

TINY LIFE

EMILY SCHLESINGER

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NONFICTION

Area 51	Monsters on Land
Bioweapons	Mysterious Objects
Cannibal Animals	Racetracks
Cloning	The Science of Movies
Comet Catcher	Seven Wonders of the Ancient World
Drones	3D Printing
Fault Lines	Tiny Life
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Medal of Honor	Wormholes
Military Dogs	Zombie Creatures
Monsters of the Deep	



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Chapter 1

TAKING OVER

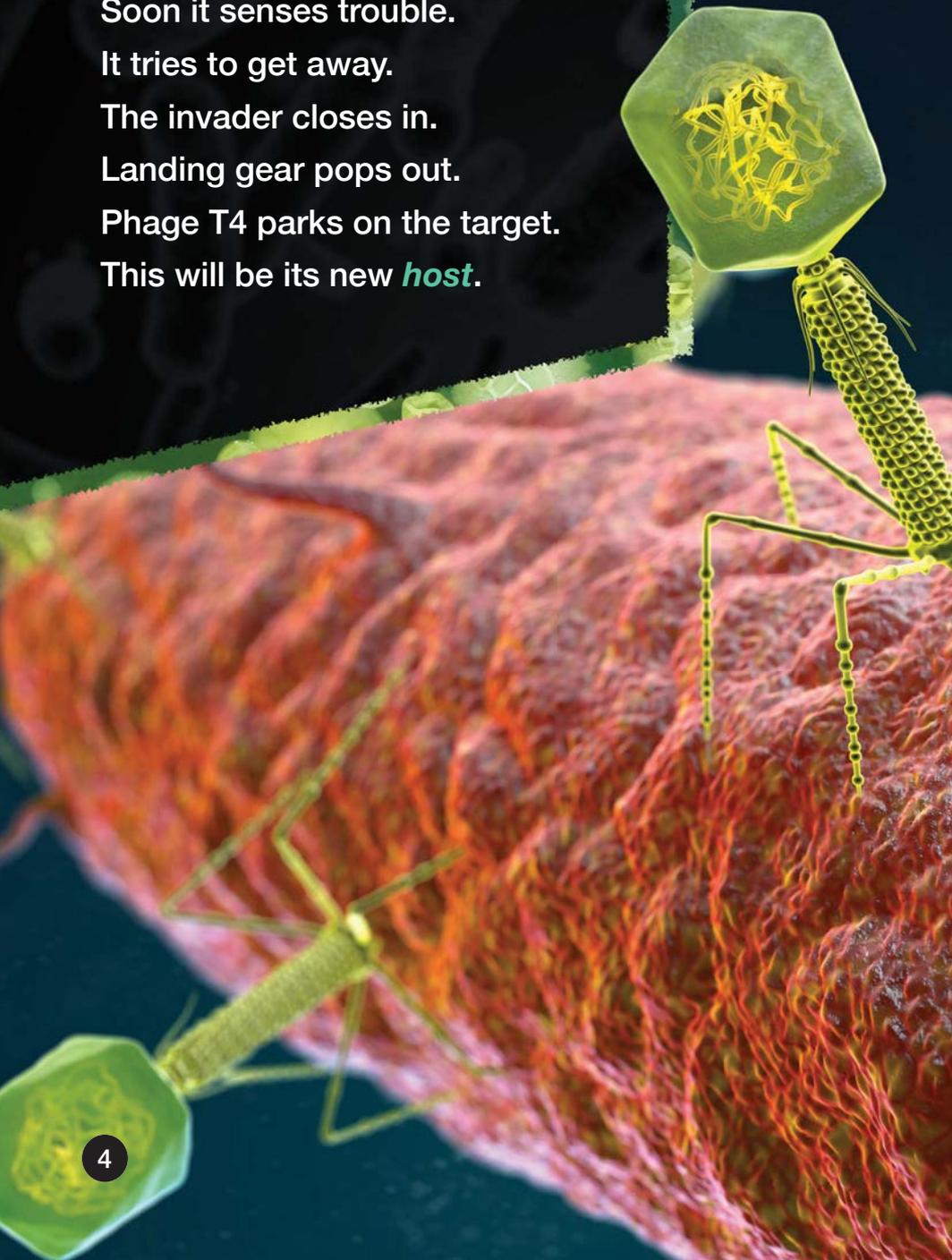
An *invader* sails down.
This is a sleek machine.
It looks like a spaceship.
But it acts like a robot.

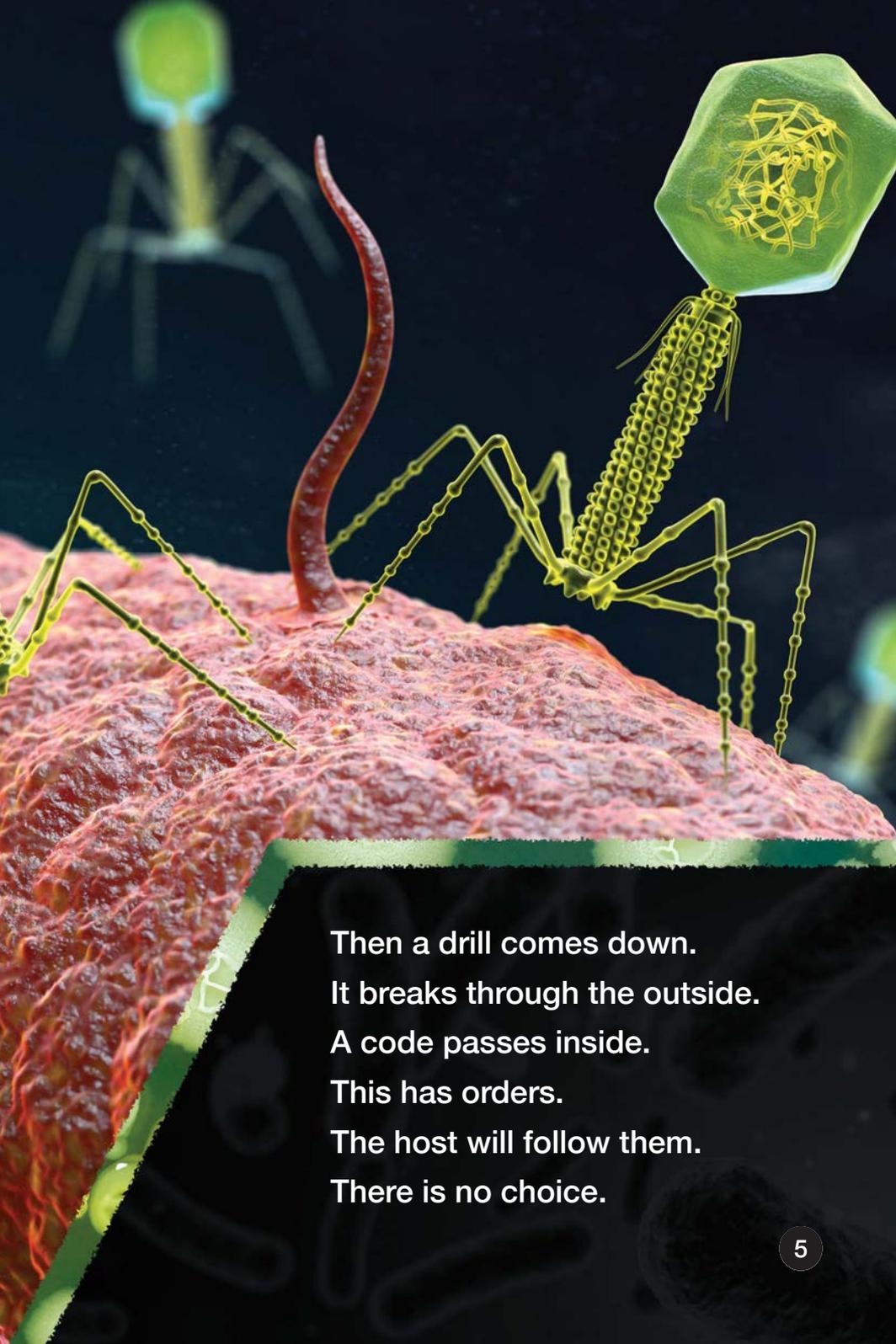
A coil is at the center.
Skinny legs hang off.
On top is a control room.
This has 20 sides.

Phage T4 is its name.
This means “one that eats.”



A target comes near.
Soon it senses trouble.
It tries to get away.
The invader closes in.
Landing gear pops out.
Phage T4 parks on the target.
This will be its new *host*.





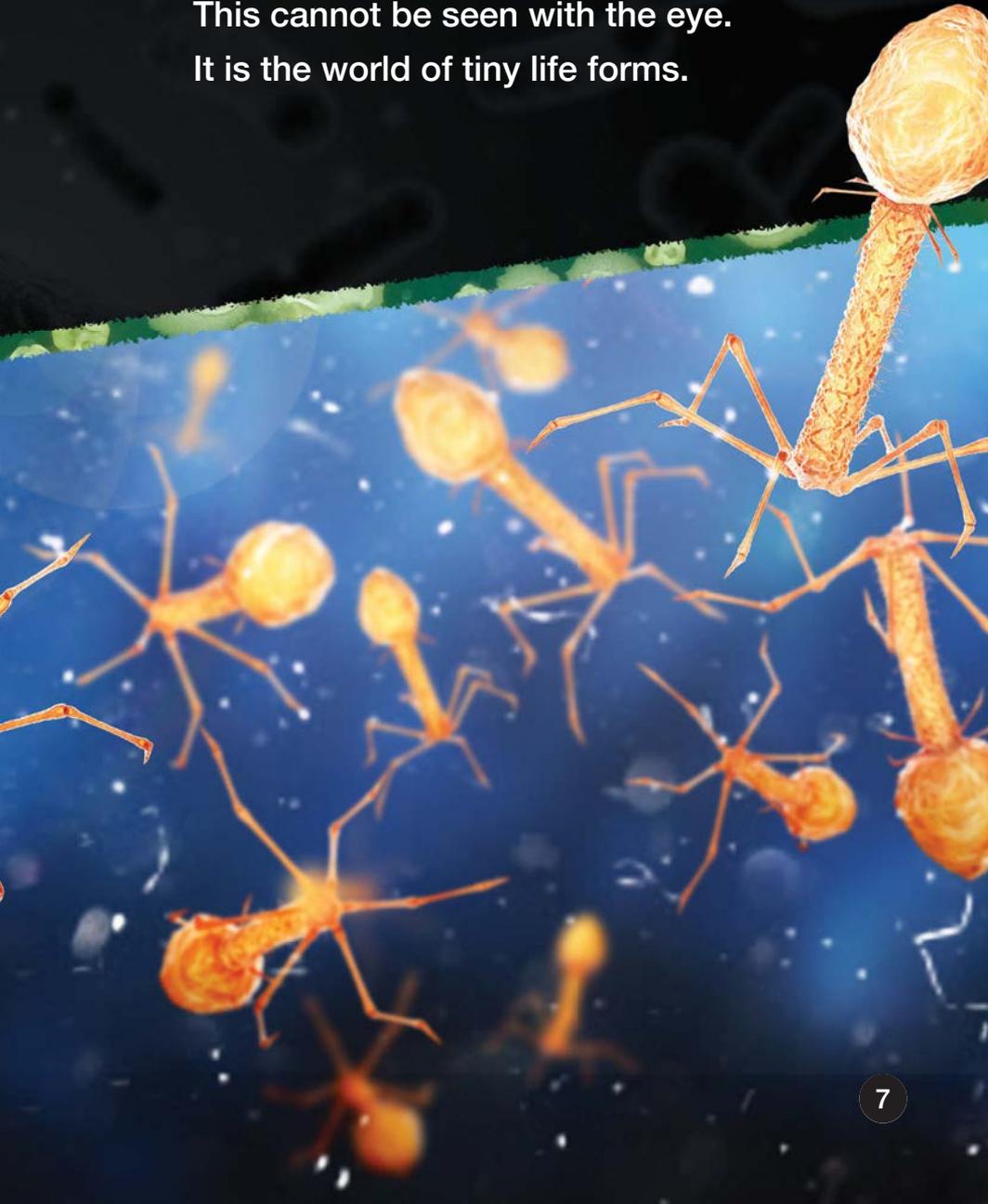
Then a drill comes down.
It breaks through the outside.
A code passes inside.
This has orders.
The host will follow them.
There is no choice.

Work begins inside.
The host makes parts.
They match the code.
It puts them together.
These are more phage T4s.

Then the host dies.
The new invaders sail on.
They join a growing army.



Some think this sounds like a movie.
But phages are real.
They are part of a hidden world.
This cannot be seen with the eye.
It is the world of tiny life forms.



Chapter 2

HIDDEN WORLD

There are many kinds of tiny life forms.

Phages are one.

These are a type of *virus*.

They can kill germs.

Some help people heal.

But not all viruses are good.

Many make people sick.

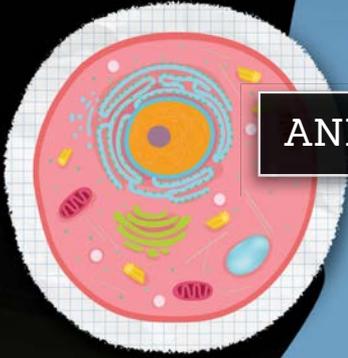
A virus wants to do only one thing.

The goal is to copy itself.

To do this, the virus needs help.

It must take over a *cell*.

This is why viruses live in people's bodies.



ANIMAL CELL

A CLOSER LOOK

A phage puts its DNA into a cell. DNA is a code. It tells the cell to build new phages.



PLANKTON

Other tiny life forms live in water.
Oceans have them.
Puddles do too.
They are part of every plant.
All animals live with them.
Some can even live in space.

Tiny life forms have always been around.
Most of them were too small for people to see.

Microscopes changed that.

These were invented a few hundred years ago.

Scientists looked closer.

Pictures got sharper.

A hidden world came into view.

It had been there all along.

People could see it at last.



MICROSCOPE