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Little Bug Big Bite!

Cooperative Extension Service
South Dakota State University

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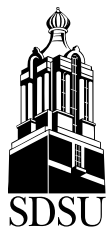
Activities to Help Children Aged 6-9
Learn About the West Nile Virus

Little Bug

BIG BITE!



ESS603 / South Dakota State University / Cooperative Extension Service / April 2003



South Dakota State University Cooperative Extension Service

Dear Parents and Teachers:

This activity book is a fun, non-threatening way to help you teach children how to protect themselves, their families, and friends from a serious health threat, the West Nile virus. While it is not common in humans, the West Nile virus is a potentially dangerous disease spread by mosquito bites. It is important for everyone to be educated on the prevention of West Nile virus.

Step one in protecting humans from the West Nile virus is to control the mosquito population. This can be done in many different ways. However, we have chosen to discuss ways that children can help control the mosquito population. Thus, it is important that you participate with the children in searching for and emptying containers that hold water. For example, the activity book challenges children to pour out the water that may be collecting in their wagons or sand buckets. Please complete the enclosed container checklist with your child.

Step two in protecting humans from the West Nile virus is to use insect repellents containing DEET. Products containing DEET are the most effective mosquito repellents available. The maximum concentration currently recommended for infants (greater than two months of age) and children is 30%. The concentration of DEET in products may range from less than 10% to over 30%. Higher concentrations of DEET will protect children for longer periods of time. One should select the lowest concentration effective for the amount of time spent outdoors. It is generally recommended DEET should not be applied more than once a day. For most children going outdoors, the once per day application of DEET will be most appropriate at dusk, one of the two times per day mosquitoes are most active, the other time being dawn.

DEET containing insect repellent is considered safe if used appropriately. Always follow the insect repellent directions. Additionally, according to the CDC, it is important to follow these guidelines:

- Do not apply DEET repellents to infants under 2 months of age.
- For other children, consider using repellents with no more than 30% DEET.
- Use only enough repellent to cover exposed skin or clothing. Do not apply to skin that is covered by clothing.
- Do not apply repellent on cuts, wounds, or irritated skin.
- When back indoors, wash treated skin with soap and water.
- Do not spray repellent in an enclosed area.
- Do not apply spray repellent directly to the face. Spray your hands and rub them carefully over your or a child's face. Avoid the mouth and eye areas.
- Consult your physician if you have any questions about repellents for infants or toddlers.

Please take time to complete this activity book with your child or with the children in your classroom. It is important to teach children that they can make a difference in their health and the health of members of their community.

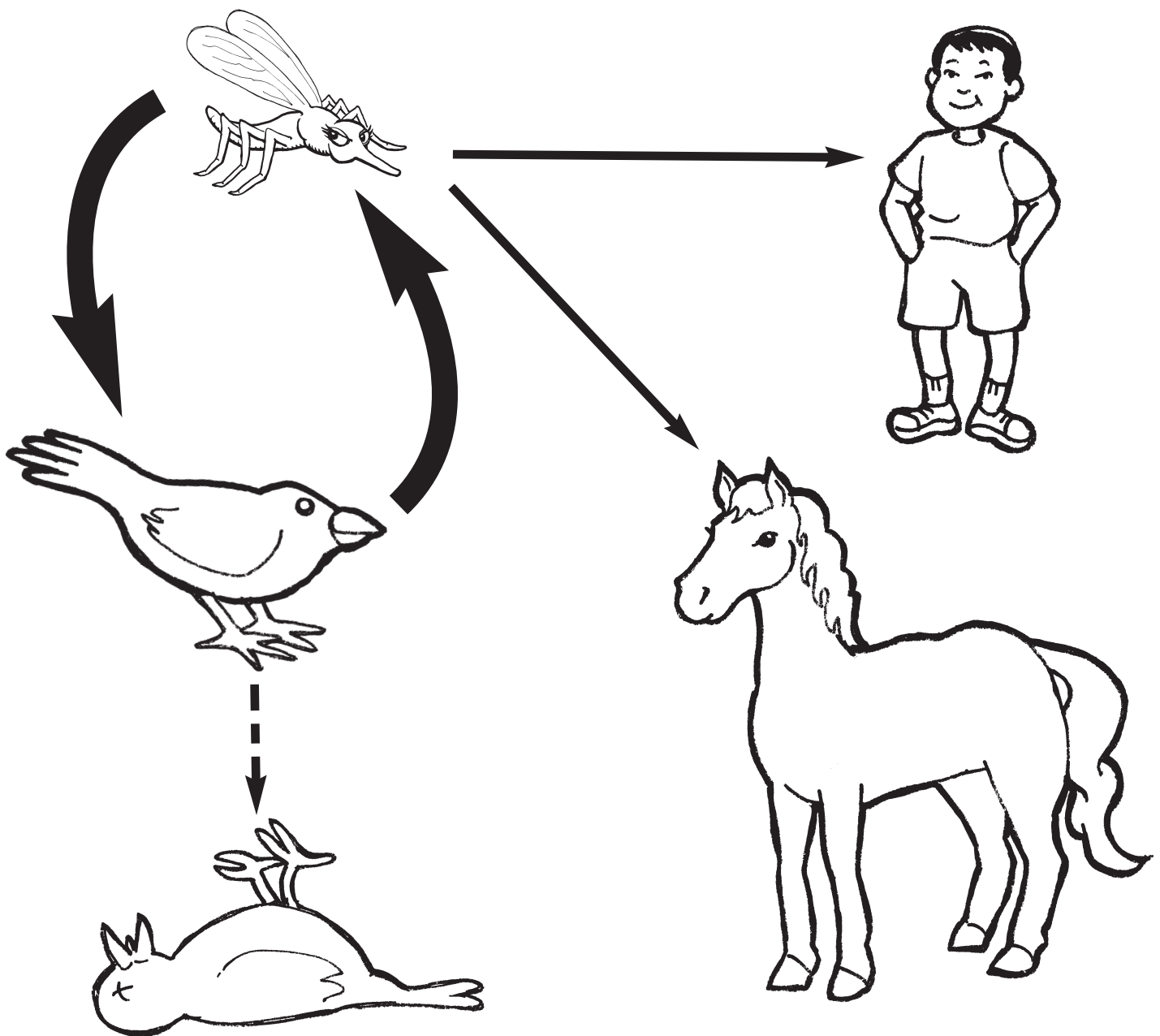
Thank you for this opportunity to work together to make a difference.

Ann Michelle Daniels
Extension Family Life Specialist

Mike Catangui
Extension Entomologist

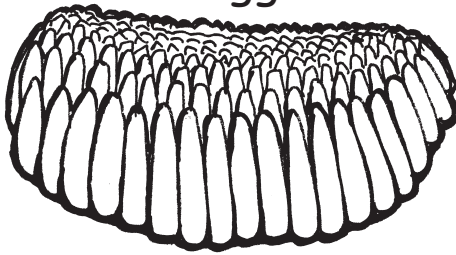
Jim Wilson
Extension Pesticide
Education Coordinator

It is important to control mosquitoes, because they can carry diseases such as the West Nile virus. West Nile virus is passed between mosquitoes and some birds. People and some animals can get the disease when infected mosquitoes bite them to get blood. Female mosquitoes need blood to lay eggs. The eggs are the beginning of the mosquito's life cycle.

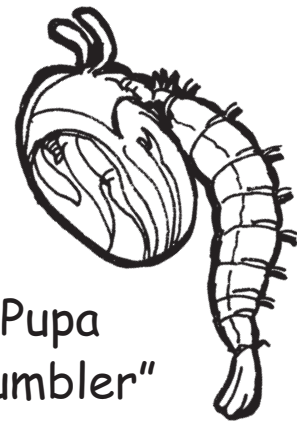


Mosquitoes have four growth stages.
They include eggs, larva, pupa, and
the adult mosquito.

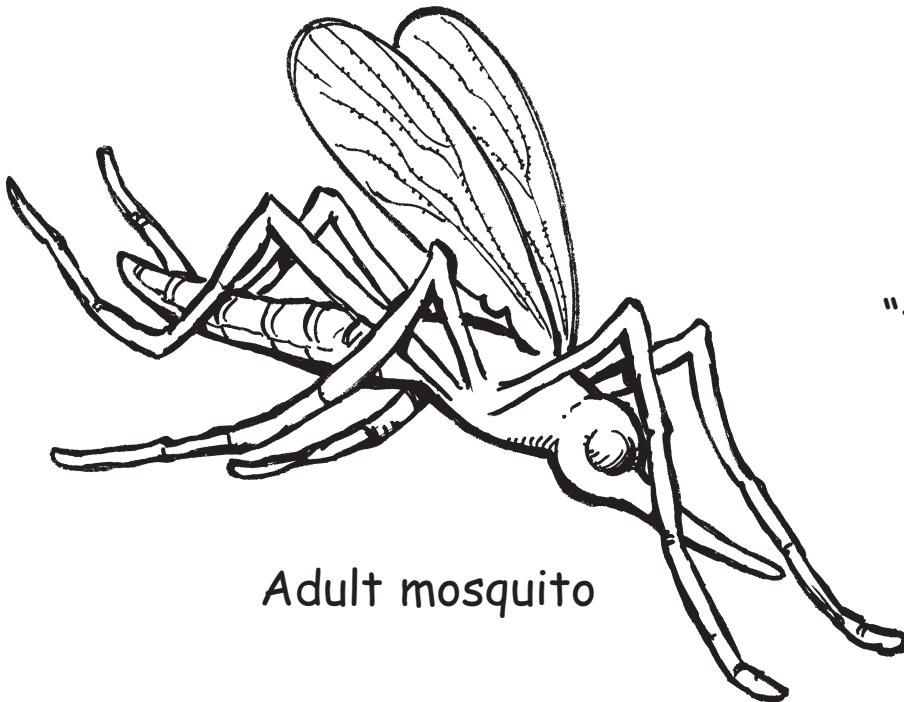
Mosquito
eggs



Larva
"wiggler"



Pupa
"tumbler"



Adult mosquito

Mosquito Smarts Home Patrol Checklist

These are some places where you might find mosquitoes or mosquito larvae in your yard. With a parent or teacher, check around your yard, school, or play area for the items on the list below. Check the appropriate boxes as you go.



	We found these things:	Number found:	We checked for water and emptied these:	We did not find any of these things:
Tires				
Toys				
Rain barrels				
Wheel barrows				
Flower pots				
Boats/ boat covers				
Plastic covers				
Swimming				
Buckets				
Plants				
Cans and jars				
Bird baths				
Tree holes				
Rain buckets				
Pet dishes				

Did you find mosquitoes in any other places that aren't on the list?

Your name:

Parent's signature:

Just for Kids — West Nile virus

You want to go out and play. But you are scared. You have heard about mosquitoes and West Nile virus. There are mosquitoes around your yard and you don't want to get bit. You decide to stay inside.

GUESS WHAT?!!! You can still go outside and play if you follow some simple rules. So go ahead!! **Enjoy the summer!**

By understanding the virus, we are able to protect ourselves from it. This information on the West Nile virus will help you protect yourself.

What is West Nile virus?

It is a virus that gets to people when they are bitten by **infected** mosquitoes. Not all mosquitoes are infected. In fact, only a **very, very, small number** of mosquitoes are actually infected.



Can the West Nile virus make my family or me sick?

Remember, only a very, very, small number of mosquitoes are infected with the virus. So just because a mosquito bit you does not mean you will get sick. In fact, even if an infected mosquito bit you, the chances of you getting sick are still **very, very small**. Healthy kids don't get the virus very often. But if they do get sick, they don't usually get very sick.

How will I know if I'm sick?

It would feel a lot like the flu. There would be fever, headaches, muscle aches, tiredness, and joint pain, and perhaps a rash.

Does this mean that everyone who feels bad or has the symptoms has the West Nile virus? **NO!!**

Most people don't get sick at all. Remember, the chances are very, very small. But if you are feeling bad, it is always important to tell your parents or an adult.

What is West Nile Encephalitis?

Encephalitis (it sounds like in-sef-fah-lite-us) is a big word for swelling of the brain, and the West Nile virus can cause it. Remember, **healthy kids usually don't get very sick**.

Encephalitis usually affects people who are old—over 50 years old—or who have been unhealthy in the past.

Can I get West Nile virus from animals or other people?

No. But remember, it is still important not to play with strange animals or touch dead animals.

How can I keep my family and myself safe?

Start by learning a little about mosquitoes. Did you know that mosquitoes are more active in the early morning and right before the sun goes down? They like being around water. They really like water that is not moving.

For example, if you have an old wagon outside that is full of water, a mosquito might come along and lay her eggs in it. Older mosquitoes like to live in tall grass or weeds.

Other ways to keep safe:

- Finish playing outside before it begins to get dark. This is when most mosquitoes are out.
- Wear long sleeve shirts and pants when playing outside. (Make sure you don't get too hot. Drink lots of water).
- Don't play near tall grasses or standing water.
- Make sure your toys are not holding water. For example: Dump the water out of the old wagon and make sure the plastic swimming pool is empty when nobody is using it.
- Have your parents spray your clothes with insect repellent. (Ask them to use repellent that has DEET in it.) They can contact the Extension office if they need more information.
- Don't use too much of the insect repellent. **ALWAYS** follow the directions on the insect repellent.
- Tell your parents or an adult when you have a mosquito bite.

Remember, the rest of the summer can still be fun and safe. You just have to follow some simple rules to protect yourself. Always talk to an adult or your parents if you are worried about something or if you have questions about your health. The more information you have, the safer you can be.

(Parents: This material is provided for informational purposes only and is not a substitute for medical care. Direct specific questions to your medical provider.)

10 Questions about Mosquitoes and the West Nile virus

T

F

☐☐

1. You can get the West Nile virus from an infected mosquito.

☐☐

2. Everyone who is bitten by a mosquito gets the West Nile virus.

☐☐

3. If you get a mosquito bite, you should tell your parents or teacher.

☐☐

4. Mosquitoes have seven life stages.

☐☐

5. The West Nile virus can not be spread by coughing or sneezing.

☐☐

6. You can prevent the spread of the West Nile virus by controlling mosquitoes.

☐☐

7. Bug repellent containing DEET can help protect you from mosquito bites.

☐☐

8. Mosquitoes don't need water to lay their eggs in, so it is okay to leave water in wagons, flower pots, and old tires.

☐☐

9. Most people do not die from the West Nile virus.

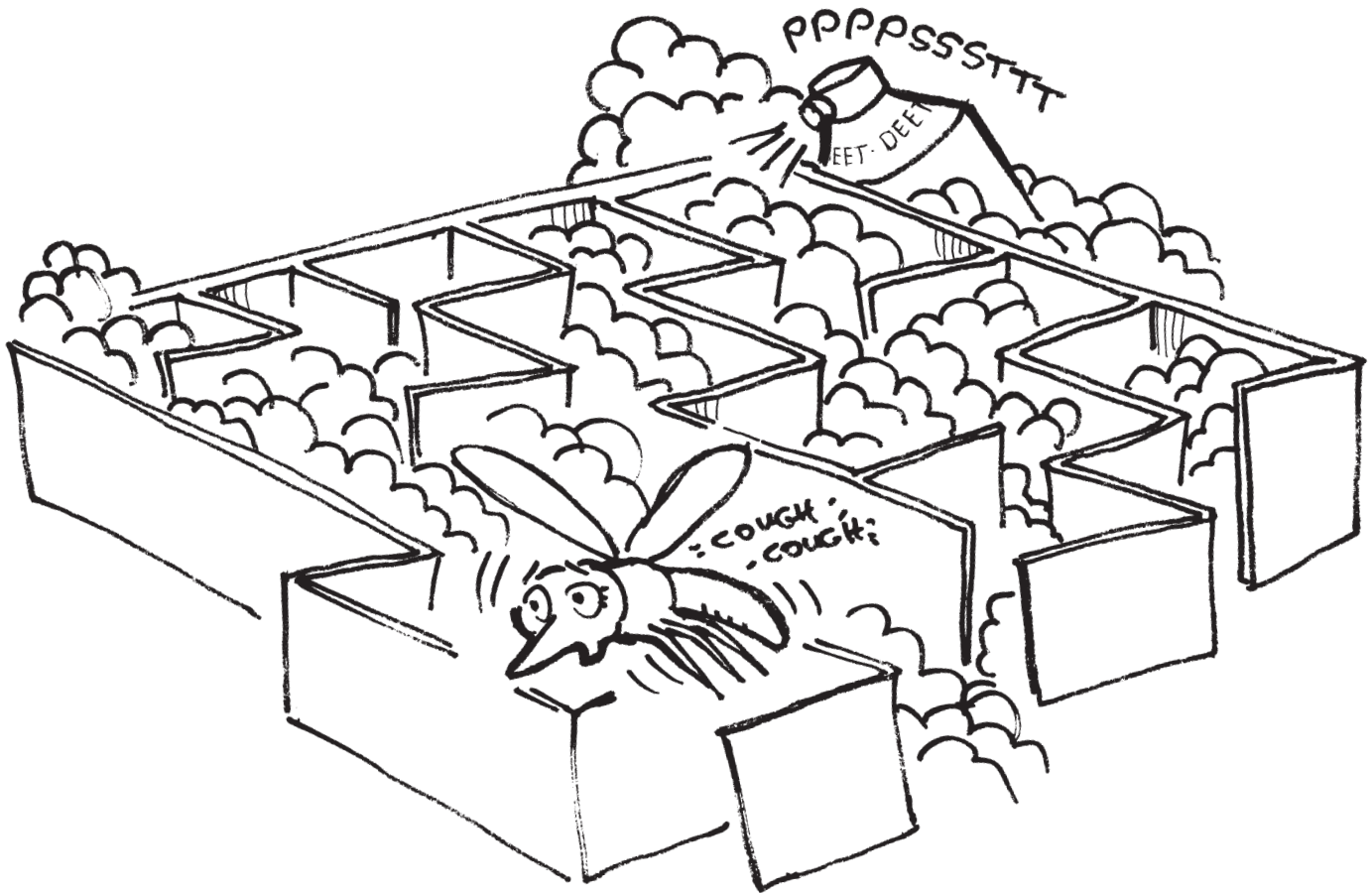
☐☐

10. Male mosquitoes need blood to lay eggs.

ANSWERS ON INSIDE BACK COVER.

A "MAZE" ING Facts

Insect spray that contains DEET is the most effective in repelling mosquitoes.



DEET insect repellent is considered safe if used appropriately. Make sure a parent or another adult follows these guidelines when applying DEET for you:

- Do not spray repellent in an enclosed area.
- Use only enough repellent to cover exposed skin or clothing.
- Do not apply to skin that is covered by clothing.
- Do not apply repellent on cuts, wounds, or irritated skin.
- Do not apply spray repellent directly to the face. Spray hands and rub them carefully over the face, avoiding the mouth and eyes.
- When children have returned indoors, wash treated skin with soap and water.

Mosquito Word Scramble

See if you can unscramble these words about mosquitoes!

1. Mosquitoes grow in _____.

ARTEW

--	--	--	--	--

2. Another name for mosquito larvae.

RGIWRLGE

--	--	--	--	--	--	--	--

3. Female mosquitoes bite in order to feed on _____.

OBODL

--	--	--	--	--

4. Mosquitoes have one pair of _____.

GSINW

--	--	--	--	--

5. These are spread by mosquitoes.

SEISDASE

--	--	--	--	--	--	--	--

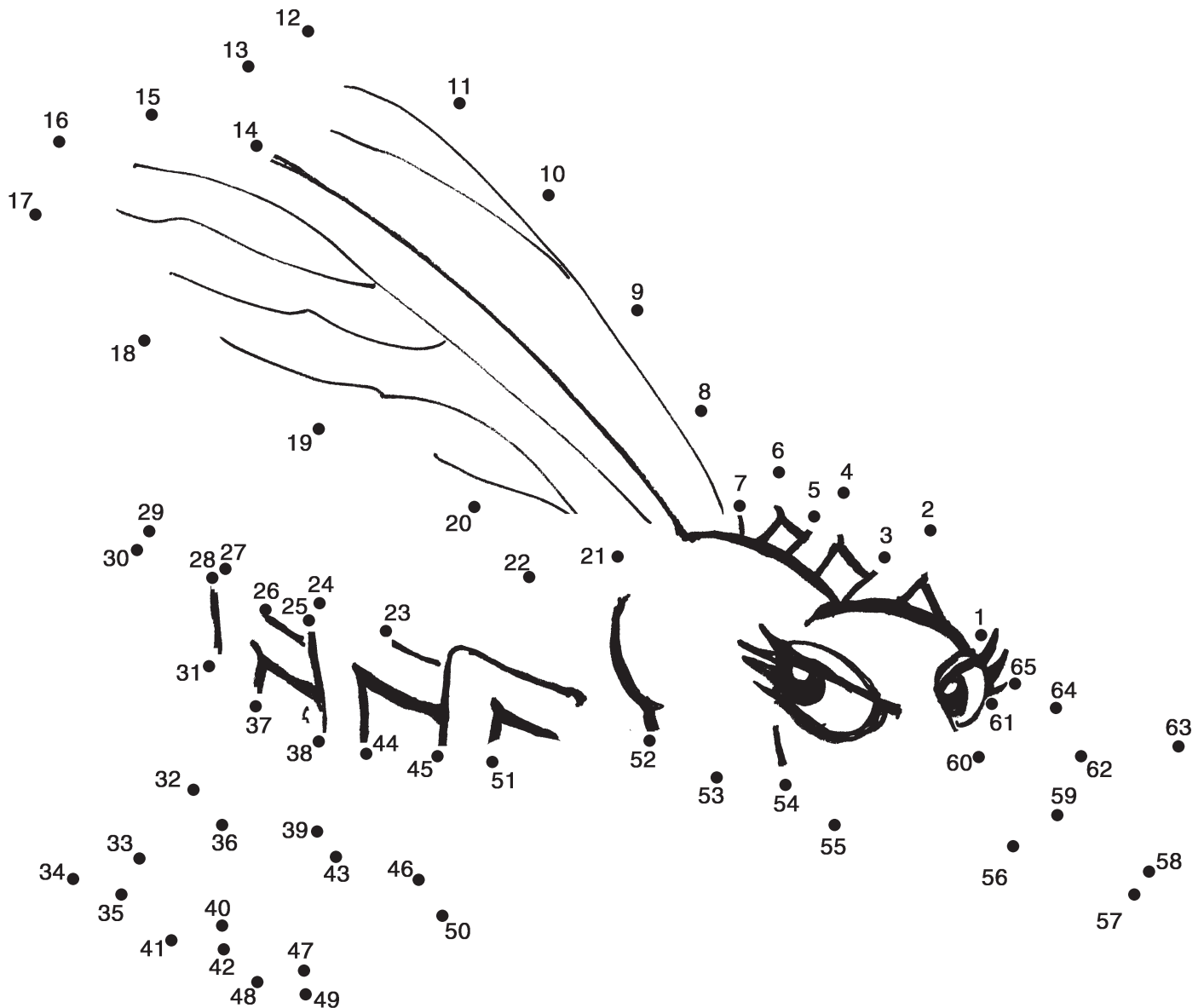
6. Mosquitoes begin their lives as _____.

GESG

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Connect the dots to find out what bug carries the West Nile virus.



The Series

(ESS503) **Book 1 — Nita the Mosquito**

Activities to Help Preschool Children Learn About the West Nile Virus

(ESS603) **Book 2 — Little Bug, Big Bite!**

Activities to Help Children Aged 6 to 9 Learn About the West Nile Virus

(ESS703) **Book 3 — What's Up With the "Buzz"?**

Activities to Help Children Aged 10 to 12 Learn About the West Nile Virus

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Series References

South Dakota Cooperative Extension Web site: South Dakota West Nile virus fact sheet. South Dakota Department of Health - Office of Disease Prevention (<http://sdces.sdstate.edu/>).

South Dakota Cooperative Extension Web site: Q & A on West Nile Virus. (<http://www.state.ssd.us/doh/WestNile/Q&A.htm>).

What's West Nile Virus? 2002. KidsHealth, The Nemours Foundation. (<http://www.kidshealth.org>).

ANSWERS TO TRUE AND FALSE: 1-T, 2-F, 3-T, 4-F, 5-T, 6-T, 7-T, 8-F, 9-T, 10-F



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STATE OF SOUTH DAKOTA
M. MICHAEL ROUNDS, GOVERNOR

Dear South Dakota Kids:

More than 1,000 people in South Dakota got sick with West Nile Virus in 2003. They got sick with West Nile when mosquitoes with the virus bit them.

This year we want to stop mosquito bites, and you can help. "Fight the Bite" and stop West Nile Virus.

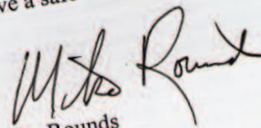
You can:

- Ask for bug spray when you go out.
- Wear long pants and long-sleeved shirts if there are lots of mosquitoes.
- Stay in at dusk and dawn when mosquitoes are out.

Ask mom and dad to:

- Put up bug lights.
- Put screens on doors and windows.
- Check your yard. Get rid of things like tire swings that fill with water and give mosquitoes a place to live.
- Support your town's mosquito control program.

Have a safe and healthy summer. Help "Fight the Bite!"


Mike Rounds
Governor

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