Zika, dengue and chikungunya

prevention toolkit

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safe

Zap that mosquito game

International Federation of Red Cross and Red Crescent Societies

Acknowledgments

This toolkit was made possible by the European Union funded International Consortium on dengue Risk Assessment, Management and Surveillance (IDAMS), a five and a half research project led by Heidelberg University Hospital. Further we would like to thank the IDAMS partners and, in particular, Leigh Bowman from Liverpool School of Tropical Medicine for their support to the development of this toolkit.

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Foreword

Through the 2016 declared outbreak of Zika, the bite of an infected Aedes Aegypti and Aedes Albopictus mosquito grew even more hazardous. These same Aedes mosquitoes that transmit Zika also transmit dengue, chikungunya and yellow fever, diseases that affect all segments of society but with particular impact on the poorest and most vulnerable. Diseases caused by the Aedes mosquitoes result in hundreds of thousands of deaths each year – deaths which are largely preventable by eliminating mosquito breeding sites and interrupting human-to-mosquito contact.

In the battle against diseases like Zika and dengue, knowledge is power. Climate change is shifting the distribution of mosquitoes and to new areas. Empowering communities is essential in reaching and protecting the most vulnerable individuals and households. Vector control programmes, community empowerment and awareness campaigns are proven strategies to reduce the burden of vector-borne diseases. Red Cross and Red Crescent volunteers can play a key role in community and school outreach activities for Zika, dengue and chikungunya prevention. These community-based activities need to be sustained to ensure long-lasting disease control.

The Zika, dengue and chikungunya prevention modules and toolkit were developed to initiate a long-term engagement with the communities at risk through awareness and health promotion materials. National Societies and organizations at community level can contribute to sustained improvement of sanitation, reduction of mosquito breeding sites and increased level of knowledge on how to protect the community from mosquito-borne diseases such as Zika, dengue and chikungunya.

It is our hope that these materials will start the necessary conversations with communities and school communities to recognise that prevention is the best weapon in the battle against the threats posed by Aedes mosquitoes. We invite all partners within and outside the Movement to adapt and use these materials to empower your communities with the knowledge, skills and behaviour necessary to reduce vector-borne disease transmission for healthier and happier communities.

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ZDC prevention toolkit

Introduction

The Zika, dengue and chikungunya prevention modules and toolkit



Community module

The Zika, dengue and chikungunya prevention community module is intended for volunteers teaching and coaching adults (ages 17 +) about the transmission, symptoms, treatment and prevention methods to address Zika, dengue and chikungunya (ZDC). The community module is comprised of 5 topics which we advise teaching in sequential order for maximum effect. The included tools, talking points and activities allows volunteers to teach communities in an interactive way about how ZDC is transmitted, how to prevent mosquito bites and reduce mosquito populations through community action and social and behavior change techniques as well as what to do if a community thinks they may have contracted Zika, dengue or chikungunya. The materials also address stigma associated with ZDC and helps to set a supportive environment for preventing disease as a collective group through ongoing community action.



School/youth module

The Zika, dengue and chikungunya prevention school / youth module is intended for volunteers, educators, and peer educators teaching children from ages 7 - 16 in a school or youth club setting about the transmission, symptoms, treatment and prevention methods to address Zika, dengue and chikungunya (ZDC). The school / youth module is comprised of 5 topics which should be taught in sequential order. The included tools, talking points and activities allows children to learn in an interactive way about how ZDC is transmitted, how to prevent mosquito bites and reduce mosquito populations through collective school community action and social and behavior change techniques as well as what to do if a child suspects that s/he or a family member thinks they may have contracted Zika, dengue or chikungunya. The materials also address stigma associated with ZDC and help to set a supportive environment for preventing disease as a collective group through ongoing school community action.



Toolkit

The Zika, dengue and chikungunya prevention toolkit is intended to be used with the Zika, dengue and chikungunya prevention modules. The toolkit features full-colour imagery, interactive formats and games material to teach all audiences according to the methodology suggested in the module guides. All materials can be printed in colour or black/white and are of high resolution for those national societies wishing to enlarge and print posters and banners for other uses in their Zika, dengue and/or chikungunya prevention activities.



Topic outline for community and school/youth modules

- Topic 1 Let's learn about diseases spread by Aedes mosquitoes
- Topic 2 Know the risks of Zika, dengue and chikungunya
- **Topic 3 -** Know where mosquitoes breed and live in the community
- Topic 4 Preparing for and preventing Zika, dengue and chikungunya
- Topic 5 Creating an action plan



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Mosquitoes poster Transmission card Symptoms board (left/right) Symptoms cards Treatment card Untreated disease board Untreated disease cards Microcephaly card Pregnant woman card

Breeding sites board (left/right) Breeding sites cards Prevention board (left/right) Prevention cards Breeding site posters for discussion #1 Breeding site posters for discussion #3 Breeding site posters for discussion #4 Mosquitoes and eggs poster Community poster School map with no flags (left/right) School map with green flags School map with green and red flags Community map with no flags (left/right) Community map with green flags Community map with green and yellow flags Community map with green, yellow and red flags Mapping flags - school/youth Mapping flags - community

A buzz about dengue game cards 1 (front/back) A buzz about dengue game cards 2 (front/back) A buzz about dengue game cards 3 (front/back) A buzz about dengue game cards 4 (front/back) A buzz about dengue game cards 5 (front/back) A buzz about dengue game instructions Charades clues cards Zap that mosquito game cards Zap that mosquito game board (top/bottom) Zap that mosquito game die Addressing stigma roleplay cards #1 Addressing stigma roleplay cards #2

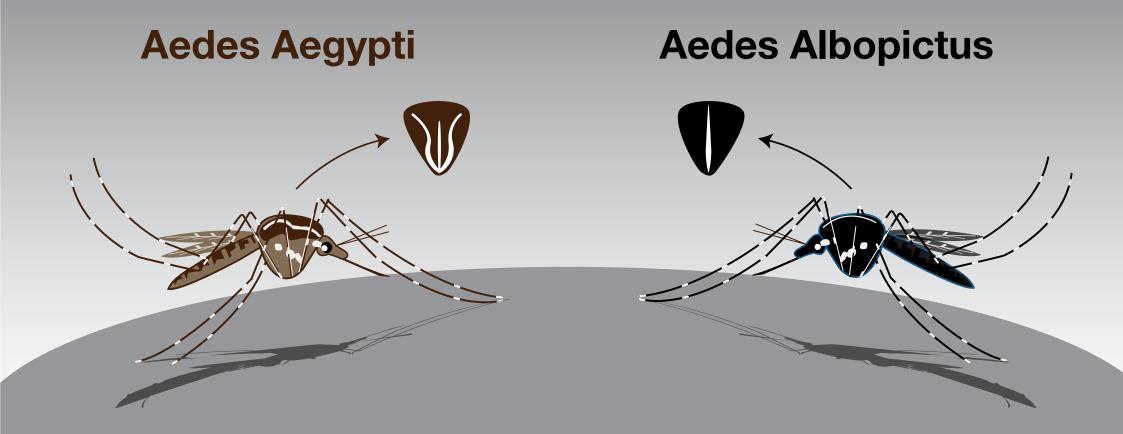
Note: Topic 5 does not use any tools from the toolkit.

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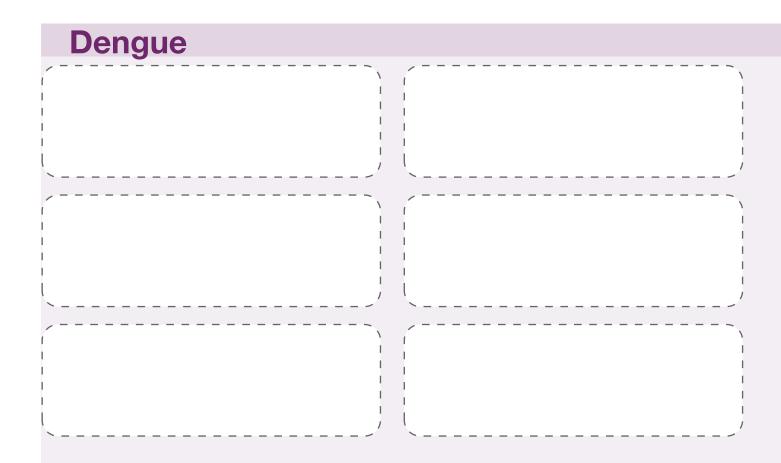








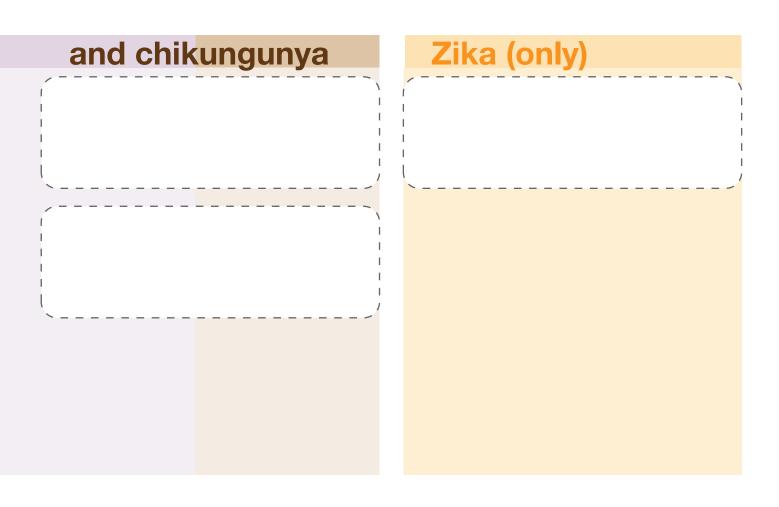






Use sticky-tape to tape the two pieces of the board together. Now stick the Symptoms cards on the spot underneath the appropriate virus you think the symptom belongs to.

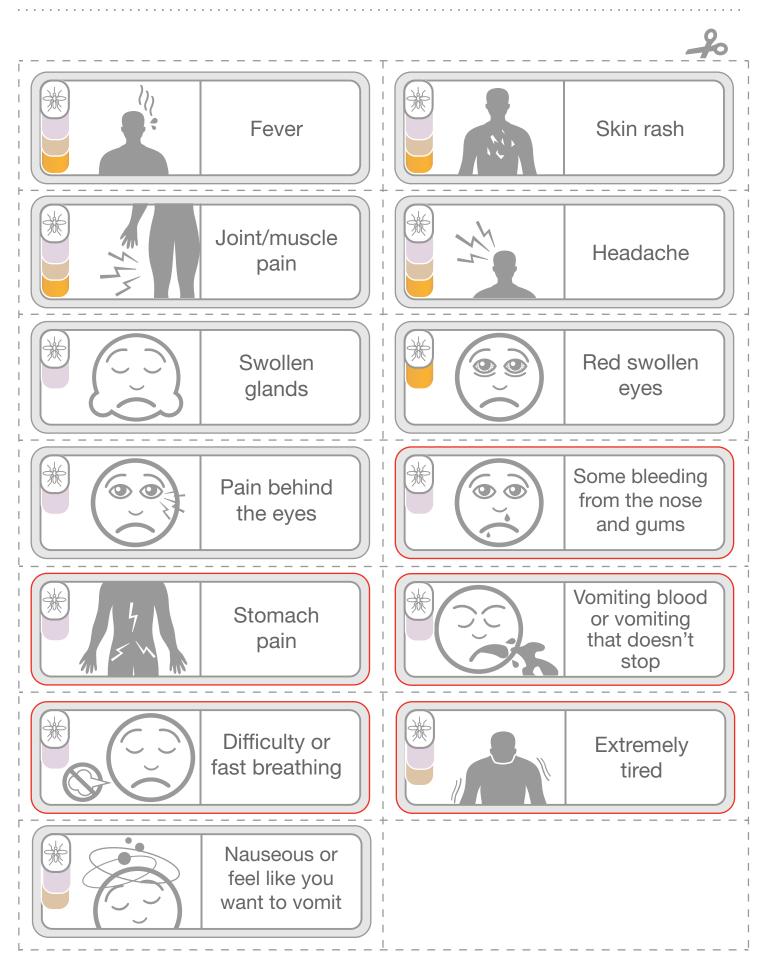






Symptoms cards

Cut out the cards along the dotted lines.



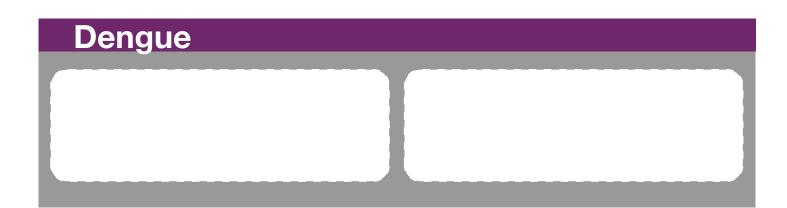
International Federation of Red Cross and Red Crescent Societies www.lfrc.org Saving lives, changing minds.



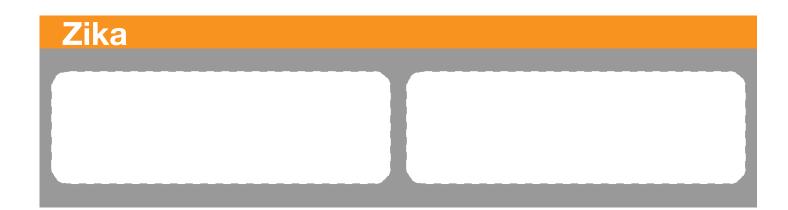


ZDC prevention toolkit

Stick the Untreated disease cards on the spot underneath the appropriate disease you think it belongs to.

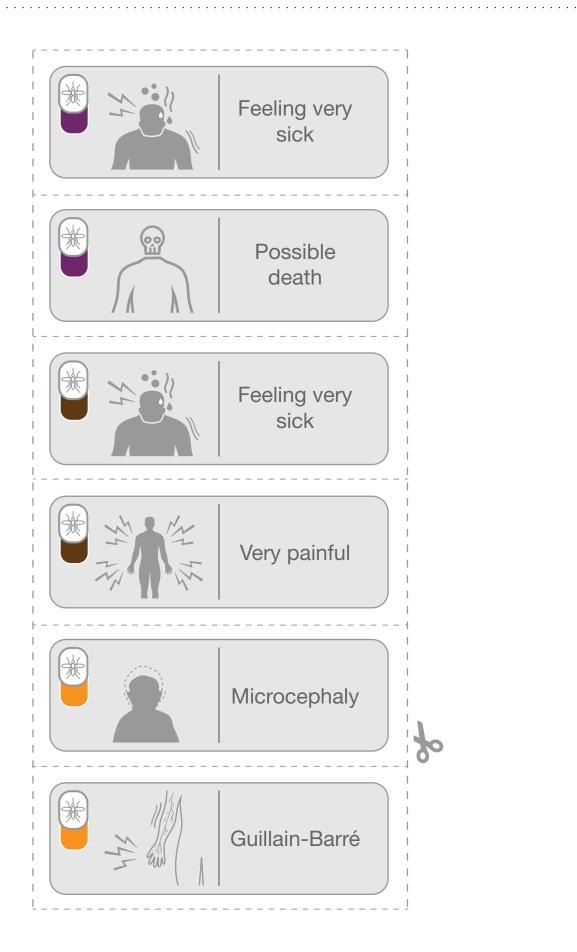


Chikungunya



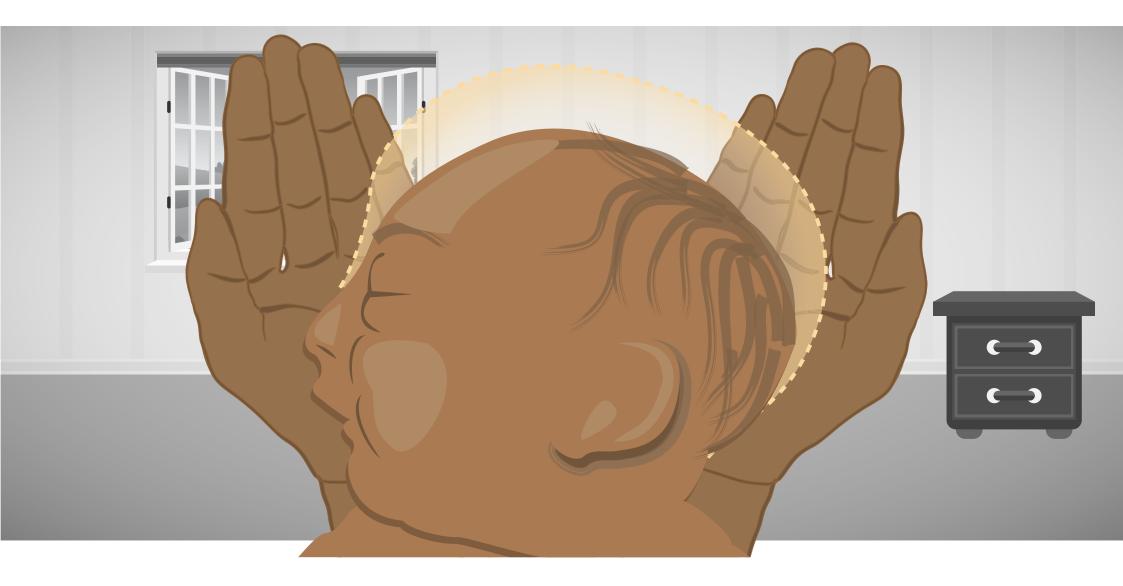












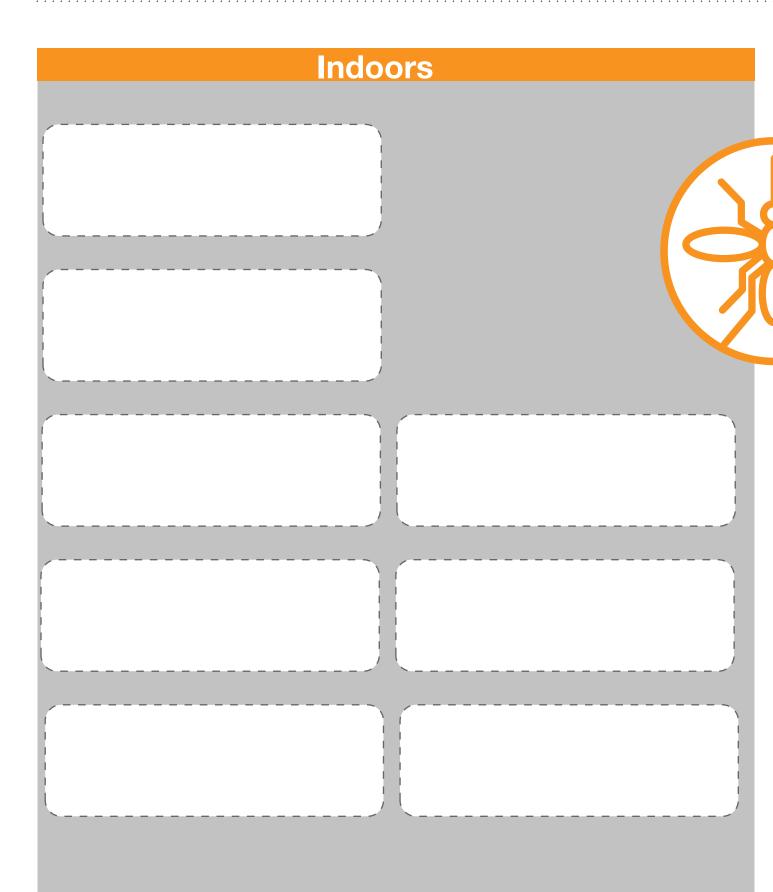






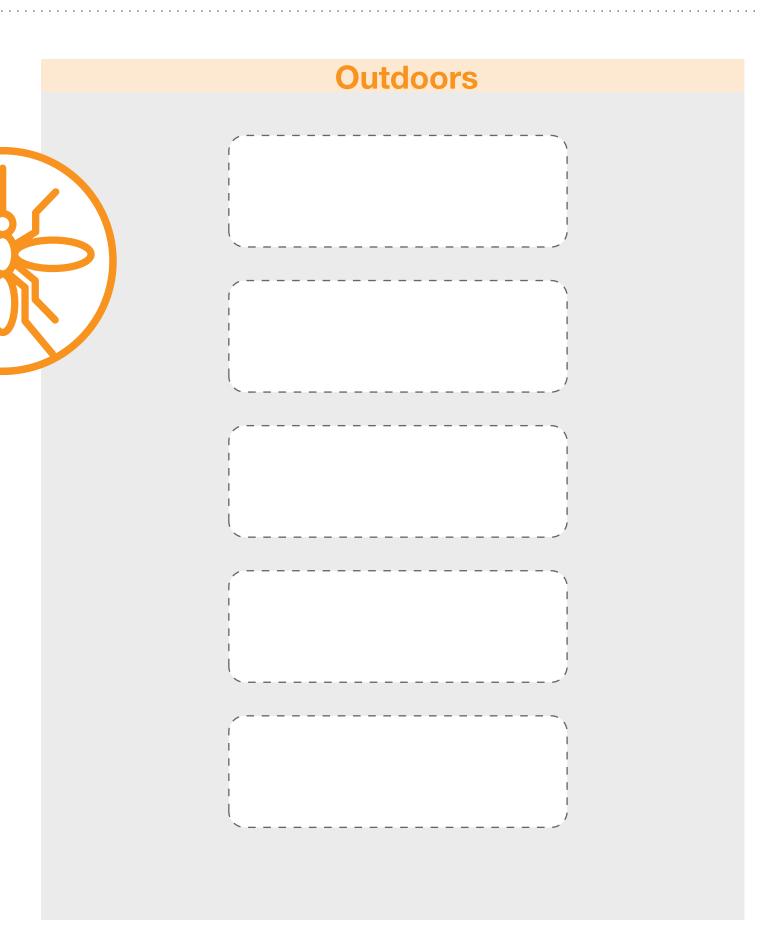
International Federation of Red Cross and Red Crescent Societies www.lfrc.org Saving lives, changing minds.







Use sticky-tape to tape the two pieces of the board together. Now stick the Breeding sites cards on the spot underneath the appropriate location you think it belongs to.





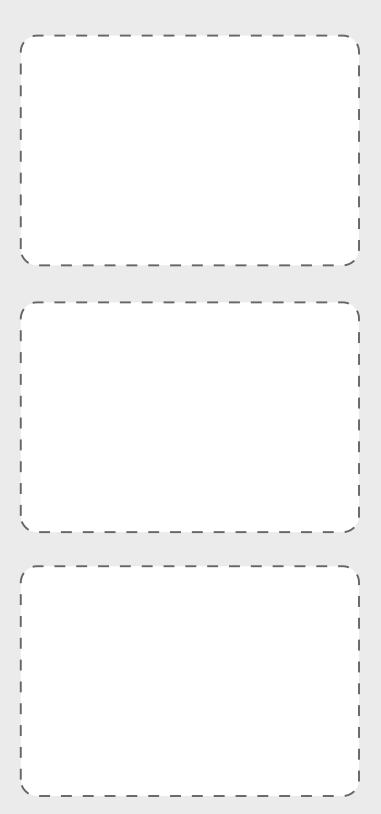
Breeding sites cards Cut out the cards along the dotted lines.

		т	40
	Rain barrel		Drum
	Pot		Bucket
	Flower vase		Plant storage bin
6.	Empty bottle		Tire
ſ	Bathtub		Outdoor water cistern
	Outdoor well		Standing pool of water
	Creek or still river		

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Prevention methods

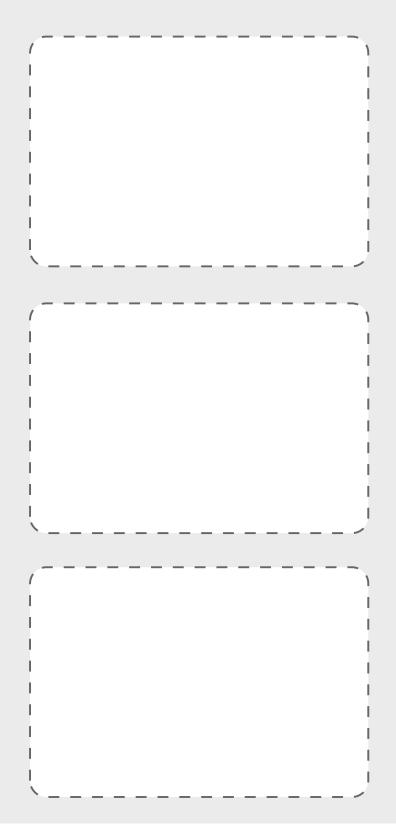






Use sticky-tape to tape the two pieces of the board together. Now stick the Prevention cards on the board.

Prevention methods







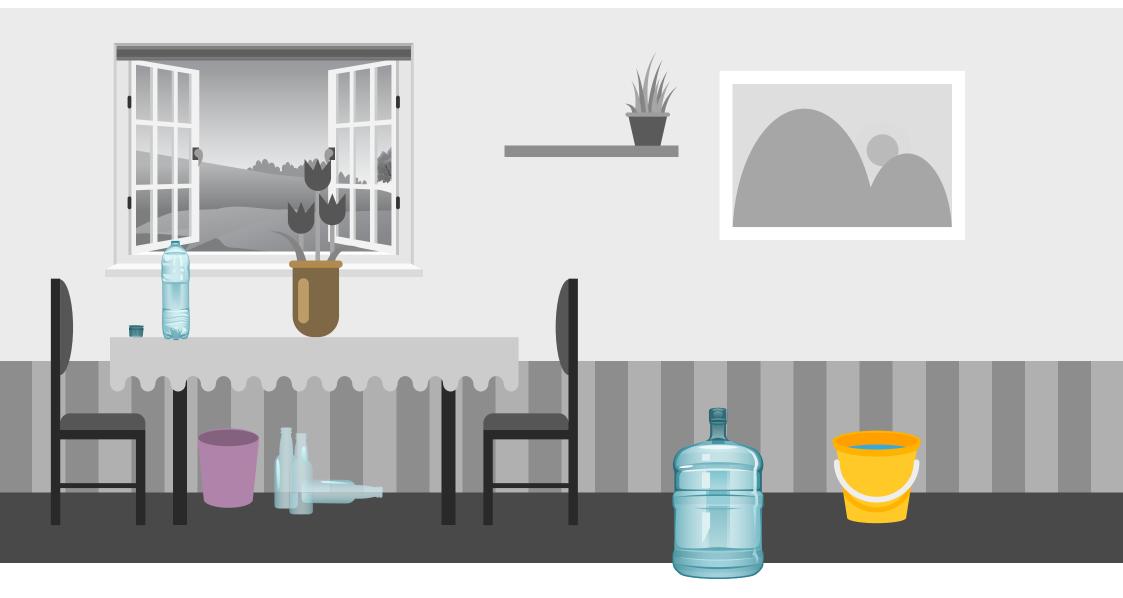
Cut out the cards along the dotted lines.

Prevention cards

Scrub inside of containers Empty standing water every week Use insect repellent Wear long sleeves and pants Sleep under a bednet Demand larvicide or fogging between dawn and dusk at school and community

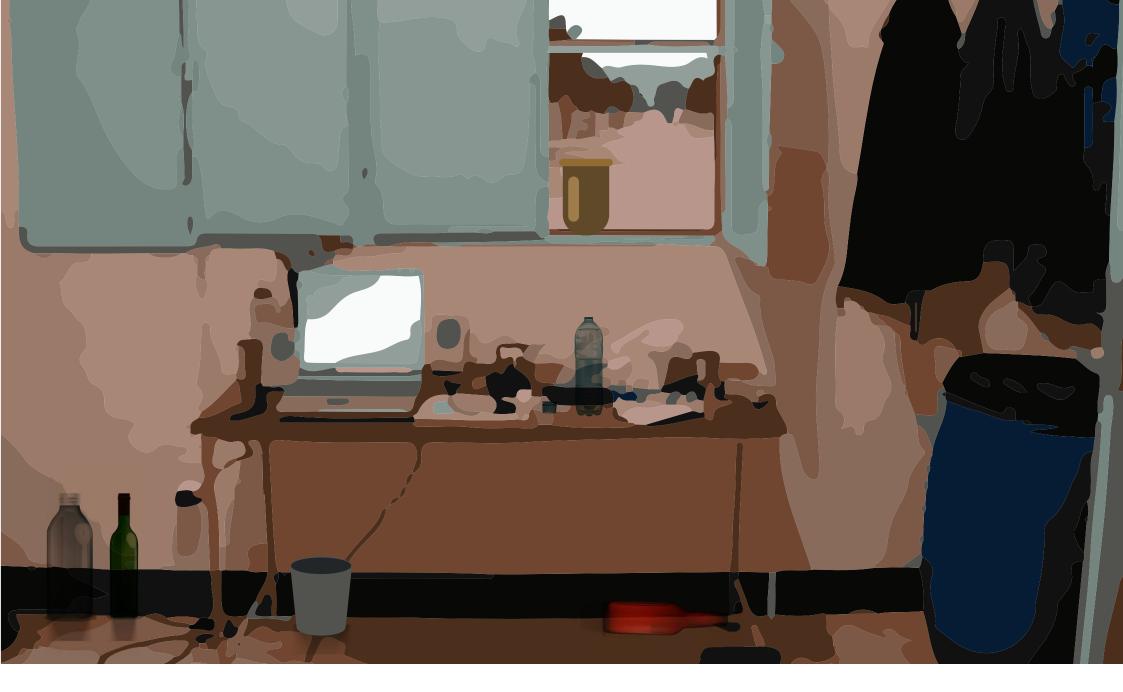


















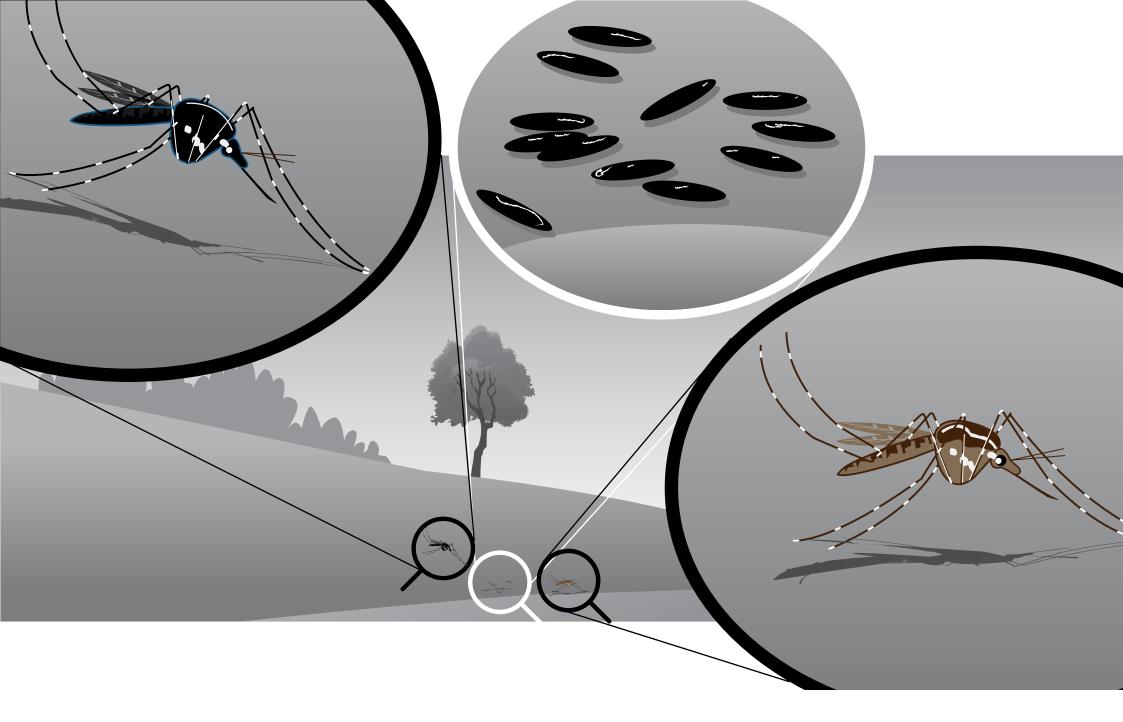














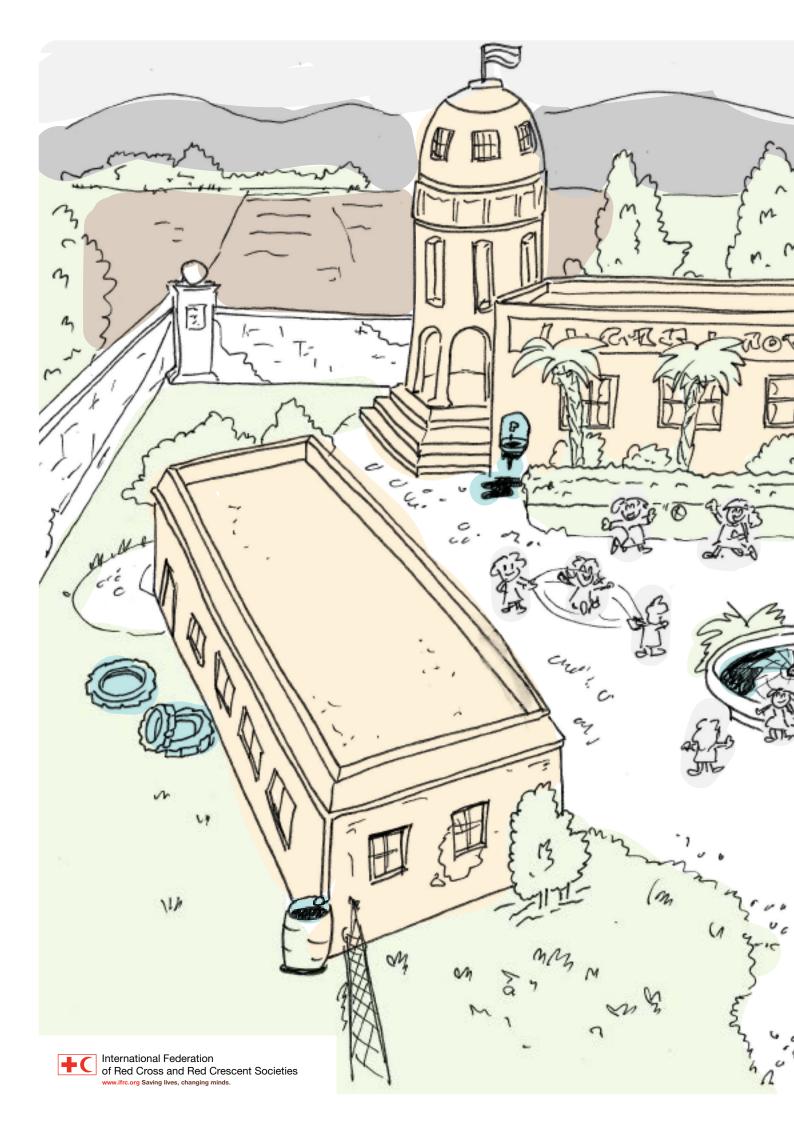


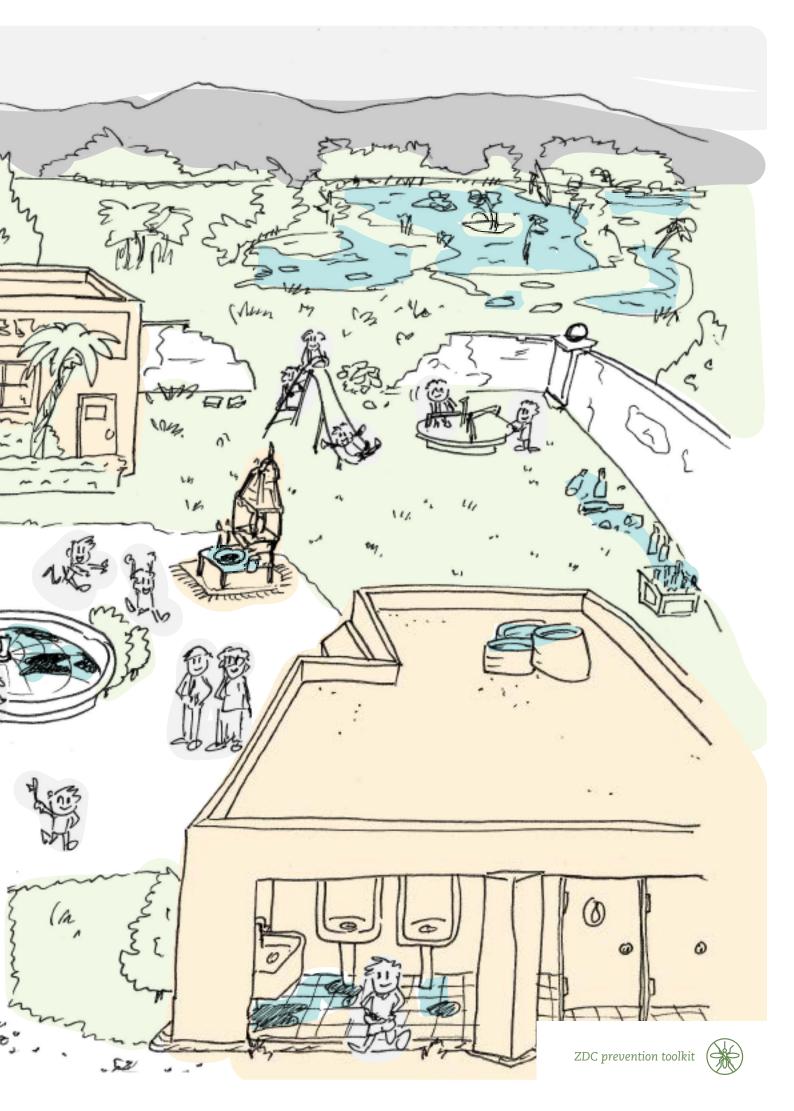


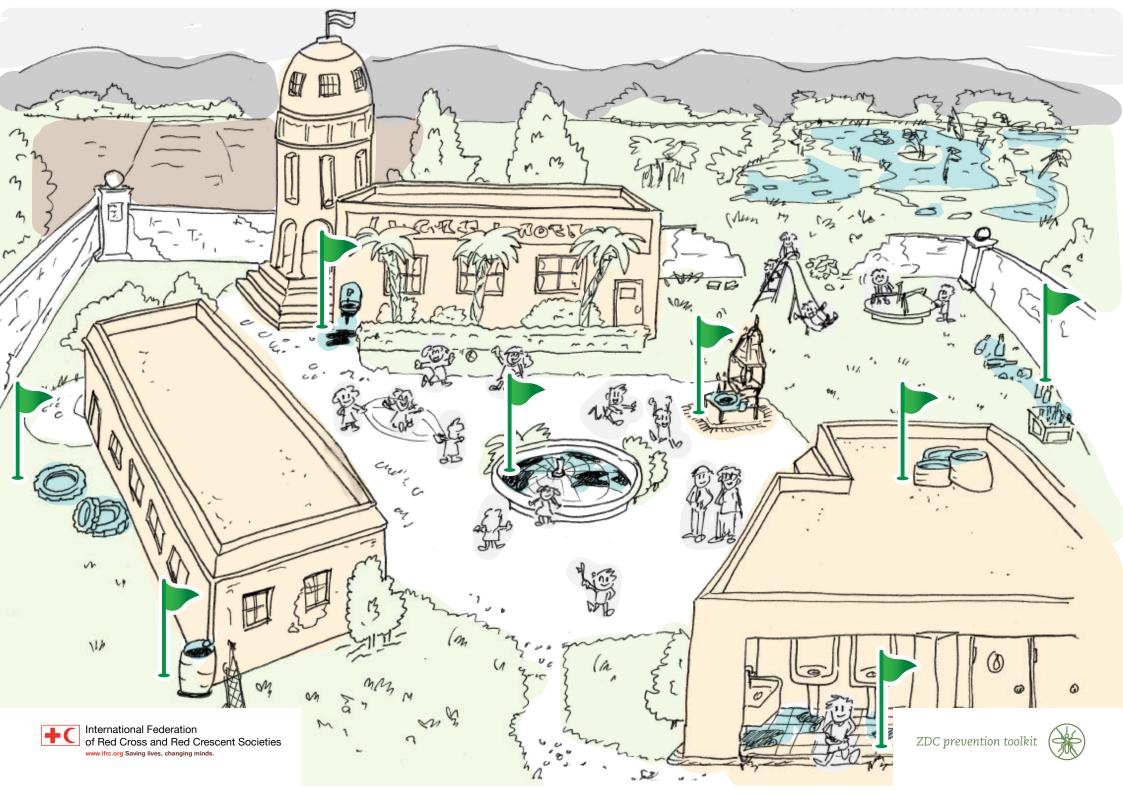


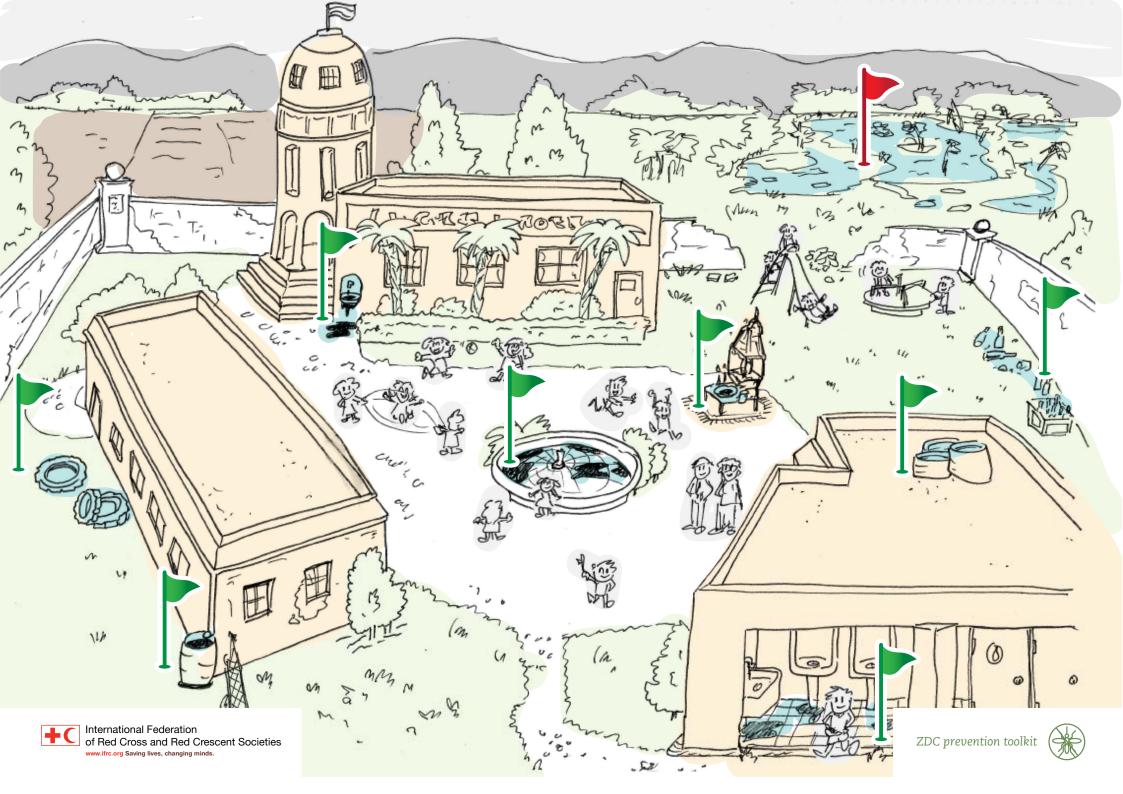


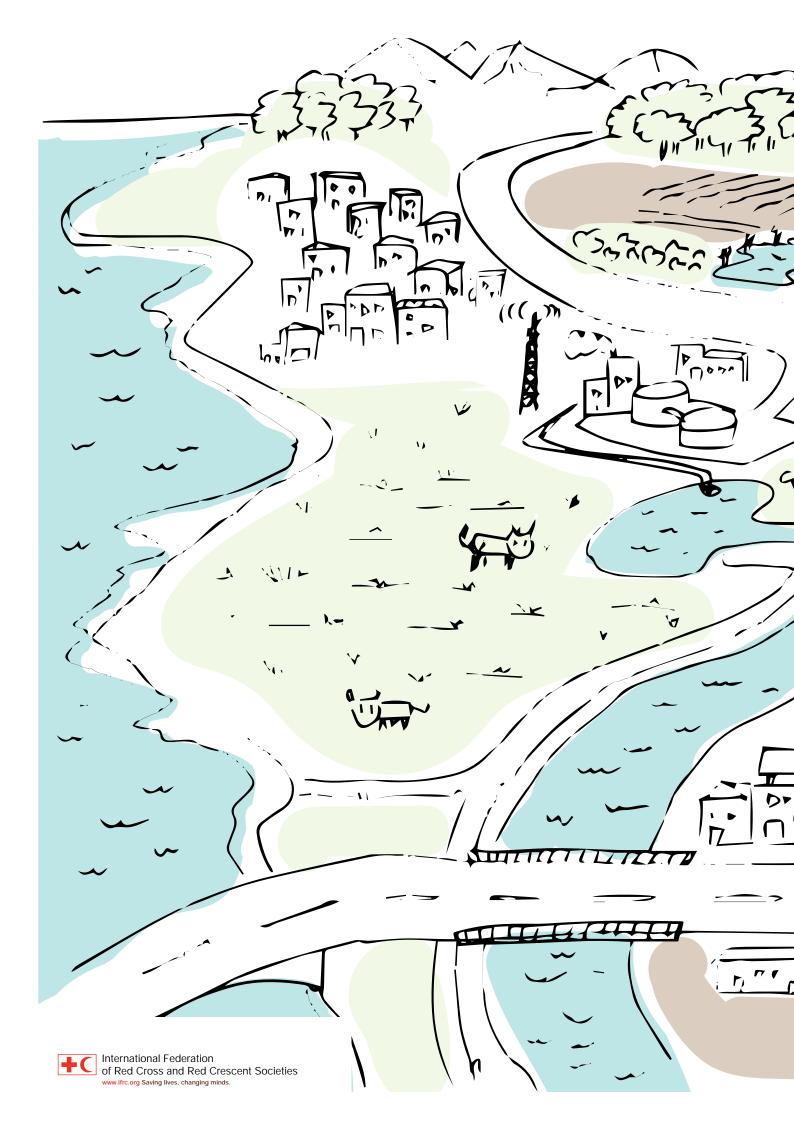




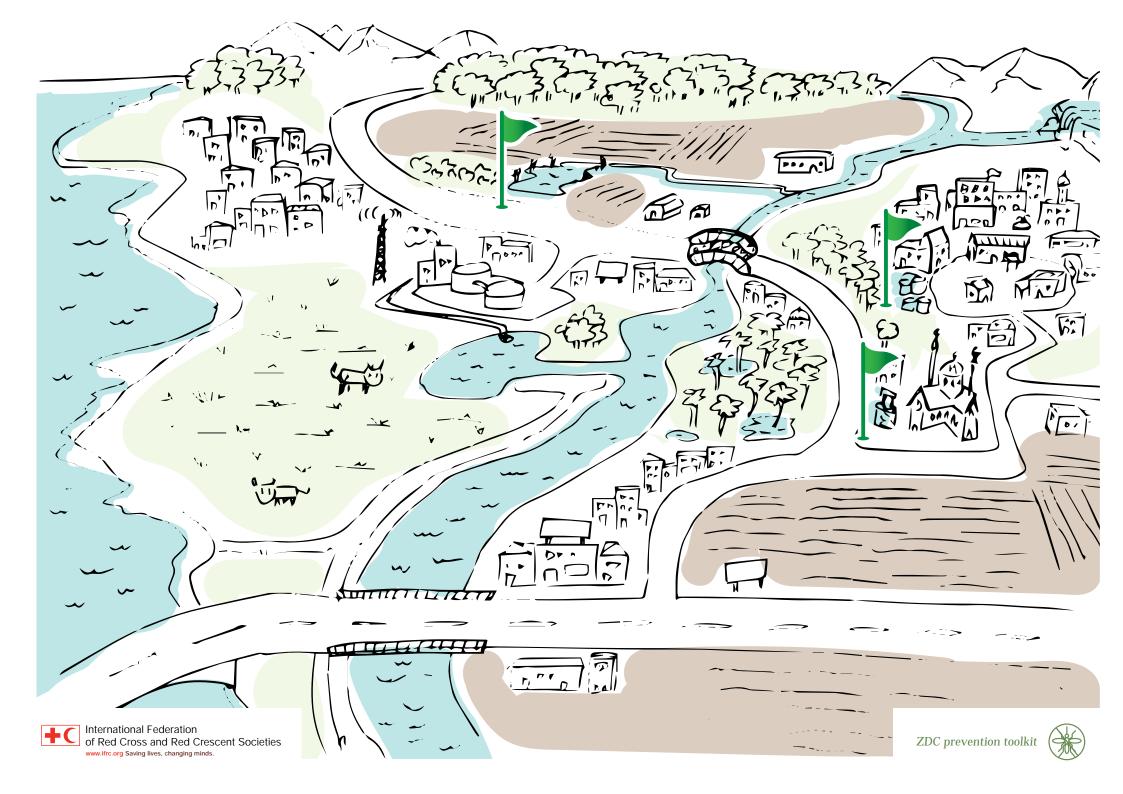


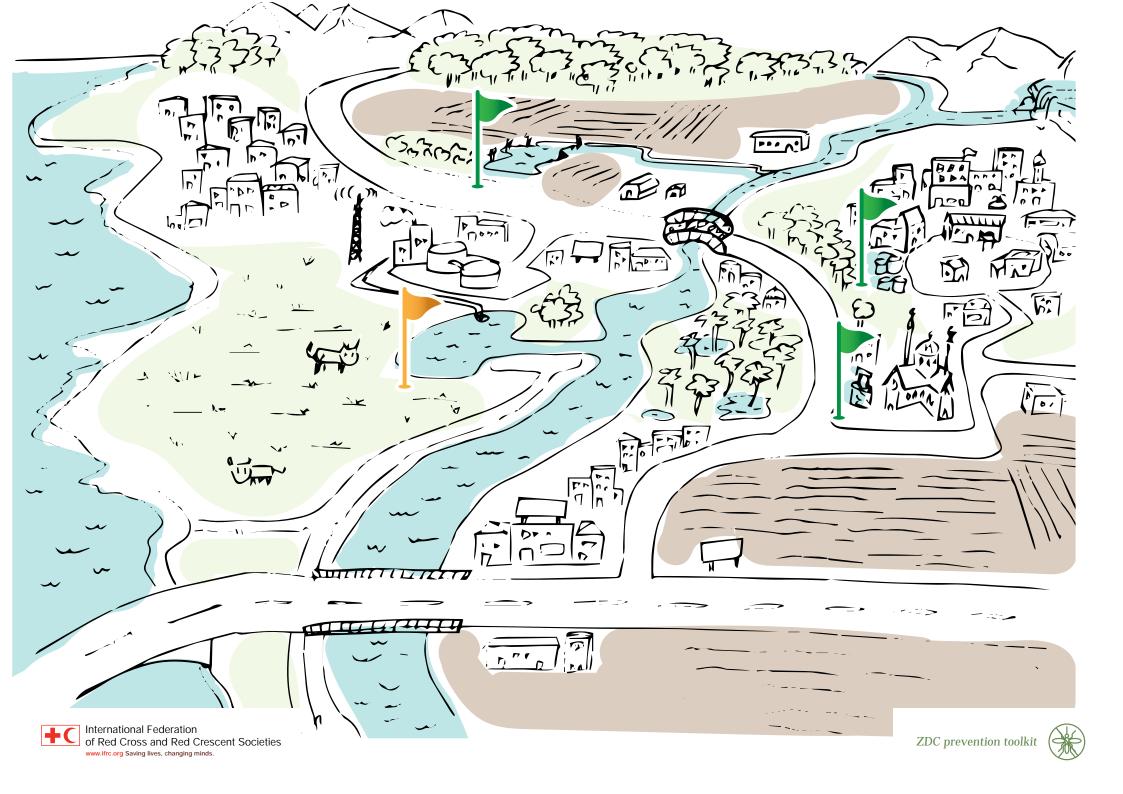


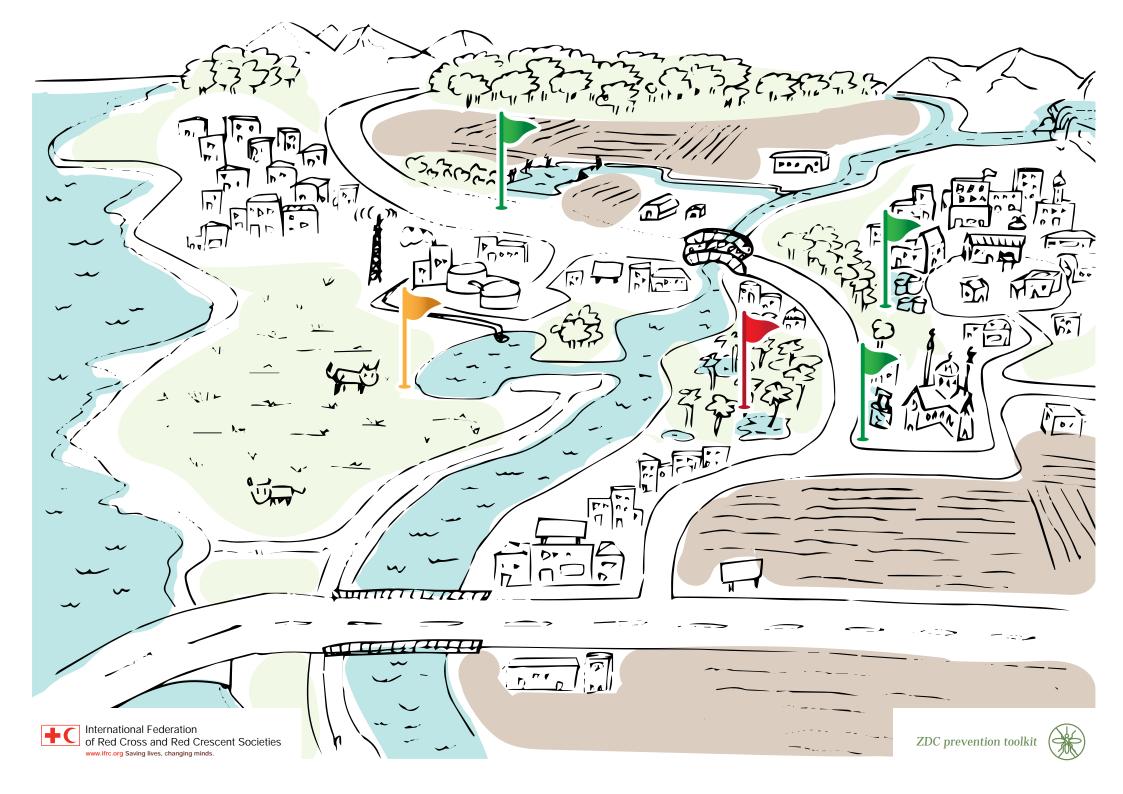


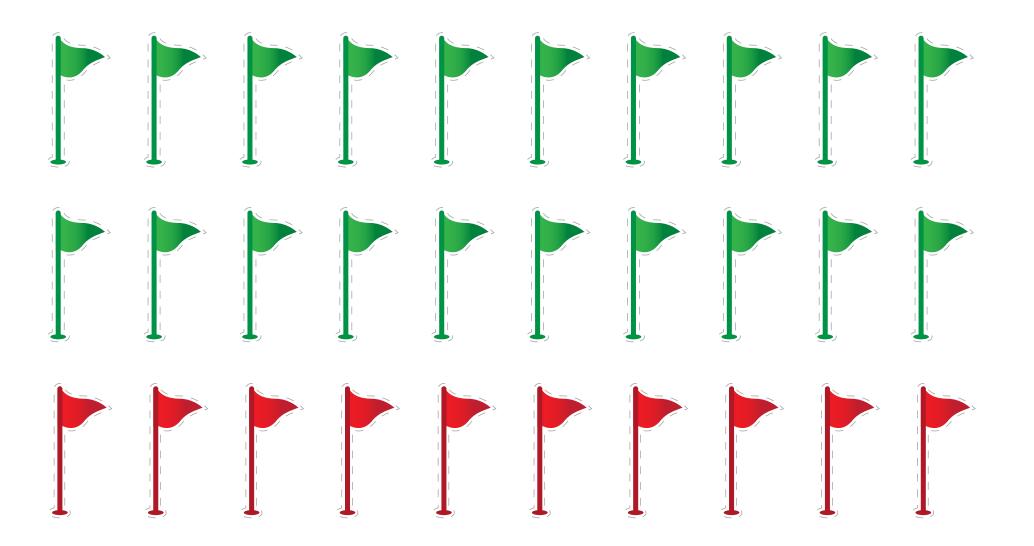






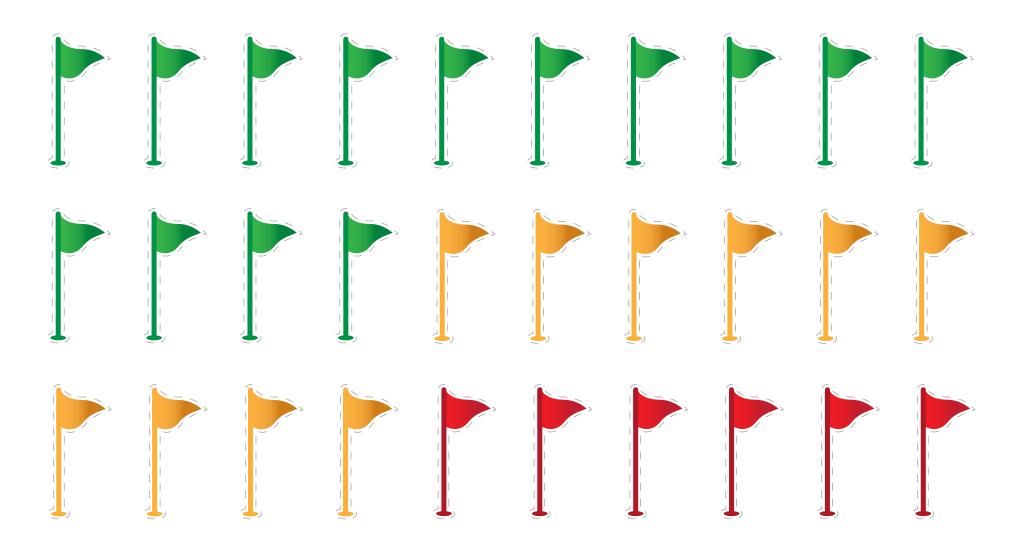
















WEARING LONGSLEEVE CLOTHING	GIVING PARACETAMOL AND LOTS OF FLUIDS TO A PATIENT	HOUSE-TO-HOUSE CALLING TO REPORT ABOUT CASES AND WHAT TO DO	SPRAYING INSECTICIDE ON THE TREATED SCREENS IN DOORS & WINDOWS
ADVOCATING FOR WEEKLY FOGGING ACTIVITIES DURING AN OUTBREAK	MOBILIZING SCHOOL GROUPS FOR LOCAL CLEAN-UP CAMPAIGNS	ADVOCATING FOR IMPROVEMENT OF THE WASTE MANAGEMENT	BRINGING BUG SPRAY TO PATIENTS AND THEIR FAMILY

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A buzz about dengue game cards 1 (back)

HUMANS! This is a reasonably good measure as humans are better protected, but since the mosquito is resting indoor, spraying in house is also needed.	HUMANS! Standing water in street rubbish can enable breeding sites. School clean-up activities help to protect the community and at the same, creates awareness of the risks of dengue. (Note: picking up the garbage alone does not necessarily contribute to reducing dengue, e.g. no standing water or productive pupa).	HUMANS! This a very good measure, waste can become breeding sites due to standing water, so if waste is better managed, mosquitoes have less options to breed.	HUMANS! This a reasonably good measure, especially if people in the family/ neighborhood are infected, others can protect themselves against mosquitoes bites by using the spray.
HUMANS! This is reasonably good measure as it is harder for mosquitoes to bite you, but it is not a 100% protection.	HUMANS! Good, paracetamol will fight the fever and fluids to avoid dehydration. (Note: never give aspirin to a dengue patient, it is DANGEROUS!)	HUMANS! A very good measure as people will be better aware of the risks and ways to prevent dengue. Advise friends and family of warning signs for dengue: abdominal pain/tenderness; persistent vomiting; bleeding from mucosa; and lethargy/restlessness.	HUMANS! A good measure, in this way the mosquitoes will enter or breed less inside the house, which will protect the family when they are indoors.





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USING BUG SPRAY INDOORS ON FURNITURE & DARK CORNERS	PLACING MESOCYCLOPS OR LARVICIDES IN STANDING WATER	SETTING UP A LOCAL DENGUE STEERING COMMITTEE	ENCOURAGING THE REPORTING OF DENGUE CASES
TREATING BEDNETS WITH INSECTICIDE, ESPECIALLY FOR CHILDREN'S NAPS	COVERING WATER STORAGE WITH TIGHT LIDS	SEEKING MEDICAL CARE FOR FRIEND & FAMILY WITH SYMPTOMS	APPLYING BUG REPELLENT EACH MORNING ON THE SKIN

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HUMANS! As children nap during the day, mosquitoes seek chances to bite. Children are more vulnerable and severe dengue fever is dangerous for them.	HUMANS! A good measure, water storages are an ideal places for mosquitoes to lay eggs. By covering them, the mosquitoes can no longer breed there.	HUMANS! Medical attention is needed when dengue develops into severe hemorrhagic fever. Hospitals are aware of the cases in the area.	HUMANS! When humans use bug repellent, they protect themselves against the mosquitoes. It still doesn't mean their 100% safe.
HUMANS! A reasonably good measure, by spraying furniture and corners indoors you make sure the mosquitoes do not want to breed and hide there.	HUMANS! Mesocyclops prey on mosquitoes larvae, so by putting it in standing water, the breeding places will be cleaned up.	HUMANS! When people are in charge they can make sure the whole community can be protected. (organizing clean-up, advocating, etc.)	HUMANS! Reporting dengue cases to local authorities is very important since it can stimulate further discus- sions on protection in the communi- ty and identify possible neglected breeding sites in the neighbourhood.





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INVOLVING PRIVATE SECTOR, LOCAL GOVERNMENT OFFICES AND HOSPITALS INTO COMMUNITY DENGUE STEERING GROUPS	NEW BREEDING SITES CAUSED BY RAINY SEASONS	NEGLECTING THE CLEAN UP AROUND THE LIKELY INFECTED NEIGHBOR'S PROPERTY	HIGH-DENSITY NEIGHBORHOODS STORING WATER UNPROPERLY
FORGETING TO CHECK NEIGHBORHOOD WATER CONTAINERS	ENJOYING A LATE AFTERNOON NAP WITHOUT A BEDNET	CHECKING STANDING WATER EVERY 2 MONTHS	FORGETING TO CLEAR THE STANDING WATER THIS WEEK





MOSQUITOES! It is a perfect place to breed, so if this is not done, the mosquitoes can spread easily.	MOSQUITOES! It is easier for the mosquitoes to bite when humans are not using bed nets.	MOSQUITOES! Standing water should be checked must more often as eggs will become full grown mosquitoes in approx. 10 days	MOSQUITOES! Eggs will become full grown mosquitoes in approx. 10 days, so it is better to not skip a week.
HUMANS! Multiple stakeholder dialogue and action can enhance the work of the community dengue steering committee., (note: health sector should be represented)	MOSQUITOES! When the rain is not drained well, it can create a lot of standing water. Perfect for the mosquitoes to breed.	MOSQUITOES! If the neighbor is ill, there are likely breeding places close by as the mosquito usually bites/- feeds no further than 200 metres from his breeding place. Breeding places should be traced & cleaned before other people get infected too.	MOSQUITOES! This will make for perfect breeding places and since it is high density area, a lot of people can get bitten by the mosquitoes.





STANDING POOLS IN STREAMS DUE TO DROUGHT AND MORE WATER STORING	MORE INFECTED PEOPLE FLYING ON PLANES BRINGING DENGUE	HEAVY RAIN & NEGLECTING TO CLEAN DITCHES	LEAVING OLD TIRES LYING AROUND OUTSIDE
MORE STANDING WATER SITES CAUSED BY URBANISATION	IGNORING A SICK FAMILY MEMBER'S SYMPTOMS	NOT TREATING BED NETS AND DOOR WITH INSECTICE, HOLES	LOOSE REFUSE WHICH IS GREAT FOR BREEDING SITES





A buzz about dengue game cards 4 (back)

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MOSQUITOES! Urbanisation can lead to more standing water sites, given the mosquitoes more chance to breed	MOSQUITOES! By ignoring the symptoms they put them selves at a higher risk of dengue. People need to act upon potential infection and eliminate breeding sites near by to avoid further transmission	MOSQUITOES! It is better to treat the bed nets and the curtains of open doors with insecticide to keep mosquitos out and to repair them when needed	MOSQUITOES! More possibilities for breeding sites in standing water
MOSQUITOES! Streams dry up slowly, leaving perfect pools of standing water for the mosquitoes to breed in, as well as the increased water storage without taps.	MOSQUITOES! Dengue has spread enormously over the past decade. Over half of the worlds population is now prone to dengue. Global travel has contributed to this spread, amongst other factors like urbaniza- tion and climate change.	MOSQUITOES! By not cleaning the ditches, the water can not flow and will create nice pools for the mosqui- toes to breed. (Note: heavy rain which leads to often flushes out breeding sites)	MOSQUITOES! Tires are perfect places for mosquitoes to breed.





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A LIKELY INFECTED NEIGHBOR'S PROPERTY THAT IS FULL OF TRASH	MORE HUMANS IN CLOSE PROXIMITY DUE TO URBANISATION	





A buzz about dengue game cards 5 (back)

MOSQUITOES! Trash is a perfect place to breed and since the person is ill, there are likely dengue mosqui- toes in close proximity.	MOSQUITOES! These can infect more people in the same time, in compari- son to less densely populated areas.	





A buzz about dengue: Cross serious game

Designed by Janot Mendler de Suarez and Pablo Suarez*

Objective of the game

This game aims to create awareness on the characteristics of the dengue disease while providing useful information on how to uce the risk of infection through community mobilization and organization. The game can be played with communities as risk as a tool to engage in discussion and local decision making on response and prevention of vector-transmitted diseases (as it can be adapted for chikungunya).

Goal of the game

Humans try to prevent dengue outbreaks by protecting themselves from Mosquito bites and by cleaning up breeding grounds. On the other hand, Mosquitoes try to infect Humans by biting them, and try to multiply by laying more eggs in their nice wet breeding grounds. The team who wipes out the other team or with more beans (blood/eggs) wins!

Materials:

Deck of cards – print the document double sided over the long edge. Stack of dry beans (minimum of 50)

Setup of the game

• Minimum 6 players, forming 2 teams of 3 (3 players are Humans and 3 players are Mosquitoes). Teams face off across a table, more groups of 6 can play in parallel.

• The mosquito team gets 5 beans; the human team gets 11 beans. Each team divides these beans among players as they wish, but the opposing team must not see which player is holding how many beans!

• The table between the teams represents potential Mosquito Breeding Grounds in the middle of the table. To start the game, 12 beans are grouped into 3 Breeding Grounds, each one with 4 beans.

• There is one deck of cards. The facilitator will shuffle and hold the deck of cards. On the cards are scenarios or actions indicated that can be off benefit to the Humans or the Mosquitoes. When using the cards, the facilitator can ask the basic question: Which group will benefit from...?

Gameplay

Each player can make use of two different actions, one action at a time:

Human

Protect: The player crosses hands over the chest Clean: The Player points at one breeding ground on the table

Mosquitoes

Bite: The player point across the table to one of the human players Breed: The player points at one breeding group on the table

The rounds of the game are played very quickly (like a game of Rock, Paper, Scissors!). The players of each team can strategize for 1 minute on which action will they take on each round.

The 11 beans protect Humans from getting dengue; as long as a Human has at least 1 stone, they are healthy enough to protect or recover from a bite, but with each successful bite, the Mosquito takes a 'blood' stone!. On the other hand, the 5 beans to allocate as they wish among the 3 team members. Mosquitos holding beans may choose whether to 'bite' or 'breed' in the Breeding Grounds. Players without beans have only one option, to 'bite' a human.

SCENARIO CARDS/ACTION CARDS PLAY: The facilitator has a deck of 34 cards. In this deck there are 17 positive scenarios/actions cards for the humans and 17 positive scenarios/actions cards for the mosquitoes. After playing the game 4 rounds without cards, the facilitator will play a card after each round of actions (Breed/Bite, Protect/Clean). After a card question, the teams must quickly answer who the card has a positive outcome and that team will get an extra stone (representing healthy blood or eggs). The Mosquitoes can request to answer by "buzzing" and the human can request to answer by "clapping at the mosquito".

Considerations

• When a mosquito bites a human who is not protected, but choose to clean up, he will take a stone from the human. However when a mosquito bites a human who is protected, nothing happens.

• When a human chooses to clean up a breeding site, he/she takes a stone from the breeding ground he/she was pointing at. The stone moves to the side and is no longer used in the game.

• If at the same time a mosquito chosen to breed in that same breeding ground, he/she puts the stone that he is holding in the breeding ground. The amount of beans in the breeding ground does not change, but there is one stone less in the game.

• The facilitator will pick a card from the deck and reads it out loud. The group then decides if the card is in favor of the Mosquitoes or in favor of the Humans. When this is decided, the facilitator can give extra information when required and afterwards gives the "winning" team an extra stone. They can then decide who is going to get it among themselves.

* adapted from original Humans vs. Mosquitoes game, designed by Clay Ewing, Lien Tran, Mohini Freya Dutta, Ben Norskov, Eulani Labay, Sophia Colantonio, Lauren Graham, Vanessa Lamers, and Kanchan Shrestha, in consultation with Janot Mendler de Suarez and Pablo Suarez.





Charades clues cards

Cut out the cards along the dotted lines.







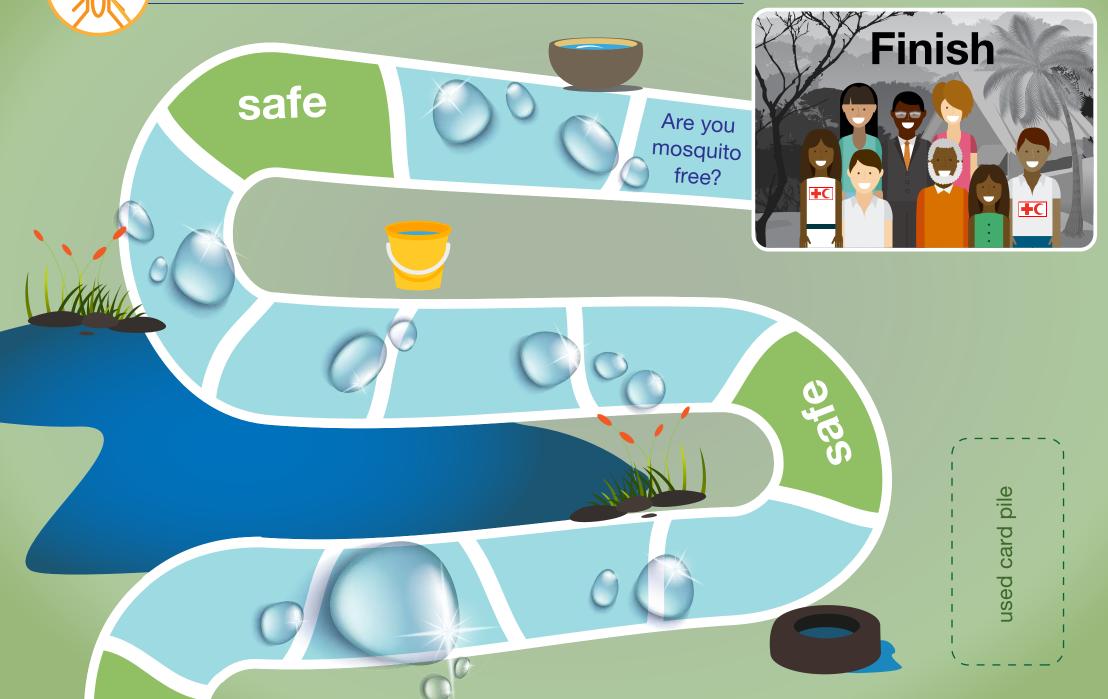


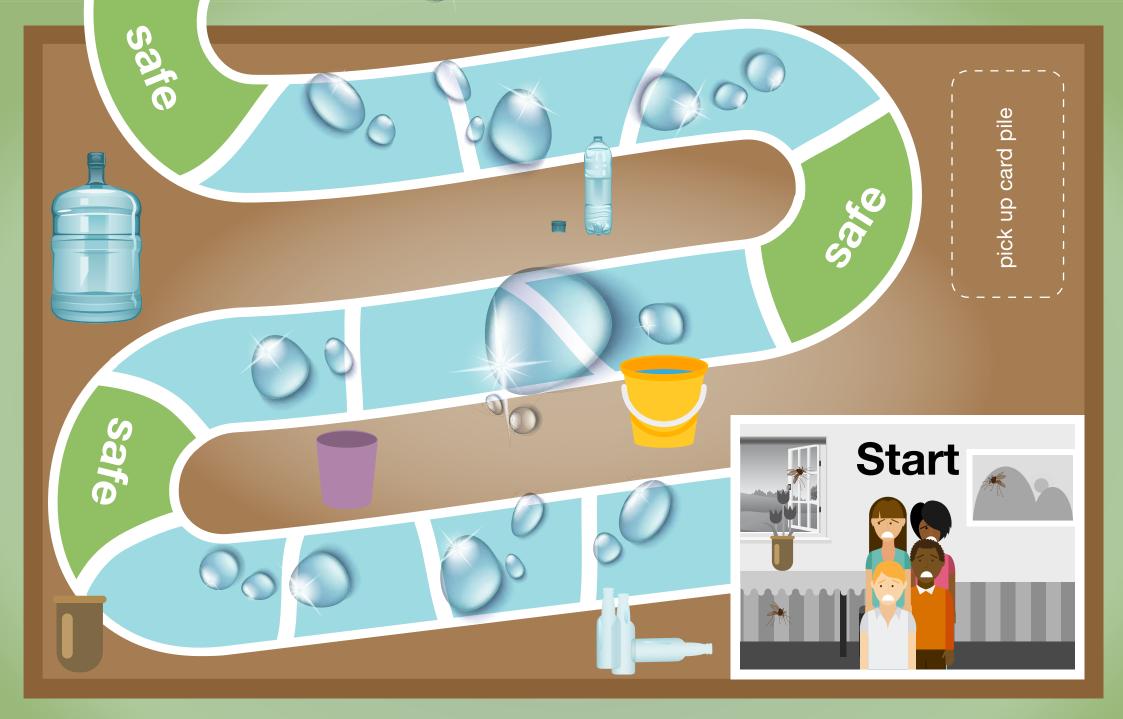




Zap that mosquito game

Use sticky-tape to tape the two pieces of the game board together.



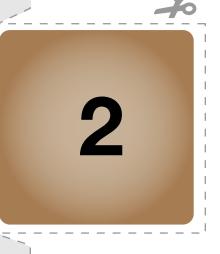


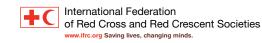




Zap that mosquito game die

Cut the shape out on the dotted lines to get one shape. Fold each square wih a number inward so the die forms a cube with the numbers on the outside. Tape the edges to make a solid die.

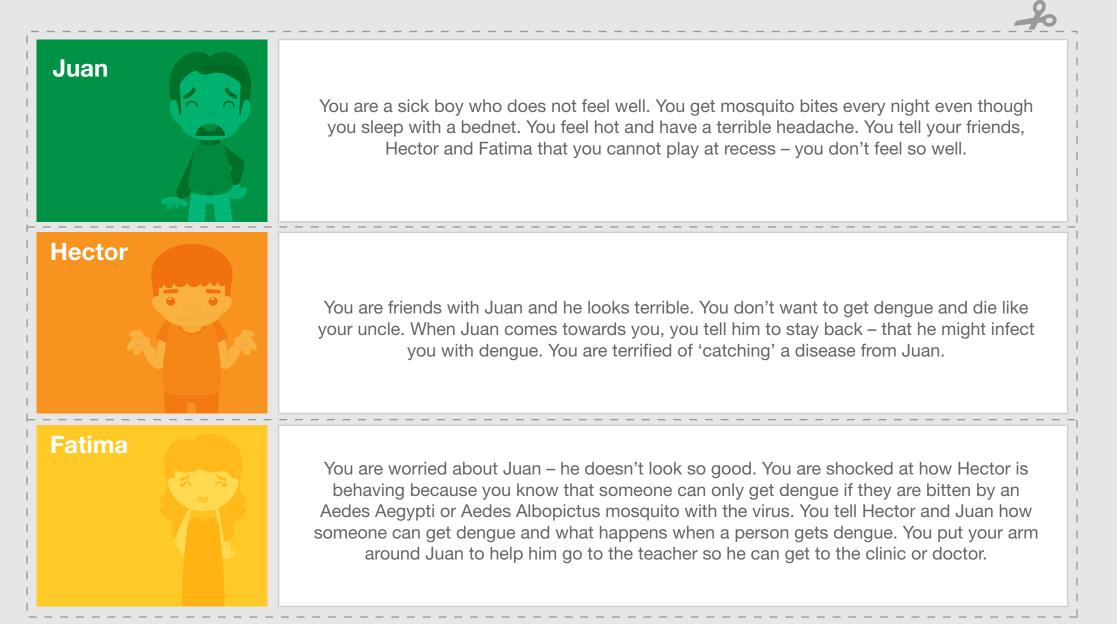






Addressing stigma roleplay cards #1

Cut out the cards along the dotted lines.







Addressing stigma roleplay cards #2

Cut out the cards along the dotted lines.

