

Don't give mosquitoes a chance!

Activity book for 8 to 12-year-old kids



**Green
Kidz**[®]
Turn your world around

LEARNING ABOUT A HEALTHY LIVING ENVIRONMENT IN A PLAYFUL WAY

Mosquito prevention package for home and school

This prevention activity book by the GreenKidz Foundation has been made possible by ENNIA. This book together with the mosquito prevention handbook from ENNIA is a good information package for home and school.

Don't
give
Mosquitoes
a chance



Forward

Mosquitoes are not only pesky and annoying, but they can also be dangerous. The Aedes Aegypti mosquito spreads Chikungunya, Dengue and Zika. You can get quite sick from these viruses. They are spreading worldwide and are already present in the Dutch Caribbean.

You can make sure there are fewer places in your home, your neighborhood and your school where mosquitoes like to breed. That is what this brochure is all about. It is full of coloring pages, games and tips. Soon you will know everything about mosquitoes, the diseases they spread and what you can do to protect yourself against them.

Enjoy learning about prevention!



Mosquito Prevention Manual



Mosquito Prevention Activity Book



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Changing the mindset of generations

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Index

Part 1 • Information

Everything about mosquitoes and the diseases that they spread.

Foreword	2
Table of contents	3
Picture Mosquito breeding sites	4
Coloring page Mosquitoes in the house	6
Coloring page Waste in the garbage bin	7
Coloring page Curaçao Clean Up	8
Coloring page Earth Day	9
Body parts game	10
Drawing game	11
Life Cycle Game	12
Counting game	13
Symptoms game	14
Virus Quiz	16
Mosquito Bite Game	17
Shadow game	18
Search game	19

Part 2 • Prevention

Everything about mosquitoes and how to prevent mosquito bites

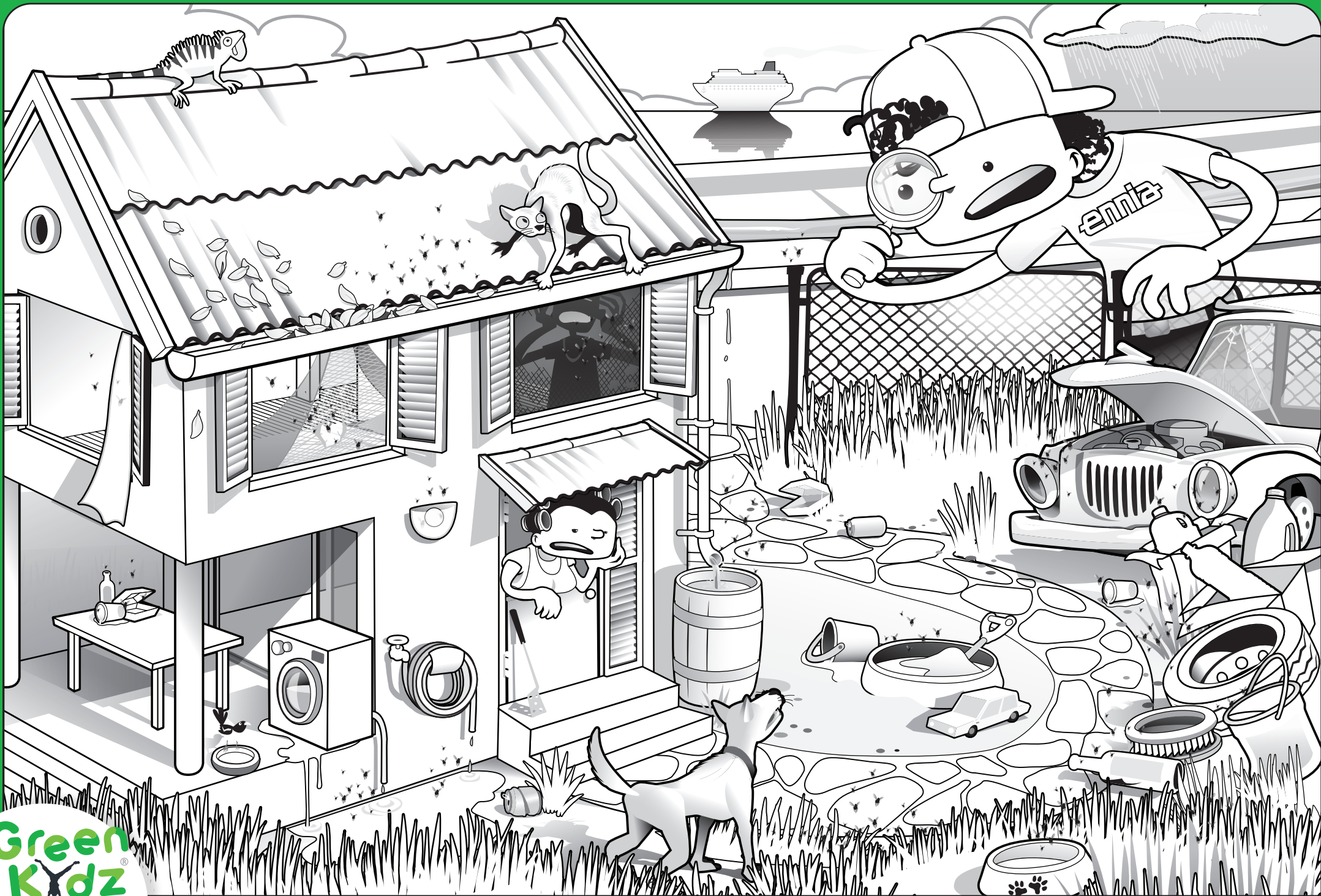
Picture Mosquito prevention	20
Coloring page mosquitoes at school	22
Coloring page Beware of the garbage police!	23
Coloring page Tooby and the Recycle Unit	24
Word game	25
Difference game	26
Puzzle game	28
Maze game	29
Magnifying game	30
Dress up game	32
Sudoku game	34
Clean up game	35
Make your own mosquito candle	36
Mosquito detector quiz	37
Mosquito detector certificate	39

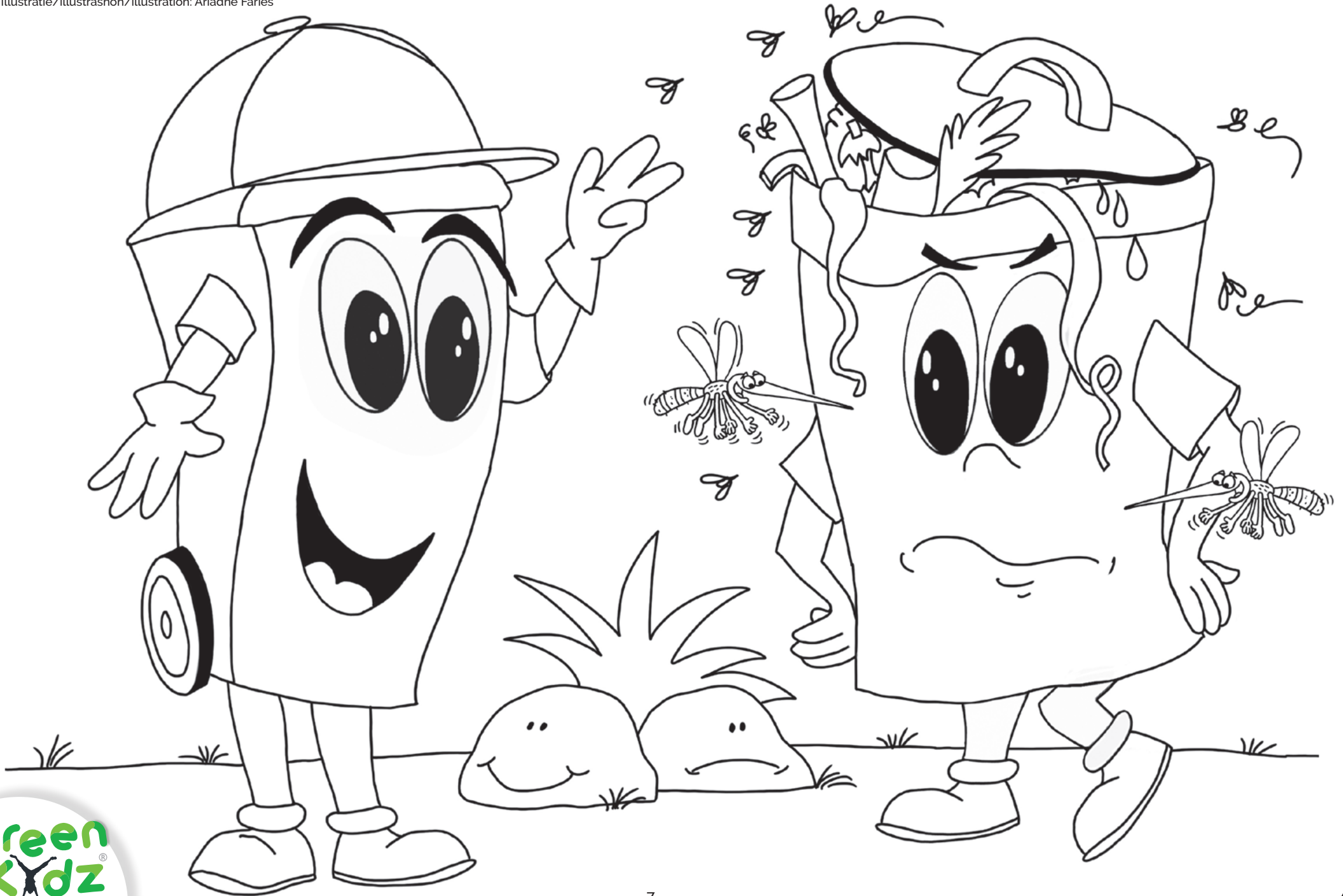


Instruction: In this picture you can see all kinds of places where mosquitoes like to breed. These places are called mosquito breeding sites. How many mosquito breeding sites do you see? Write your answer in the circle.



PICTURE MOSQUITO BREEDING SITES









Mosquito Facts

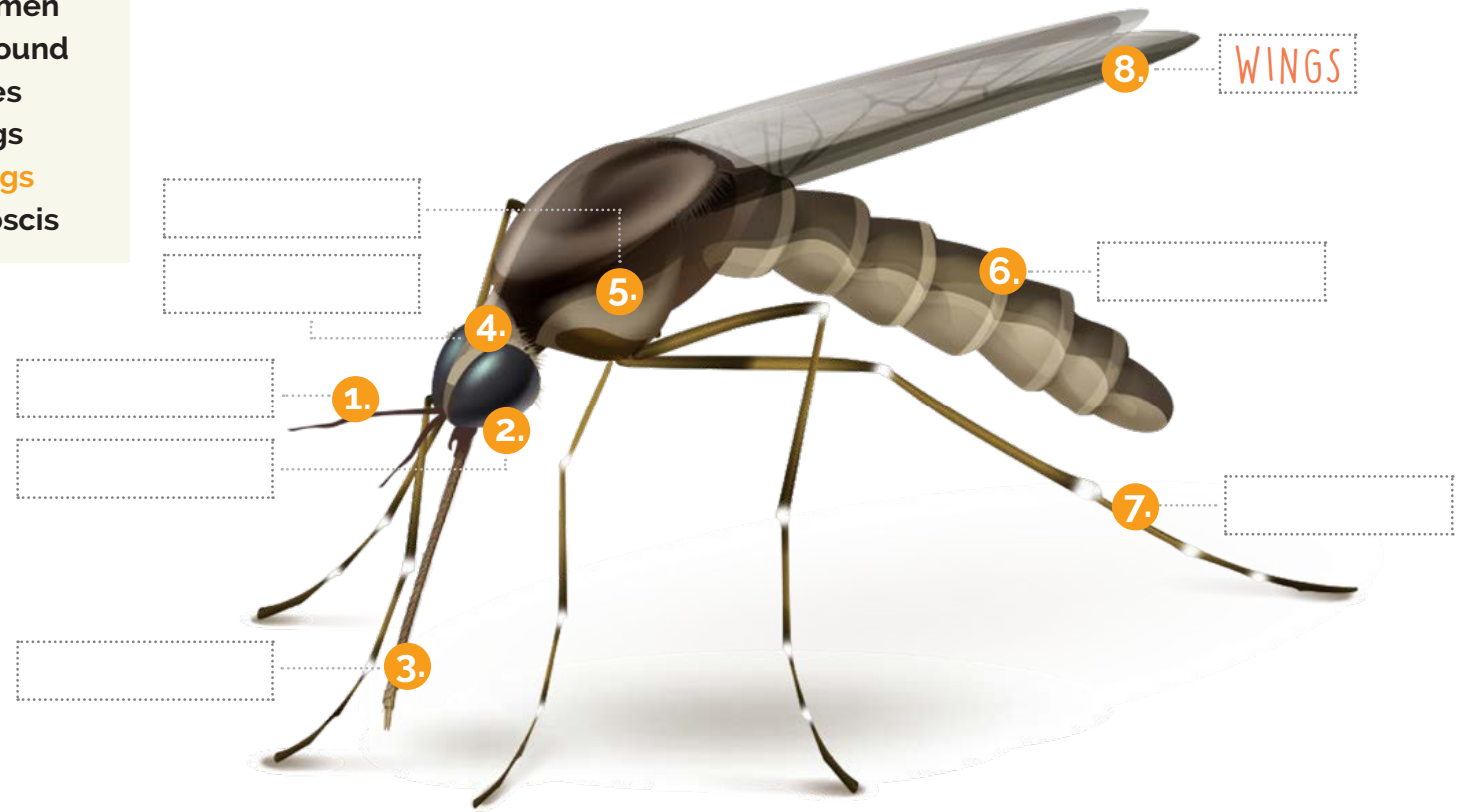
A mosquito has two eyes, six legs, two transparent wings and two feather-like antennae, which it uses to smell very well.

A mosquito has a small thin body without bones. The body consists of 3 parts: a head with visible proboscis, a thorax and an abdomen.

The 8 body parts of a mosquito:

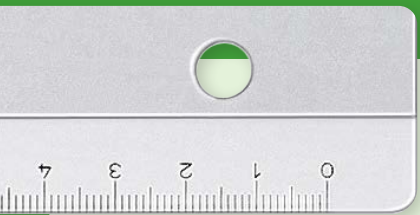
- Antennas
- Thorax
- Head
- Abdomen
- Compound eyes
- Legs
- Wings
- Proboscis

Examine this mosquito carefully. Do you recognize all 8 body parts? Write each body part in the correct box. We'll do one for you.



BODY PARTS GAME

WHICH BODY PARTS DO YOU RECOGNIZE?



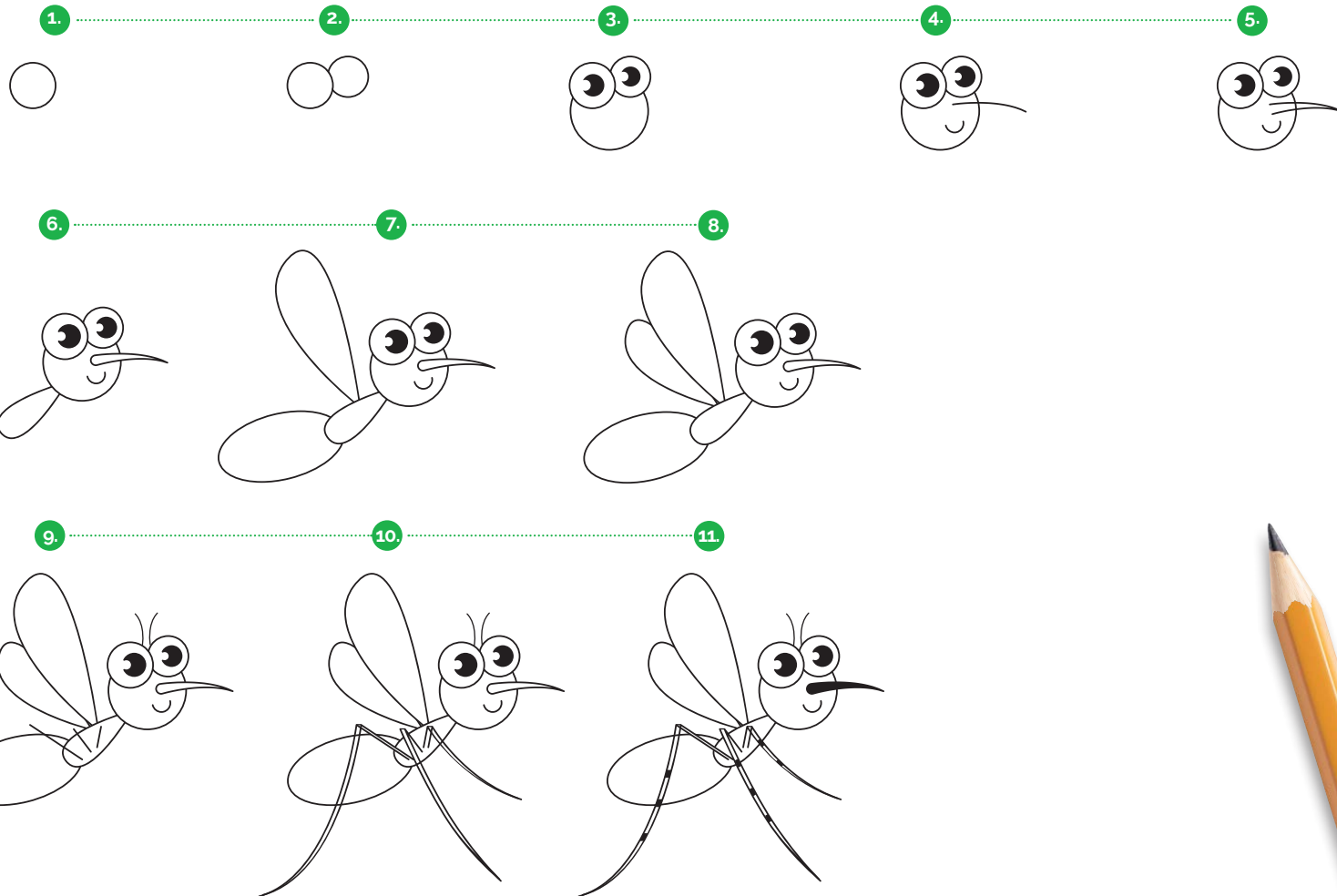
Mosquito Facts

Aedes Aegypti mosquitoes are also called yellow fever mosquitoes. They are found on all the islands of the Dutch Caribbean.

One of their striking features are the black and white stripes on their bodies and legs. These mosquitoes are actually only 5 to 10 millimeters long.

The male mosquito is vegetarian and feeds on nectar and plant juices. The female mosquito bites people and animals because she needs blood to produce her eggs.

In this example we will show you how to draw a mosquito in 11 steps.
Now draw the mosquito yourself. You can do it!



DRAWING GAME

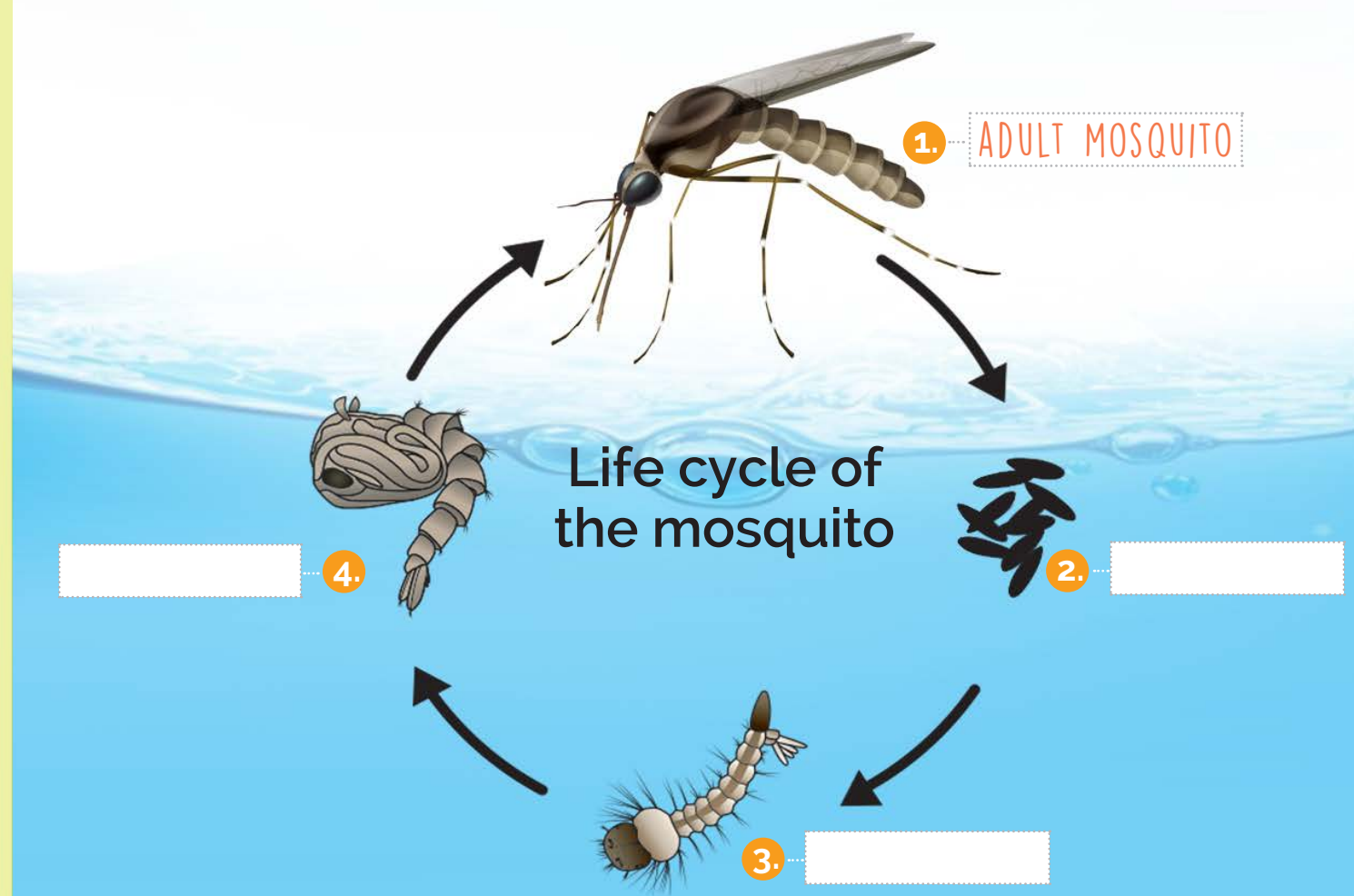
HOW TO DRAW A MOSQUITO

Mosquito Facts

The Aedes Aegypti mosquito develops from an egg to an adult mosquito in 5 to 10 days. The female mosquito lays her eggs on stagnant water. She lays eggs 4 to 5 times in her lifetime. She lays about 200 eggs in total.

The eggs hatch in water into a larva and the larva develops into a pupa. Eventually the pupa grows into adult mosquitoes, which in turn leave the water. Adult mosquitoes live about 6 weeks.

The drawing below shows the 4 life stages of a mosquito. Write the correct word for each phase **pupa**, **larva**, **adult mosquito**, **mosquito eggs**. We'll do one for you.



LIFE CYCLE GAME

WHICH LIFE STAGES DO YOU KNOW?

In this picture you can see different types of insects. You can see mosquitoes, flies, bees, ants and butterflies. Count them and color them all. Write the correct answer in each circle. We'll do one for you.

Mosquito Facts

Mosquitoes are flying insects. There are at least a million species of insects and about three thousand species of mosquitoes on earth.

When a female mosquito quickly moves her wings up and down, you will hear an annoying buzzing sound. Male mosquitoes will then know that a female is nearby.

I see
5
mosquitoes

I see

flies

I see

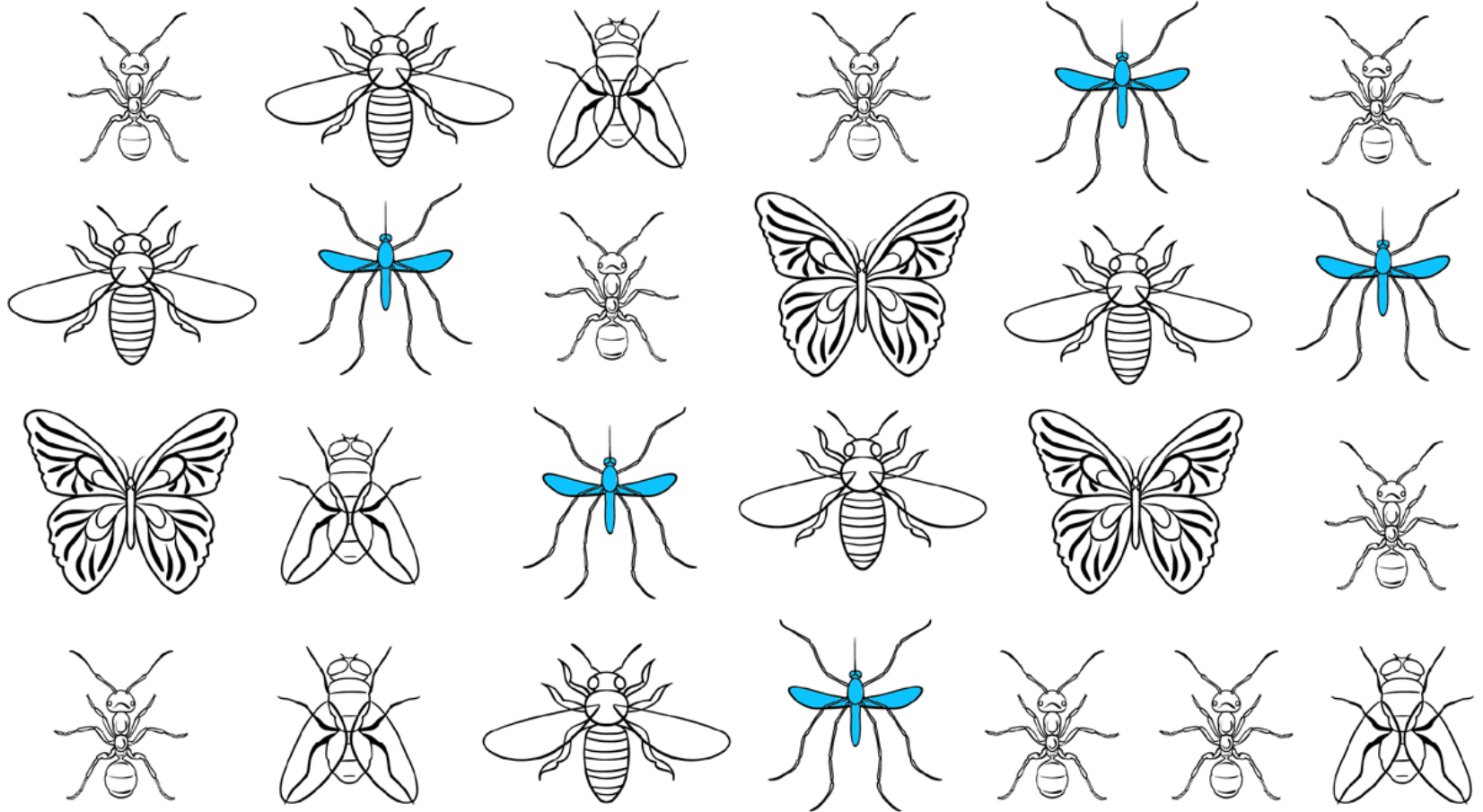
butterflies

I see

ants

I see

bees



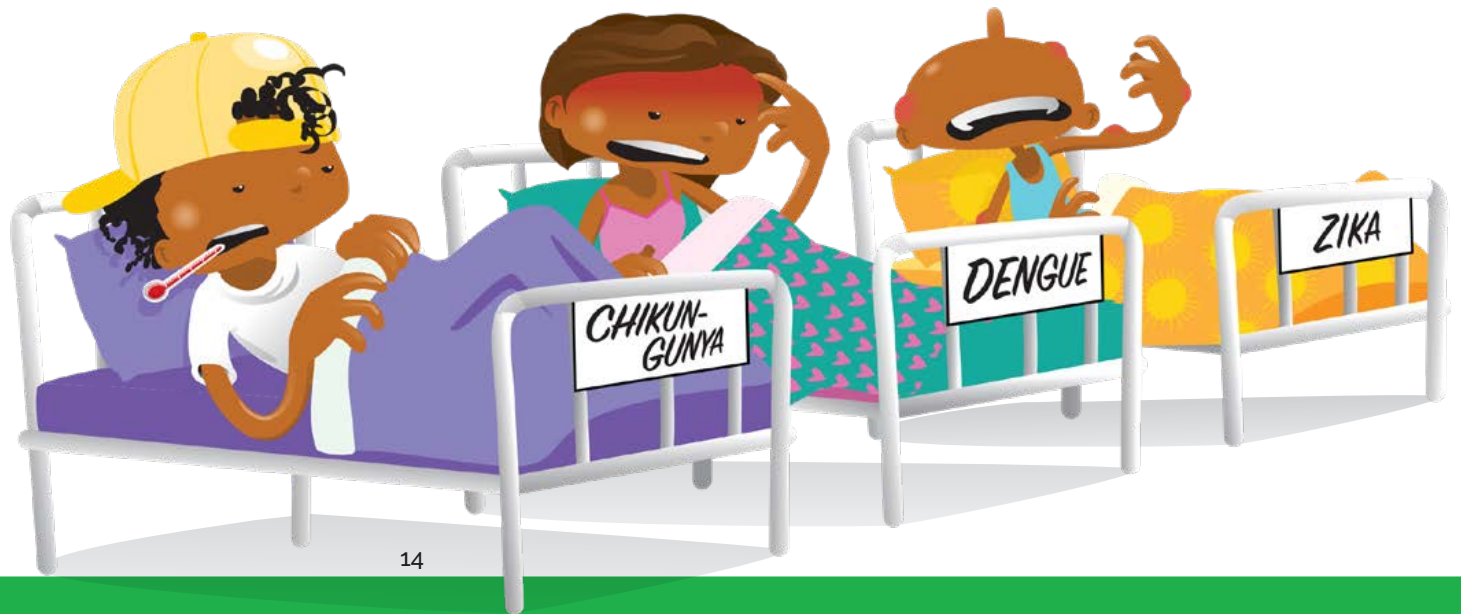
COUNTING GAME

HOW MANY MOSQUITOES CAN YOU COUNT?

TABLE OF SYMPTOMS

SYMPTOMS

	C Chikungunya	D Dengue	Z Zika
1. Fever	✓	✓	✓
2. Headache	✓	✓	✓
3. Joint pain	✓	✓	✓
4. Skin rash	✓	✓	✓
5. Nausea and vomiting	✓	✓	✓
6. General malaise/ weakness in general	✓	✓	✓
7. Painful swollen joints that feel warm to the touch (arthritis)	✓		
8. Pain behind the eyes		✓	✓
9. Irritated (red) eyes	✓		✓
10. Painful bones		✓	
11. Nosebleeds, bleeding gums, blood in your stool, vomiting and bruising under the skin		✓	
12. Painful, swollen wrists, ankles, and soles of your feet	✓		
13. Swollen legs			✓



Mosquito Facts

Chikungunya, Dengue and Zika are infectious diseases. They are caused by the Chikungunya virus, the Dengue virus and the Zika virus.

When the Aedes Aegypti mosquito is infected with one of these viruses, it can in turn transmit the virus.

Chikungunya, Dengue and Zika cause flu like symptoms. Some symptoms are the same, but each disease also has symptoms that sets them apart.

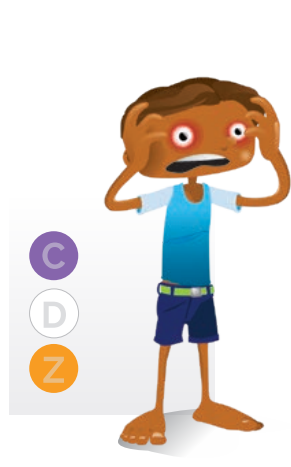
In the table on the right, you can see the symptoms of each disease.



Look closely at the symptom table above. Write down for each symptom whether it belongs to chikungunya **C**, dengue **D** or zika **Z**. We'll do two for you.



Skin rash



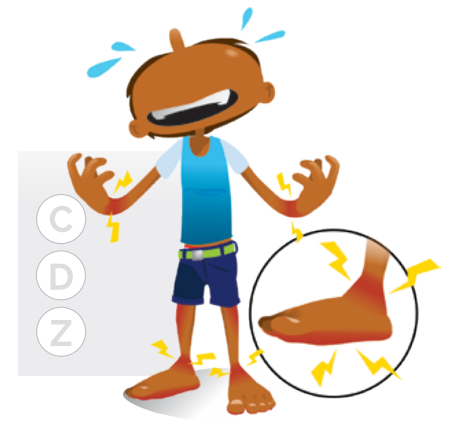
Irritated (red) eyes



Fever



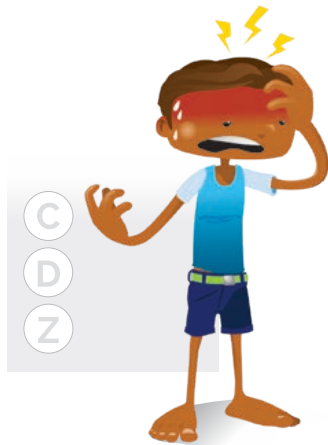
Nausea and vomiting



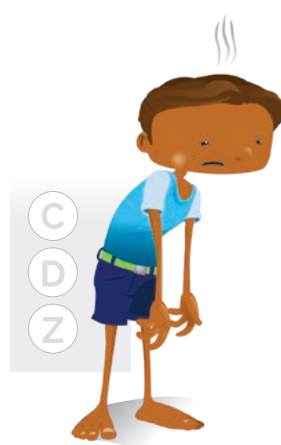
Painful swollen joints that feel warm to the touch (arthritis)



Painful bones



Headache



General malaise/
weakness in general



Blood in your stool



Nosebleeds and bleeding gums

SYMPTOMS GAME

WHAT ARE THE SYMPTOMS?

Don't

give

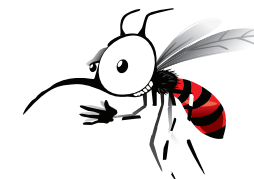
Mosquitoes

a chance



Read each of the 6 questions carefully and color the circle with the correct answer. There is only 1 correct answer per question.

1. Which mosquito spreads Chikungunya, Dengue and Zika?
 - Aedes Albopictus mosquito.
 - Anopheles mosquito.
 - Aedes Aegypti mosquito.
2. For which viral diseases aren't there any good vaccines invented yet?
 - Chikungunya & Dengue & Zika.
 - Polio & Chickenpox.
 - Measles.
3. When does the Aedes Aegypti mosquito transmit a viral disease?
 - Only if the mosquito itself is infected with the virus.
 - Only if the mosquito lays eggs.
 - Only if it is a male mosquito.
4. Which virus can you get infected with as many as 4 times?
 - Zika
 - Dengue
 - Chikungunya
5. Which virus can be transmitted through sex, if one person is infected with the virus?
 - Zika
 - Chikungunya
 - Malaria
6. Which symptoms do you only get with Dengue?
 - Fever, headache and joint pain.
 - Pain in your bones.
 - Nosebleeds, bleeding gums and blood in your stool.



If you are unsure about your answers...

You can look at the ENNIA Mosquito Prevention Handbook 'Don't give mosquitoes a chance' It contains all the answers.



Scan the QR code!



VIRUS QUIZ

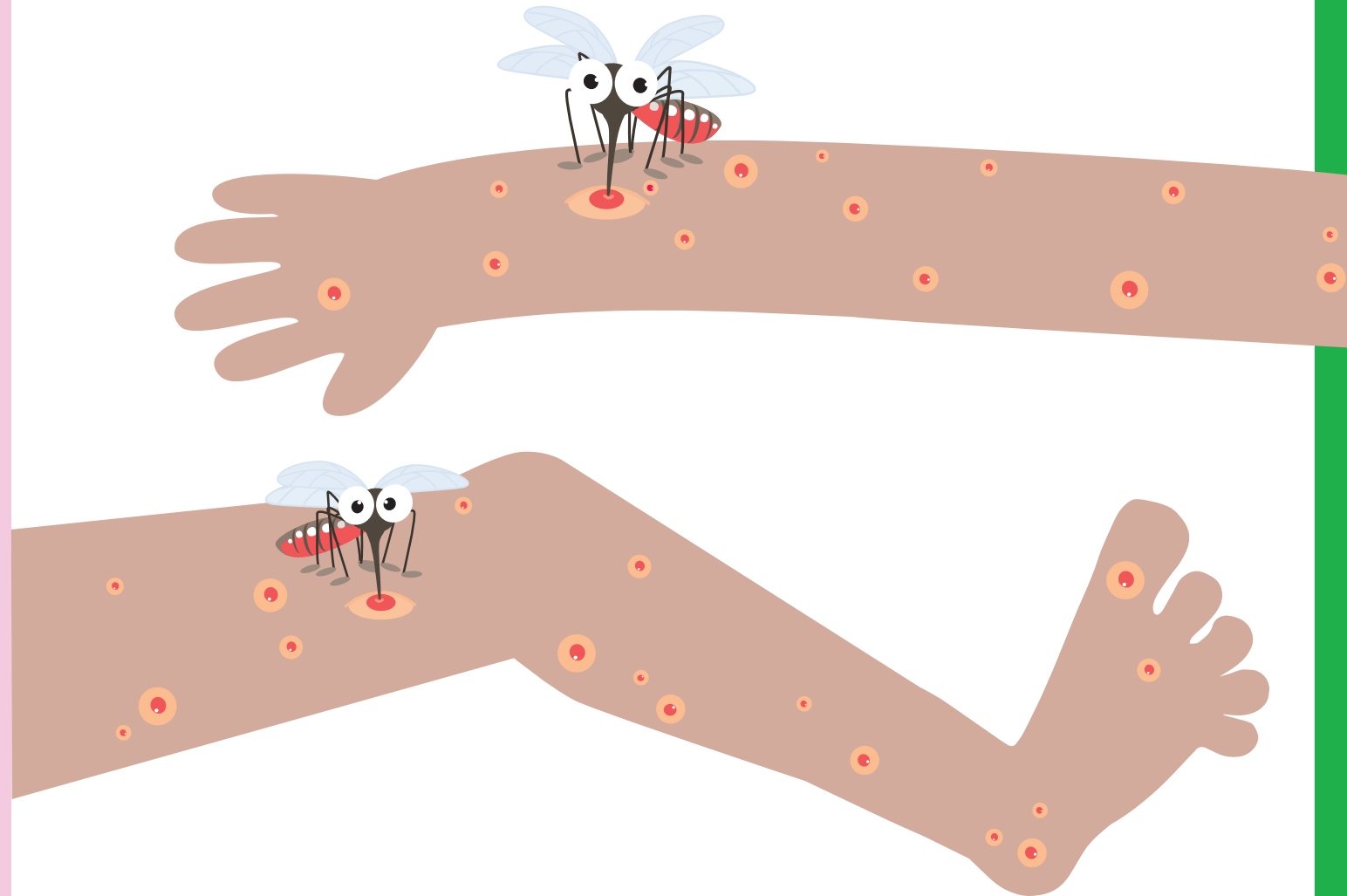
WHAT IS TRUE?

Mosquito Facts

The male Aedes Aegypti mosquito does not sting but the female mosquito does. When fertilized, she needs protein for the development of her eggs. She gets them from the blood of humans and animals. She sticks her proboscis in your skin and drills a small hole.

While doing that, she injects an anticoagulant into your blood. This way she can easily suck the blood without it becoming thick and clotting. Our immune system reacts to this drug and gives off an allergic reaction. This will give you a mosquito bite and cause a lot of itching.

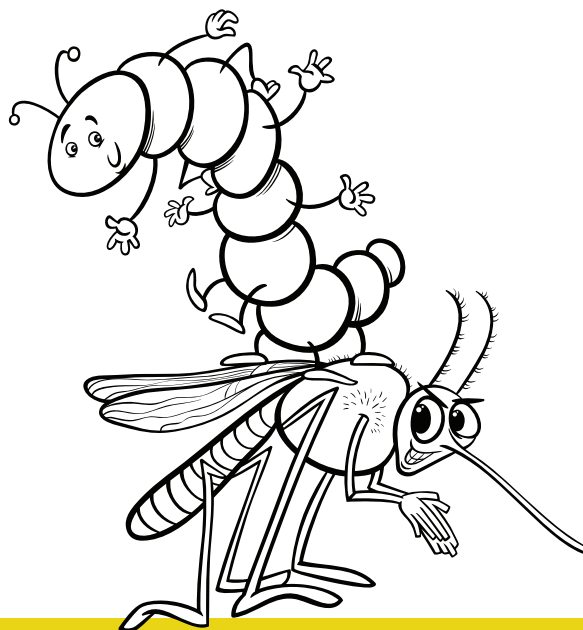
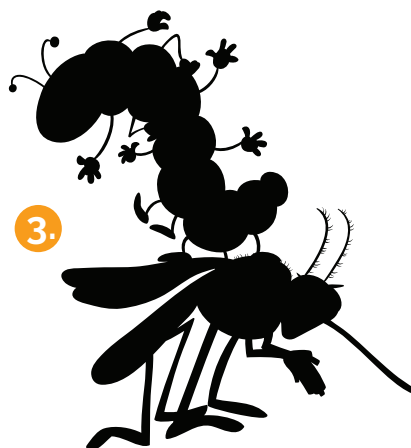
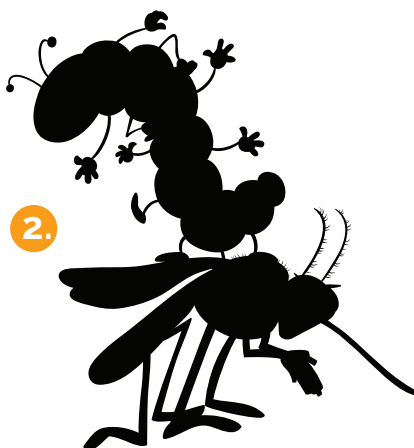
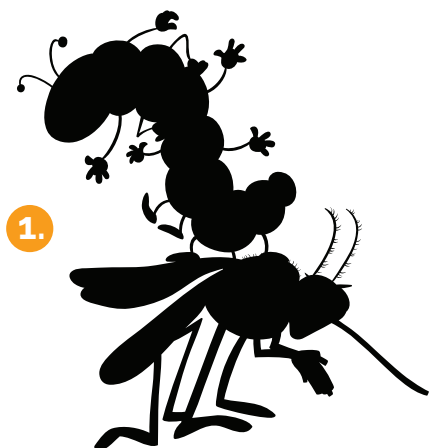
How many mosquito bites do you see?
Write down the correct number in the white circle.



MOSQUITO BITE GAME

HOW MANY MOSQUITO BITES DO YOU SEE?

In this picture you can see 1 drawing and 5 shadows. Look closely! Which shadow belongs to the drawing?
Circle the correct number.

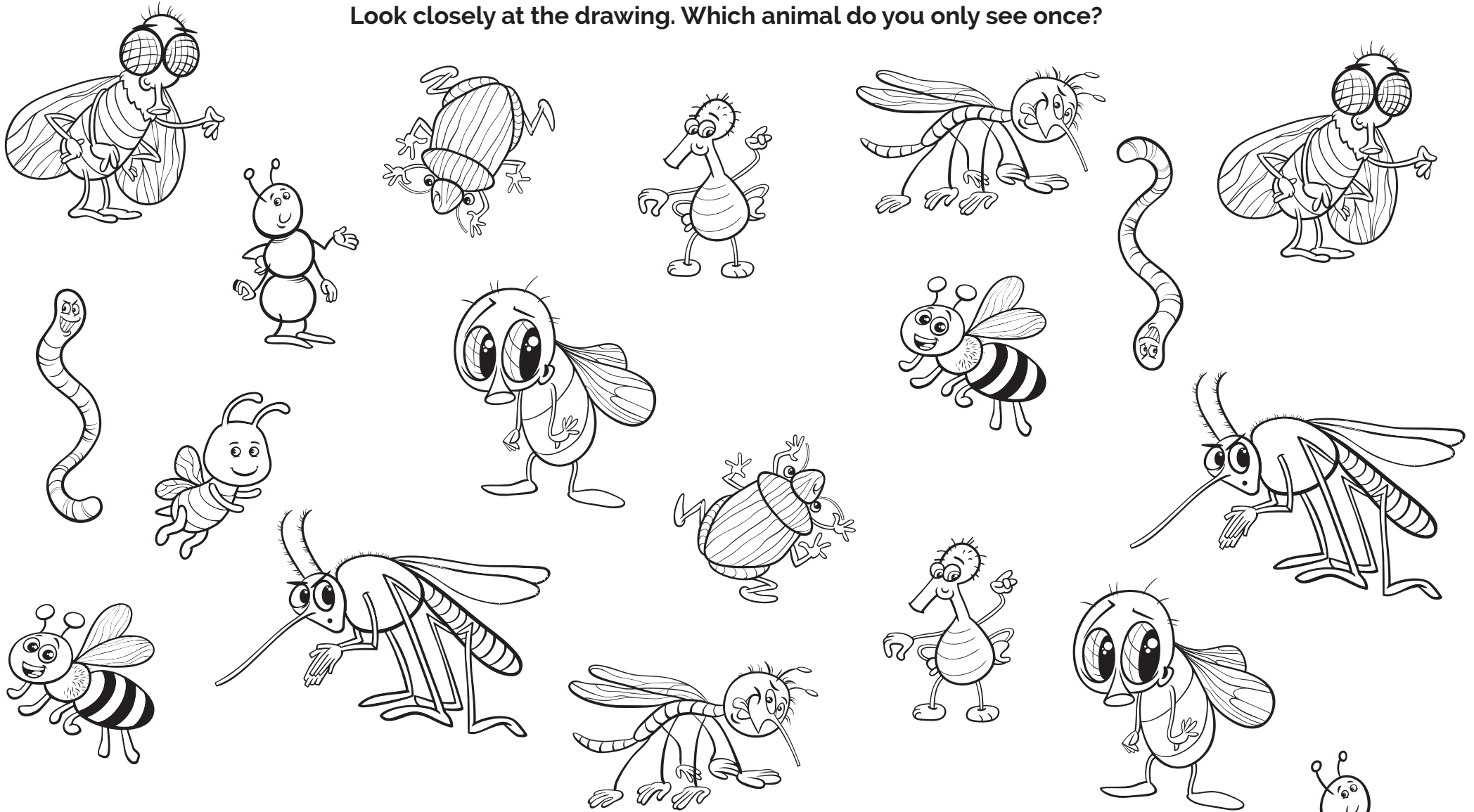


SHADOW GAME

WHICH SHADOW BELONGS TO THE DRAWING?



Look closely at the drawing. Which animal do you only see once?



SEARCH GAME

WHERE DO YOU ONLY SEE ONE?



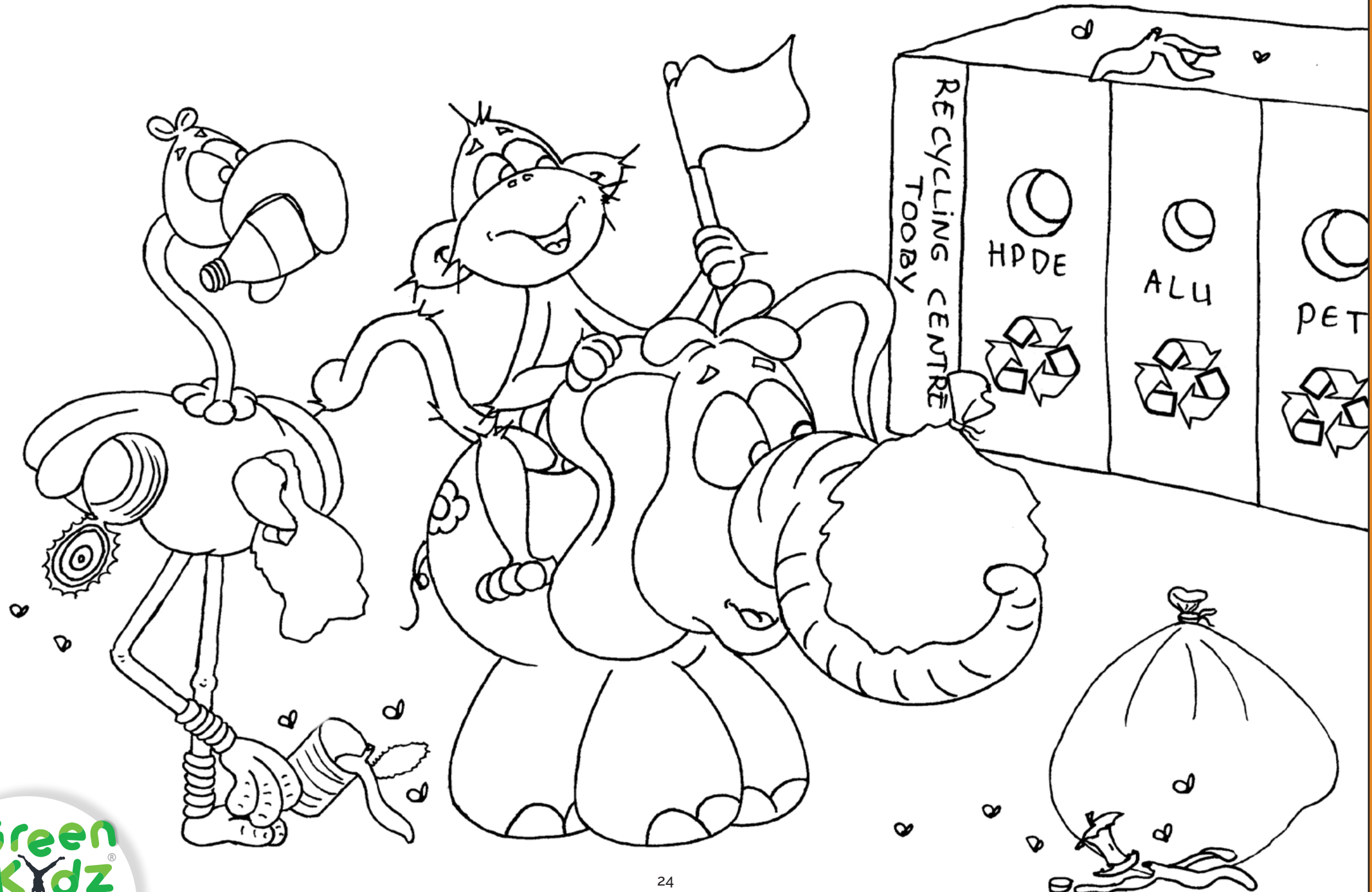
In this picture all mosquito breeding sites are gone, so there are no more mosquitoes. If you look closely, you can see several mosquito repellents and a variety of items to catch mosquitoes. How many do you see? Write your answer in the circle.



PICTURE MOSQUITO PREVENTION







In this puzzle 7 mosquito related words are hidden.

Can you find them?

We'll do one first.

Aedesaegypti

Mosquito

Chikungunya

Dengue

Zika

Virus

Infectious disease

A	P	H	A	S	I	N	J	A	E
I	N	F	E	C	T	I	O	U	S
O	S	D	I	S	E	A	S	E	G
B	I	B	L	A	C	K	Q	K	A
O	N	C	K	U	Y	E	S	W	H
T	I	M	E	A	N	B	E	L	Z
I	S	B	A	T	D	E	N	G	U
U	L	E	D	O	M	E	F	A	M
Q	E	A	S	E	W	N	O	T	O
S	U	R	I	V	O	S	Z	F	U
O	N	R	H	E	R	E	U	I	R
M	X	W	I	G	E	E	L	D	K
C	H	I	K	U	N	G	U	N	Y
R	A	T	O	N	B	E	P	I	N

WORD GAME

DO YOU SEE ANY MOSQUITO RELATED WORDS?

Find the 10 differences. Do you see them all?



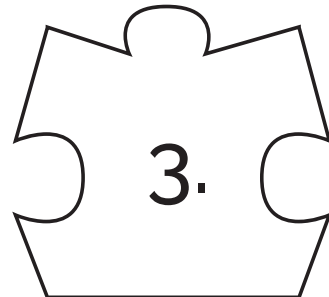
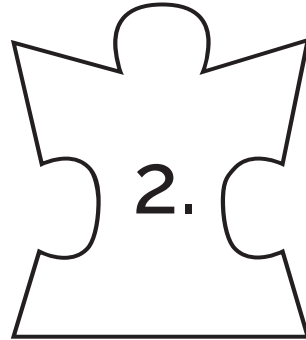
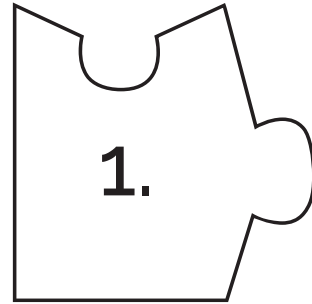
DIFFERENCE GAME

Do you see puzzle pieces 1, 2 and 3? Draw an arrow matching the pieces and write down the correct number.

Prevention tips

Aedes Aegypti mosquitoes can spread dangerous diseases. Protect yourself!

- ✓ Sleep under a mosquito net.
- ✓ Install screens on windows and doors.
- ✓ Remove objects that contain water.
- ✓ Repair air conditioners and faucets that leak water.
- ✓ Clean up litter.
- ✓ Make sure your garden hose isn't leaking.
- ✓ Remove car tires from your yard.



PUZZLE GAME

DO YOU SEE PUZZLE PIECES 1, 2 AND 3?

Prevention tips

When there are a lot of mosquitoes, the government sometimes sends spray trucks into the neighborhoods. They spray against mosquitoes that spread Chikungunya, Dengue and Zika. They use the insecticide 'Pyrethrin'.

Take the following measures when the spray trucks pass by in your neighborhood:

- ✓ Cover food and utensils.
- ✓ Keep windows and doors open to allow the insecticide to penetrate all areas.
- ✓ Keep them open for at least an hour after the spray trucks have passed by.



MAZE GAME

WHICH PATH SHOULD THE SPRAYER TAKE?

Prevention Tips

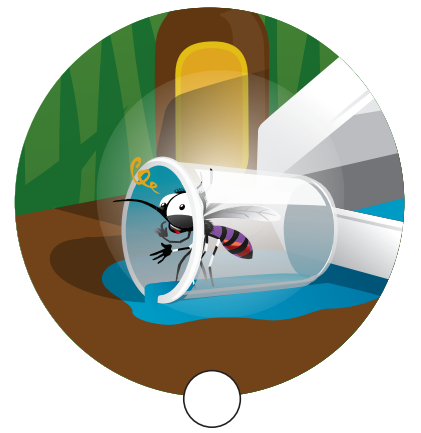
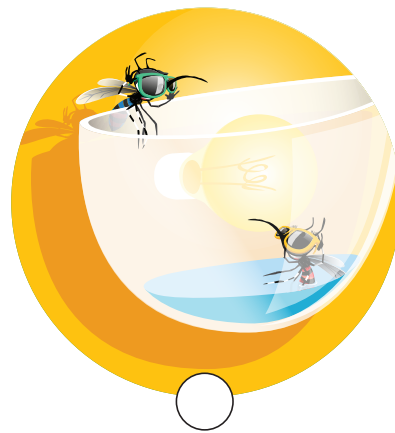
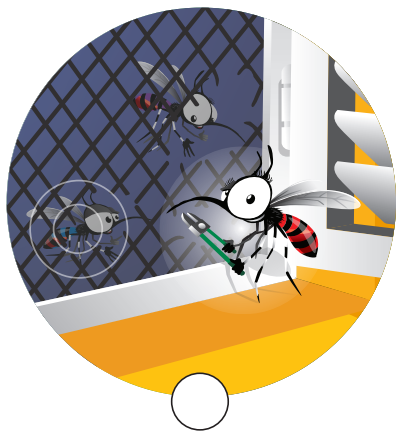
The female *Aedes Aegypti* mosquito prefers to lay her eggs in clean, stagnant water but if there is no clean water, dirty water will suffice.

Therefore, it's important that puddles and all objects that can collect water in and around your home are removed or covered.



MAGNIFYING GAME

In the picture above you can see 8 mosquito breeding sites. On this page, those mosquito bites are enlarged. Where did the mosquito tracker look at each picture? Put the correct number in each circle. We'll do one for you.



MAGNIFYING GAME

WHAT'S MAGNIFIED?

Chico and Zaira want to play outside before it gets dark. There are many mosquitoes. What clothes should they wear to protect themselves as best as possible against mosquito bites? Cut out the right clothes and dress them up!



Prevention Tips

Mosquitoes sting all day long. They are most active at sunrise and sunset. At those times, wear clothes that cover up your body as much as possible.

Wear light-colored clothing because dark clothing attracts more mosquitoes. Choose clothing with long sleeves and long pants that mosquitoes cannot easily penetrate/ bite through.



DRESS UP GAME



DRESS UP GAME WHICH CLOTHING PROTECTS THE BEST?

Prevention Tips

You can scare off mosquitoes using effective repellents such as DEET, Picaridin, Lemon and Eucalyptus oil.

These ingredients can be found in mosquito repellents or in citronella candles. They are not safe for very young children.

Many people use an electric mosquito racket to kill mosquitoes by giving them a mild electric shock or place a mosquito trap in their garden.



SUDOKU GAME

WHICH IMAGES BELONG IN THE EMPTY BOXES?

Prevention Tips

The female Aedes Aegypti mosquito lays about 200 eggs in her lifetime. She prefers to lay them in clean, stagnant water, but dirty water will also work.

The female Aedes Aegypti mosquito likes litter with low water. Therefore, always clean up litter in your garden, in your street and at your school!



Clean up the litter. Draw a dotted line from each object to the correct bin or to the garbage bag. We'll do one for you.



CLEAN UP GAME

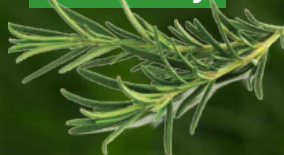
WHERE DOES THE LITTER BELONG?

You need this!

Empty glass



Rosemary



Lemon



Lime



Citronella oil



Tea lights



This is what you have to do!

1. Cut the lemon and lime into slices of about 1 centimeter thick.
2. Place the lemon and lime slices in the bottom of the glasses.
3. Add a sprig of rosemary to each glass.
4. Fill the glass just below the edge with water.
5. Add a teaspoon of citronella oil to each glass.
6. Remove the tea lights from the aluminum casing and place them on top of the water in each glass.
7. Light them and enjoy a wonderfully scented mosquito candle!



MAKE YOUR OWN MOSQUITO CANDLE

HOW TO MAKE A MOSQUITO CANDLE

Mosquito detector test.

Color the circle with the correct answer. There is only 1 correct answer.

1. An *Aedes Aegypti* mosquito goes through four life stages in its lifetime. What is the correct lifecycle order?

- Webu › Egg › Pupa › Larva › Adult mosquito
- Egg › Larva › Pupa › Adult mosquito
- Egg › Larva › Pupa › Adult mosquito

2. Which statement about the female *Aedes Aegypti* mosquito is correct?

- She lives about 6 weeks.
- She prefers to bite pets.
- She lays about 500 eggs in her lifetime.

3. What does the adult female mosquito need to produce eggs?

- Sunlight
- Water
- Blood

4. How long can mosquito eggs survive on the edges of objects?

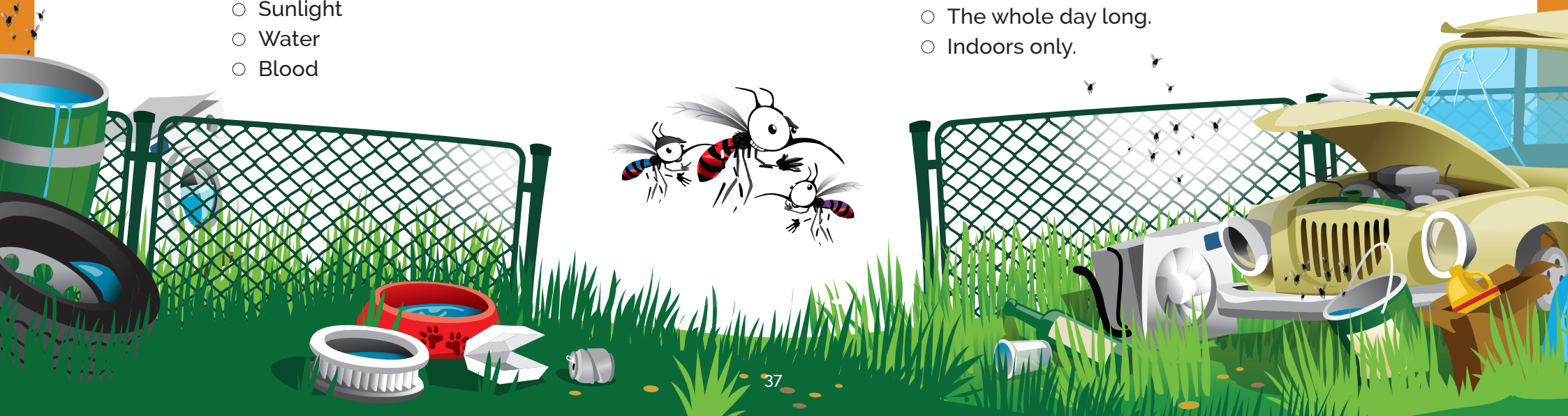
- Up to a week.
- Up to a month.
- Up to a year.

5. Which statement about the *Aedes Aegypti* mosquito is correct?

- The mosquito lays its eggs in stagnant water.
- The mosquito lays its eggs in running water.
- The mosquito lays its eggs in the sand.

6. When does the *Aedes Aegypti* mosquito bite people?

- Only at sunrise and sunset.
- The whole day long.
- Indoors only.



Color the circle with the correct answer.

7. What kind of clothing attracts mosquitoes?

- Light-colored clothing.
- Dark clothes.
- Hip clothes.

8. When is the *Aedes Aegypti* mosquito most active?

- At sunrise and sunset.
- In the winter.
- During the night.

9. What viral disease is not spread by the *Aedes Aegypti* mosquito?

- Chikungunya
- Dengue
- Malaria

10. Which of these viruses can be dangerous for pregnant women?

- Chikungunya
- Dengue
- Zika

11. Which ingredient does not protect against mosquito bites?

- DEET
- Eucalyptus lemon oil
- Suntan lotion

12. Which inspectors can help to detect mosquito breeding grounds?

- Safety inspectors.
- Health inspectors.
- Cleaning service inspectors.





Don't
give
Mosquitoes
a chance

ennia
Feel secure!



Mosquito Prevention Certificate

Name:

I am a **mosquito tracker!**



**Green
Kidz**[®]
Turn your world around

ENVIRONMENTALLY CONSCIOUS LEARNING MATERIAL FOR THE YOUTH IN THE CARIBBEAN

Prevent chikungunya, dengue and zika!

Prevention is the best medicine.

The GreenKidz Foundation encourages children, teenagers and teachers to contribute to a cleaner and healthier living environment. The foundation develops modern, multilingual teaching materials that match the experience of children in the Dutch Caribbean.

This mosquito prevention activity book from GreenKidz, together with the mosquito prevention manual from ENNIA, form a nice information package for home and school. With the information in these brochures you know exactly how to prevent mosquito bites and mosquito breeding sites.

You can download both brochures for free in Papiamentu, Papiamentu English and Dutch via: www.ennia.com/muggen and www.greenkidz.org.



Mosquito Prevention Activity Book



Mosquito Prevention Manual

For more information or orders, please contact maya@greenkidz.org



MOSQUITO INFORMATION SITES IN THE DUTCH CARIBBEAN

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GKMB (Yellow Fever and Mosquito Control)

Barcadera 1-D, Santa Cruz, Aruba
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MOSQUITO INFORMATION SITE BONAIRE

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Society & Care Directorate,
Public Entity Bonaire,
Kaya Neerlandia 41, Bonaire
T: (+599) 717 2211

MOSQUITO INFORMATION SITE CURAÇAO

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