commons.wikimedia.org/wiki/File:Aedes_aegypti_resting_position_E-A-Goeldi_1905.jpg – Public Domain

<https://pixabay.com/photos/mosquitoes-mosquito-swarm-mosquito-555827/>

<https://pixabay.com/photos/dance-schools-mosquitoes-mass-1837658/>

<https://pixnio.com/fauna-animals/insects-and-bugs/mosquito/twenty-two-eggs-deposited-by-a-female-anopheles-stephensi-mosquito>

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Interesting Asides	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Malaria- Caus Cure & Precautions

6. SA_Posters on Malaria and Anaemia

Aim: Students are able to design posters to bring about awareness on malaria and anemia.

Materials required: pen/ pencil, colour pencils, stencils, sketch pens, card paper, scale.

Procedure:

- Teacher divides the class into four groups.
- Teacher gives each group one message and the task to make a poster.
- Each group is assigned an area where they will put up the poster.
- Teacher guides the students to make posters attractive and informative.
- Students make posters in the class and paste it in the assigned places.

Instructions to teacher:

- Teacher gives each group one message:

GROUP 1--- KEEP HOUSE FLY AWAY

GROUP2 --- NO WATER STAGNATION AROUND

GROUP 3--- KEEP YOURSELF SAFE FROM MOSQUITOES

GROUP4--- ARE YOU ANAEMIC?

2. Teacher may allow the students to give more points for each message.
3. Teacher writes the points under each message on the board.
4. Teacher instructs the groups to take down the points for their respective messages.
5. Teacher instructs each group to make posters with the points noted down and the message as heading.
6. Teacher guides the students to paste the posters one each at different places in and around the school.

KEEP HOUSE FLY AWAY

Dust your house once in a week

Mop using sanitizers and room freshener once in three

days Throw/give away long time unused items

Keep separate closed bins for dry and wet waste

Cover the food items always

NO WATER STAGNATION AROUND

Don't let water collect unless used and replaced.

Don't keep water unused in pots or any containers for long.

Clean your water tanks and cooler regularly.

Report about any swamp or marshy area near your house.

Spread disinfectant or kerosene on the waste water body in your surroundings.

KEEP YOURSELF SAFE FROM MOSQUITOES

Use mosquito nets

Apply mosquito repellent like fragrant oil or cream

Don't sleep outside your house at night

Use sanitizers to clean your house

ARE YOU ANAEMIC?

Eat green vegetables every alternate day...

Eat iron-rich food like lentils, spinach, jaggery, goose berry, nuts...

Fresh juice like beetroot, pomegranate, carrot, pineapple...

Increase Vitamin C intake...

Conclusion:

1. Students are able to come up with many relevant points.
2. Students are able to make posters and create awareness around.
3. Students are able to work in unison and spread the message.

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Suggested Activity	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Anaemia- Ca Cure & Precautions Malaria Symptoms, Cure & Precauti Causes Symptoms, Cure &

7. DD_Beware of malaria

Note to teacher:

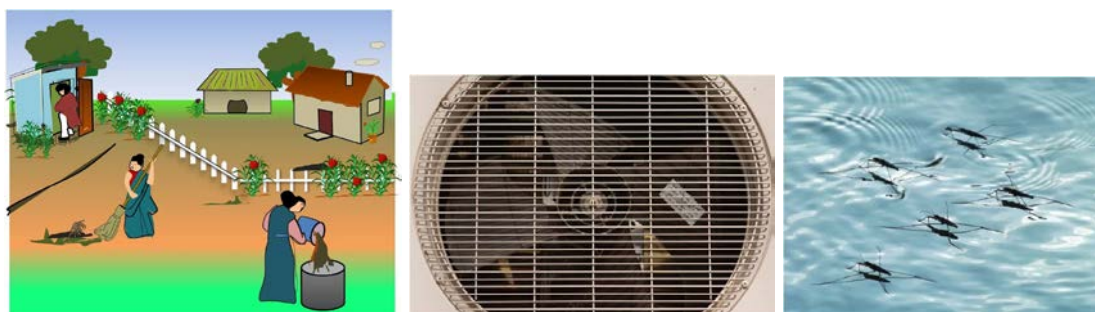
Teacher may enable the students to give a few points before showing the ppt.

Guests are invited to our homes, not mosquitoes!!

Beware of the most unwanted visitor to your homes- the mosquitoes!! Let us see what we can do to keep them away:

Keep your surroundings clean.

- Cover your garbage bin.
- Add larvae eating fish in your fish tank and pools.
- Cover the rainwater harvest pool with mosquito net.
- Change the water in the bowl kept for birds regularly.
- Clean your cooler regularly.



Standing water or stagnant water is suitable place for mosquitoes to breed.

- Empty the buckets, pots, mortar and old tyres kept outdoors.
- Fill up the pits, don't let water collect on the rooftop and keep the surrounding dry.
- Clean the garbage and gutters regularly.
- Spread mosquito repellent like chlorine or bleaching powder to disinfect water body or swamp near your house.



Keep yourself safe from mosquito bite.

- Avoid sleeping outside the house at night with mosquitoes moving around.
- Use mosquito repellent like sprays, coils or mats and mosquito net to protect yourself.
- Certain oils like lemongrass, peppermint, lemon with eucalyptus keep mosquitoes away from you.

**Image Sources:**

Original Contribution – rushmish@gmail.com
<https://pixabay.com/photos/air-conditioning-fan-ventilation-3822812/>
<https://www.needpix.com/photo/421238/mosquito-insects-water-dance>
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Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Day-to-day Relevance	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Malaria- Caus Cure & Precautions

8. SA_Survey on Malaria

Aim: Students will be able to survey the awareness and causes of malaria

Materials required: pen/pencil, survey questionnaire

Instructions to teacher:

1. Teacher instructs the class to write down the survey questions in their notebooks.
2. Teacher gives the class one week time to bring the filled up survey form.
3. Teacher leads the class for a discussion after the survey.
4. Teacher highlights important points on awareness and causes of malaria and how to prevent it.

Questionnaire:

Question 1: What is malaria?

Suggested Answer: Malaria is a mosquito borne disease caused by a parasite.

Question 2: What type of mosquito transfers malaria to humans?

Suggested Answer: A female anopheles mosquito transfers malaria to humans.

Question 3: Name the parasite that causes malaria.

Suggested Answer: Plasmodium Parasite causes malaria.

Question 4: What harm can the parasite cause to human body?

Suggested Answer: The parasite infects the liver and red blood cells of human body.

Question 5: What test is done for malaria? How?

Suggested Answer: Blood test is done. A drop of blood is spread out as blood smear on a glass slide and is observed under a microscope for examining the presence of malarial parasite in the blood.

Question 6: Do you have mosquito trouble in your house?**Suggested Answer:** Yes/ No.**Question 7: Do you know anyone who has had malaria?****Suggested Answer:** Yes, _____/ No.**Question 8: Is there any water stagnation around your house?****Suggested Answer:** Yes/No.**Question 9: Do you keep the garbage bin covered and is it cleaned regularly?****Suggested Answer:** Yes/No. Cleaned regularly/ Not cleaned regularly.**Question 10: What do you do in your house to protect yourself from mosquitoes?****Suggested Answer:** We have fixed mosquito nets on the windows, we use mosquito repellent, we keep our surrounding clean, we keep the doors and windows closed after sunset and we don't allow water to stagnate anywhere outside our house.**Conclusion:**

1. Students get the awareness of malaria
2. Students are able to survey the causes of malaria in their homes
3. Students get the awareness of preventing malaria

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Malaria- Caus Cure & Precautions

9. VC_Keep our environment clean***“What can you do so that mosquitoes do not breed in your house, school and neighbourhood?”***

Mosquitoes breed in dirty surroundings. So, we need to keep our environment clean to avoid illnesses caused by mosquitoes and other insects.

What are the ways we can keep our environment clean? Let us look at this story.

One day little Anita was walking along the garden. She was keen to know what environment is. She met a rabbit sitting and eating a carrot. As she walked towards him, she stamped on a cigarette piece and had to go around a pool of stagnated water.

When she went near him, she asked him, “My dear rabbit, what is environment?”

The rabbit said, “Environment is the air, the water, the soil, and our food. It's everything around us. You just crossed a cigarette which pollutes the air and the stagnated water breeds mosquitoes and insects.”

Anita said, "What about the sky? The sun is in the sky. Is the sky also part of the environment?"

The rabbit said, "Oh yes, it is. A little amount of sun gives you a vitamin D that you need. But if you get too much sun, you can get badly sick."

Anita understood. She said, "So, the environment is everywhere. In the sky, in the ground, in the water, in the air and around our home. And we should remember to keep them clean always."

The rabbit said, "Yes. By being careful about what you throw out, where you throw garbage, and what you pour down the drain."

Anita said, "Also, by not allowing the water to stagnate."

The rabbit said, "Yes. And by reusing things over and recycling newspapers and paper bags."

Anita said, "Oh yes. My mother does it. "

The rabbit said, "Good. You could help your mom in that. And by taking oil cans and old cans of paint to a special collection place and not to throw them in the rivers and seas. So that they do not make the environment dirty by leaking into the water and make us sick, both you and animals like me. It does not stop here. There are many more things to take care to keep the environment clean."

Anita said, "Oh my God. That's a huge job to clean the whole environment. I think it takes nearly everyone, everywhere, all the time."

The rabbit said. "Yes my dear girl. You better get busy then." He made a babbling sound to say goodbye and ran to his burrow.

Anita walked back home feeling the cool breeze on her face. She thought, "The environment is huge. It is the whole sky, the oceans, the mountains, the gardens, all the villages, all the towns all around the world. Keeping it clean is such a big job. But it is not impossible. If all of us in the school start doing it and spread it across, we can achieve it."

Anita realised it might take all morning, or all day, or all week or even whole life. But she decided to make a start that same day.

(Story by self. Adapted from <https://kids.niehs.nih.gov/activities/stories/sharon-finds-the-environment/index.htm>)

Time to teach	Value Type	Value Sub Type	Value Attribute
3 Minutes	Non-Violence		Stories

10. QA_Recap - A treat for mosquitoes

Answer the following questions:

Question 1. We get malaria when a _____ bites us.

- a. housefly b. honeybee c. mosquito d. butterfly

Question 2. Rajat could not play because he had _____.

- a. homework b. classwork c. project d. fever

Question 3. It is called _____ when you have less iron in the blood.

- a. hemoglobin b. anemia c. malaria d. RBC

Question 4. Iron-rich _____ are good for our blood.

- a. lock and keys b. medicines c. amla and jaggery d. sugar and salt

Question 5. The _____ makes details inside the blood look thousand times bigger.

- a. microscope b. television c. slide d. projector

Answers: 1. mosquito 2. fever 3. anaemia 4. amla and jaggery 5. microscope

Question 6. Where do you find algae?

Suggested answer: Algae are found growing in and around the water body, around the unclean taps and in all moist places.

Question 7. Who is responsible for keeping the roads, gutters, garbage bins clean?

Suggested answer: The municipality or corporation workers are responsible for keeping the roads, gutter and garbage bins clean.

Question 8. Who is responsible for keeping the surroundings of your house clean? Why?

Suggested answer: We are responsible for keeping our surroundings clean to prevent mosquito breeding.

Question 9. Does anemia affect our health? How?

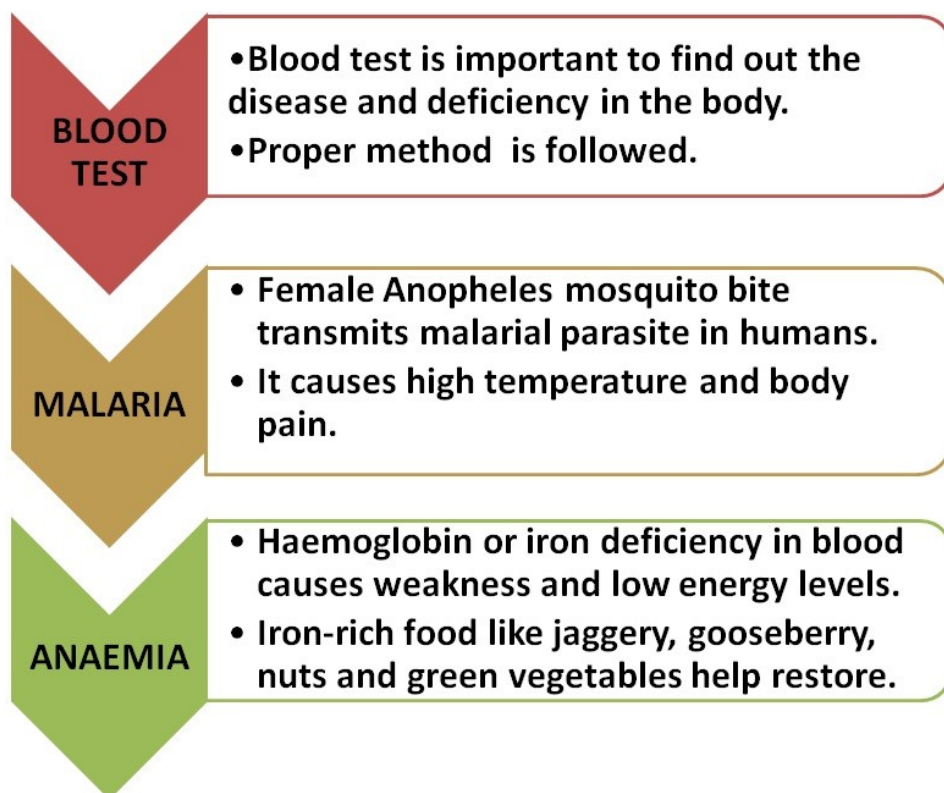
Suggested answer: Yes, anemia affects the physical as well as mental health. It causes weakness in the body and lowers the energy levels which affect the growth in children.

Question 10. What problem do houseflies cause in our body? Why do you think so?

Suggested answer: Houseflies cause stomach problems. Flies sit on all the things around. They sit on dirt and also on food we eat, thus spreading bacteria.

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Assessments	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Anaemia- Cau Cure & Precautions Malaria Symptoms, Cure & Precauti Causes Symptoms, Cure &

11. MS_Summary_A Treat for Mosquitoes



Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	EVS_Health & Human Body	Malaria- Causes, Symptom Precautions, Anaemia- Cal Cure & Precautions Malaria Symptoms, Cure & Precauti Causes Symptoms, Cure &