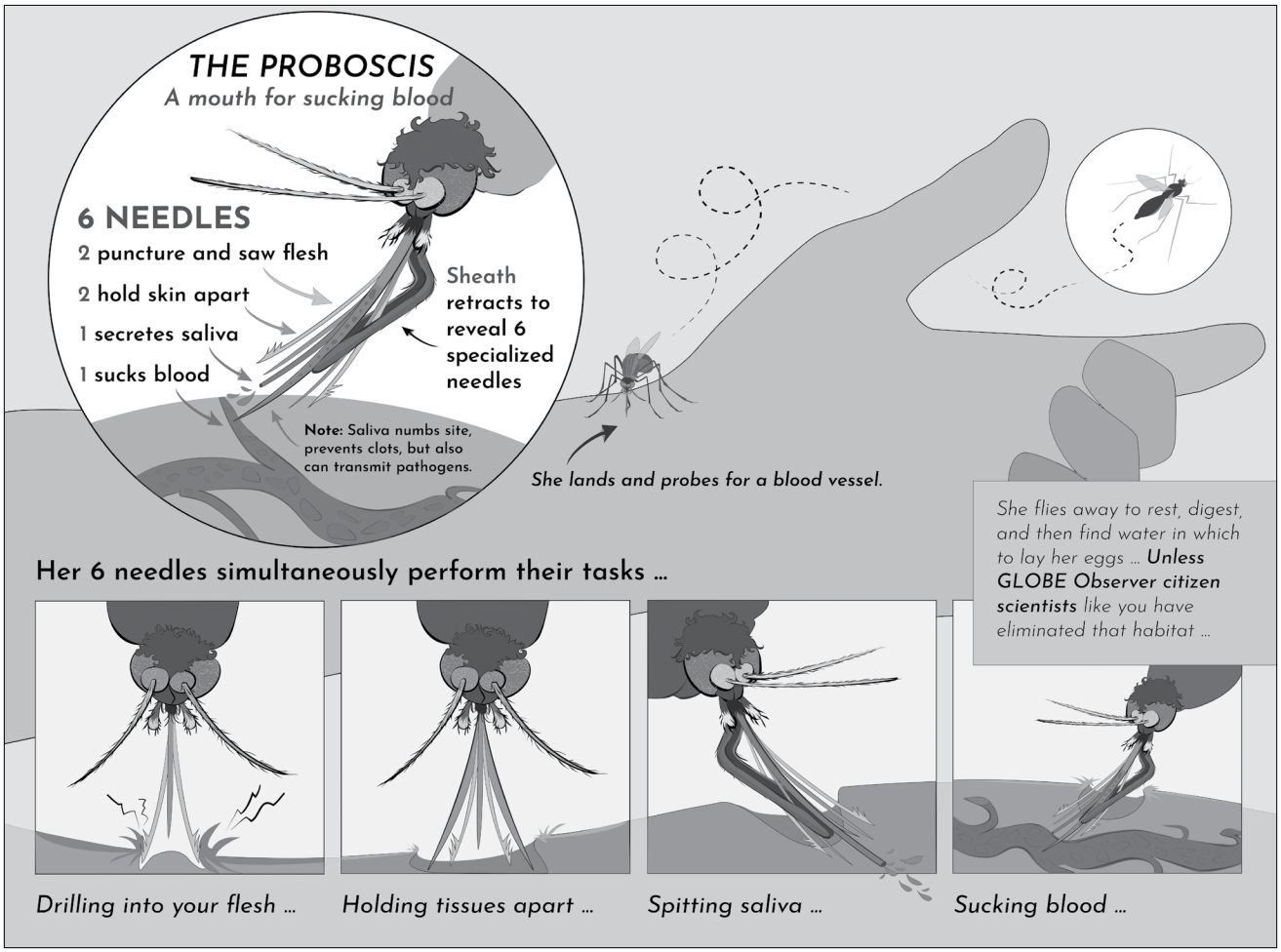
Mosquito Proboscis: Mechanics of a Bite



VOCABULARY ALERT

Proboscis *(pronounced pro-bah-sis or pro-bahs-kis):* *In insects, the proboscis is the elongated tube-shaped mouthpart used to gather food. The female mosquito also uses the proboscis to gather blood from humans and other mammals, as well as birds, reptiles, and amphibians.*

Breaking down the word: "pro" *means "forward" (from the head of an animal);* ***"boscis"*** *means "to feed."*

LEARN MORE

Watch "How Mosquitoes Use Six Needles to Suck Your Blood," a video about the structure and function of the proboscis and gain a scientific appreciation for just how amazing it is: *https://www.pbs.org/video/deep-look-mosquitoes/*.

What was the most interesting thing that you learned from this video?

Based on the graphic video and the video:

I wonder ...

What if ...

Is it possible that ...

This reminds me of ...

ODE TO THE PROBOSCIS

Mosquitoes have a mouth
since after all, they need to eat.
But the mouth of every female
poses risks to all she meets.

In her mouth are found six needles.
Wait…SIX NEEDLES?? You may scream!
Why does she need six needles?
Six needles seems extreme!

First, two will hold your skin apart,
two sharper ones will saw,
they're headed for a blood vein–
it's your blood she wants to draw.

She is such a caring mother.
She's not trying to be mean.
But her eggs cannot develop
without using blood protein.

So, needle five sucks up your blood,
to her abdomen it goes.
You will hardly know it's happening
'cause mosquitoes are such pros.

The sixth one spits saliva
that contains a lot of stuff.
Some contents numb the area,
others make blood clotting tough.

The tiny loss of blood
is not at all the greatest threat.
It's the many bad diseases
That a human just might get.

Along with her saliva–
every now and every then–
she may also leave behind
a dangerous pathogen.

A human could be the receiver
of the virus for yellow fever.

Others, meanwhile,
could get West Nile.

Add to the hysteria
the chance of getting malaria.

The diseases are a problem
that YOU can help reduce.
Find the places where she lays her eggs
And turn that water loose.

But how cool is a proboscis?
Pretty cool, you must admit.
Mosquitoes are the only ones
who simultaneously suck and spit.

NOW IT'S YOUR TURN

What is your mosquito poem, story, song, or cartoon? Include any or all of the characteristics that you've learned about mosquitoes:

- **four life cycle stages:** (egg, larva, pupa, adult)
- **habitat for egg/larva/pupa:** standing water
- **anatomy of larva:** siphon
- **anatomy of adult:** two wings, six legs, head, thorax, abdomen, proboscis
- **feeding:** eating plant nectar
- **biting:** obtaining a blood meal