

World of VIRUSES

THE
NEVER-ENDING BATTLE



SEPA SCIENCE EDUCATION
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UNIVERSITY OF
Nebraska
Lincoln

World of VIRUSES

Graphic Novel

THE NEVER-ENDING BATTLE

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OCEANS OF VIRUSES

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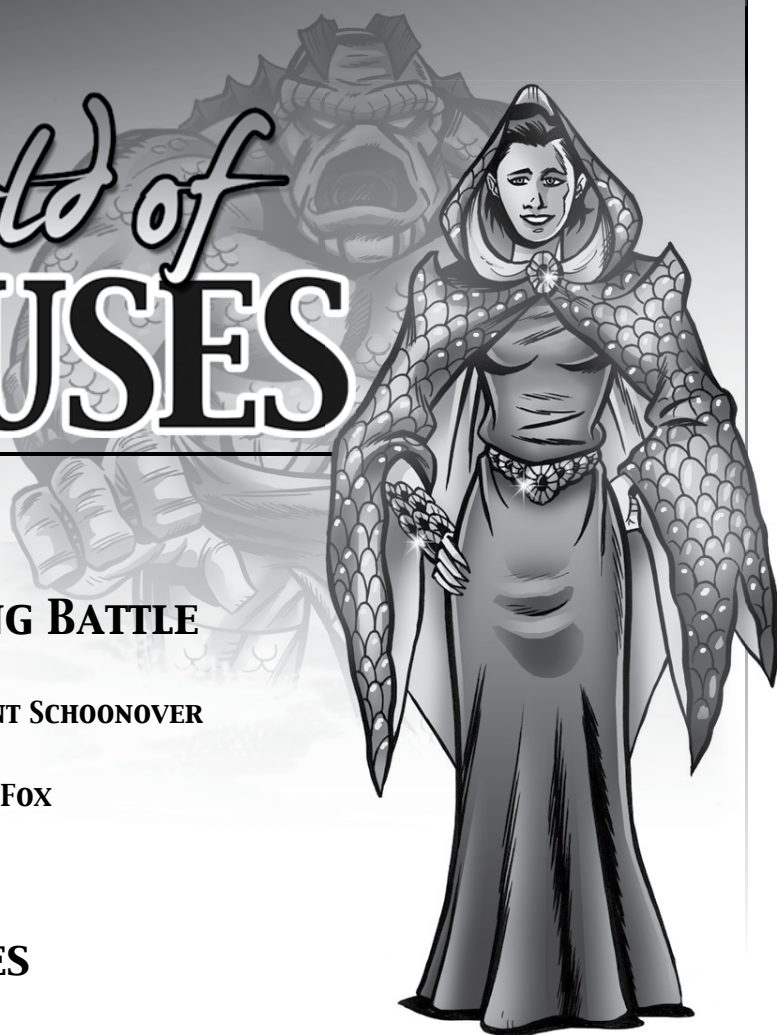
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THE NEVER-ENDING BATTLE

THIS MUCH IS CERTAIN.

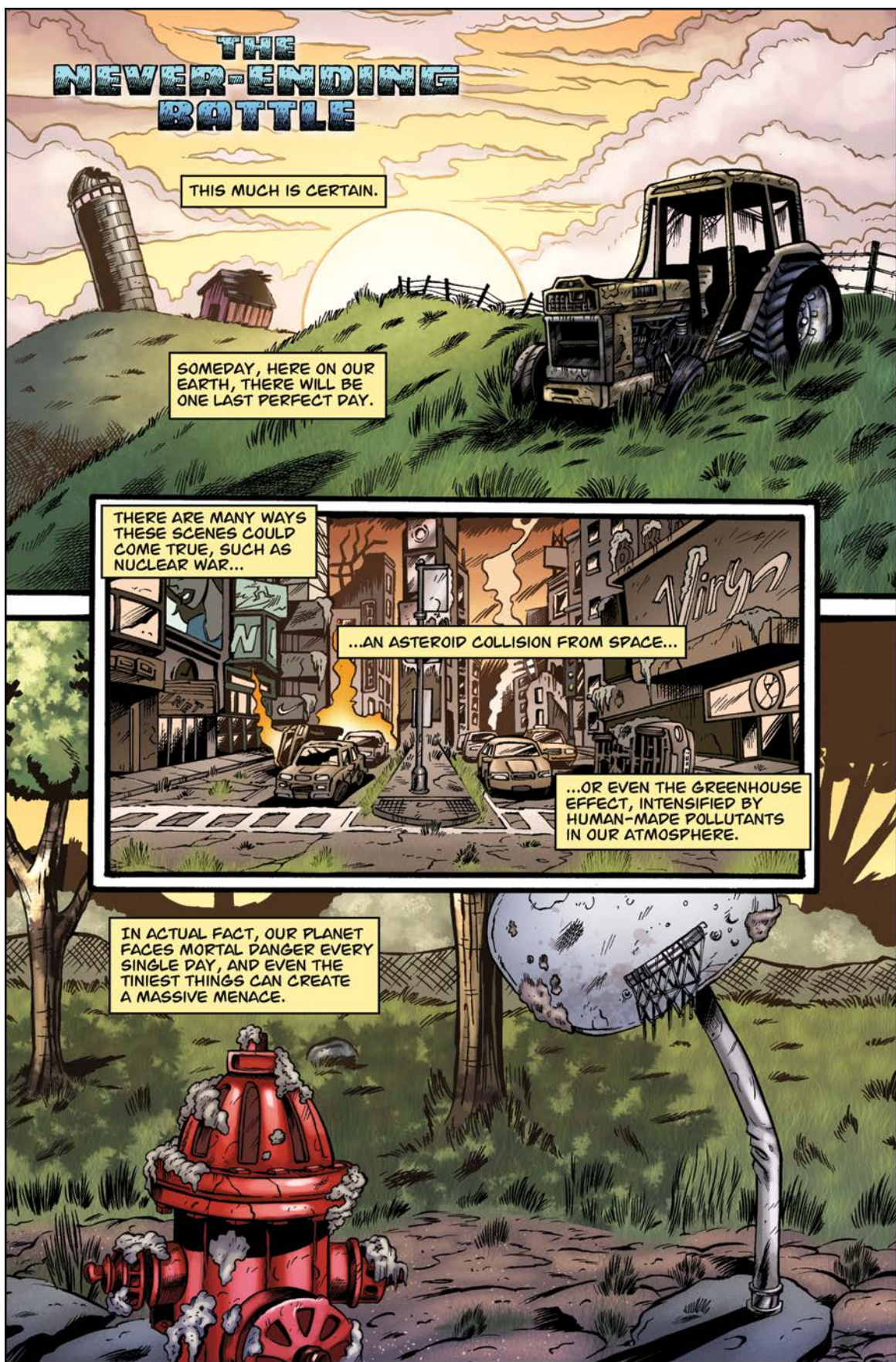
SOMEDAY, HERE ON OUR EARTH, THERE WILL BE ONE LAST PERFECT DAY.

THERE ARE MANY WAYS THESE SCENES COULD COME TRUE, SUCH AS NUCLEAR WAR...

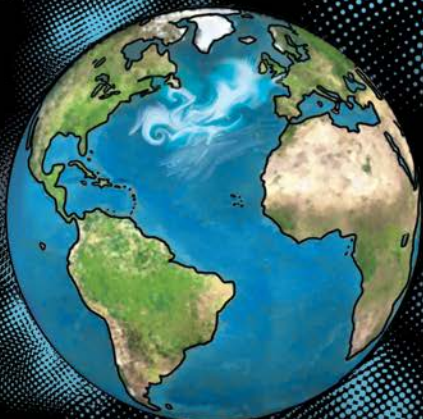
...AN ASTEROID COLLISION FROM SPACE...

...OR EVEN THE GREENHOUSE EFFECT, INTENSIFIED BY HUMAN-MADE POLLUTANTS IN OUR ATMOSPHERE.

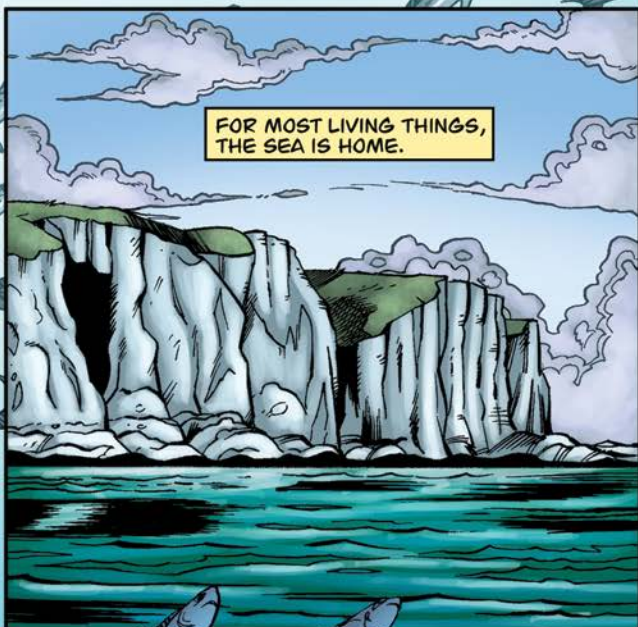
IN ACTUAL FACT, OUR PLANET FACES MORTAL DANGER EVERY SINGLE DAY, AND EVEN THE TINIEST THINGS CAN CREATE A MASSIVE MENACE.



AS SEEN FROM SPACE, THAT MILKY SPIRAL IS AN **EMILIANIA HUXLEYI** ALGAE BLOOM, A MICROSCOPIC ORGANISM, GROWING AMOK IN THE NORTHERN ATLANTIC, ALREADY REACHING MONSTROUS PROPORTIONS.

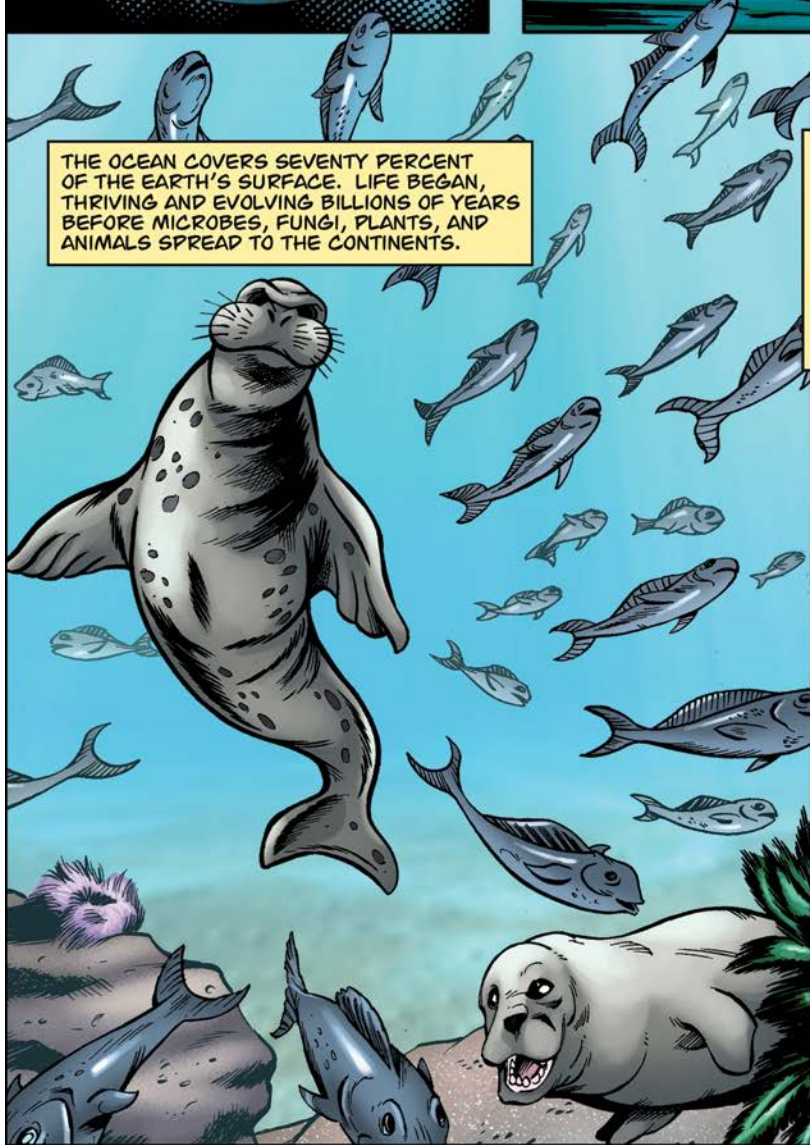


FOR MOST LIVING THINGS, THE SEA IS HOME.



THE OCEAN COVERS SEVENTY PERCENT OF THE EARTH'S SURFACE. LIFE BEGAN, THRIVING AND EVOLVING BILLIONS OF YEARS BEFORE MICROBES, FUNGI, PLANTS, AND ANIMALS SPREAD TO THE CONTINENTS.

ALTHOUGH THE ANCESTORS OF LAND ANIMALS LEFT THE SEA 360 MILLION YEARS AGO, ALL CREATURES TODAY STILL DEPEND UPON IT. FOR EXAMPLE, HALF OF THE OXYGEN HUMANS BREATHE IS PRODUCED BY PHOTOSYNTHETIC MARINE ORGANISMS, LIKE **EMILIANIA HUXLEYI**.



BUT...WHAT HAPPENS WHEN SOMETHING LIKE **EMILIANIA HUXLEYI** GROWS WILD, OUT OF CONTROL...?





THAT'S
WHEN I
STEP
IN.

SHHH...
GOT TO STAY
STEALTHY.
CAN'T LET THE ALGAE
KNOW I'M HERE...
AT LEAST,
NOT YET.



SCIENTISTS
CALL ME
EhV*.

I'M ONLY ONE OF OVER
1,000,000,000,000,000,000,000,000,000
OCEAN VIRUSES. TOUGH TO IMAGINE
SUCH A HUGE NUMBER,
ISN'T IT?



THINK
OF IT THIS
WAY.

IF ALL
THE VIRUSES IN
THE OCEAN STOOD
IN A LINE,
END TO END,
WE WOULD STRETCH
OUT PAST THE
NEAREST SIXTY
GALAXIES!

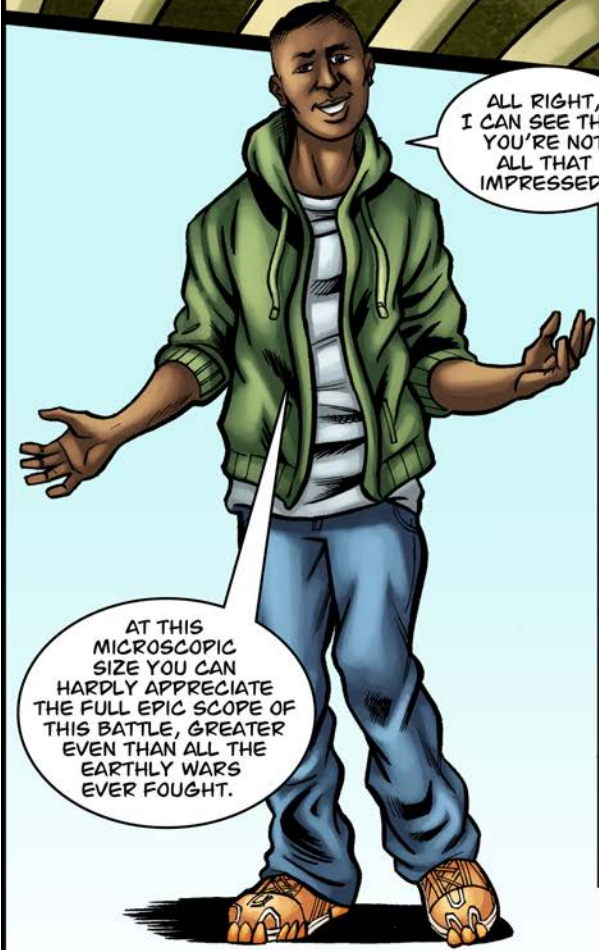
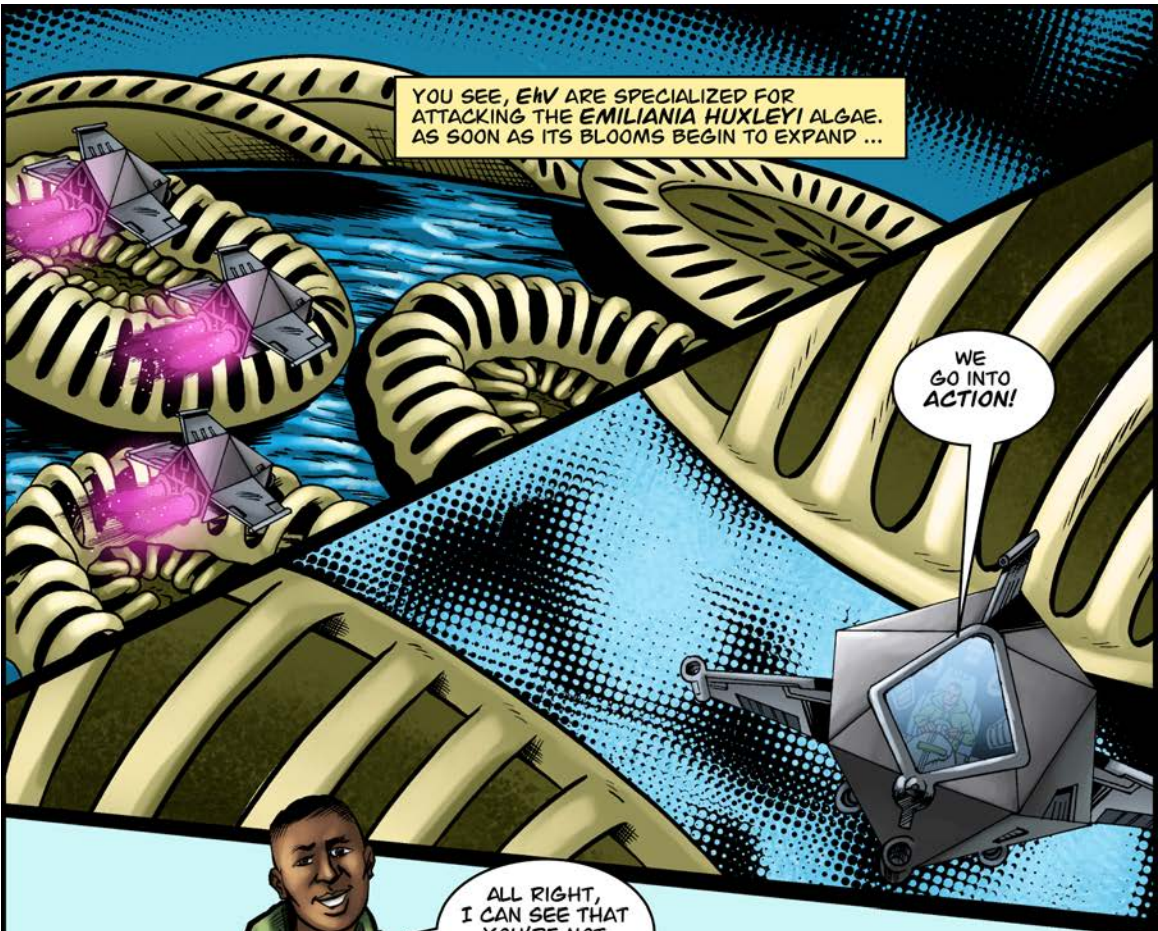


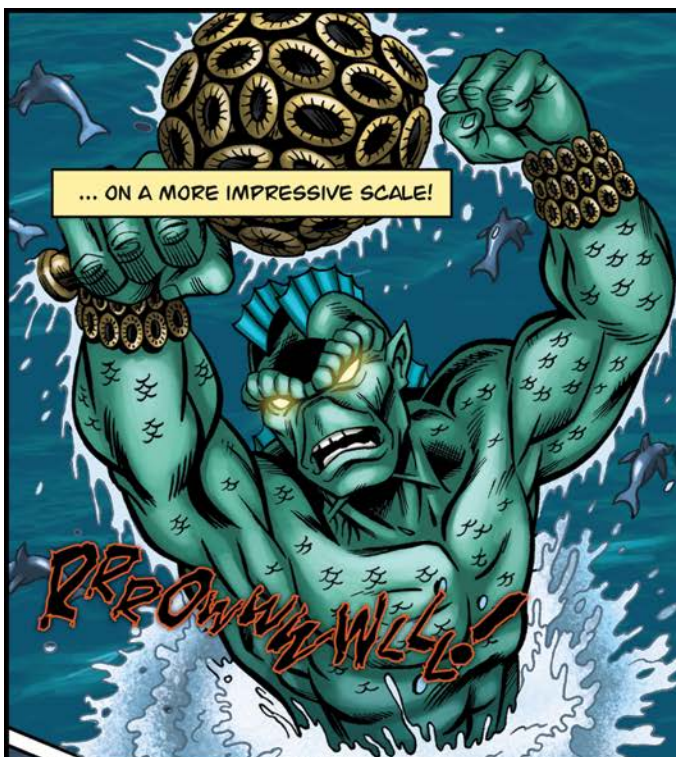
USUALLY,
VIRUSES LIKE ME
ARE DORMANT, WITHOUT
MUCH TO DO. SOMETIMES
THIS HARMLESS-LOOKING
ALGAE GROWS MORE
MASSIVE THAN THE
BRITISH ISLES,
RAGING INTO AN
OVER-CROWDING PERIL
TO EVERYTHING
ALIVE.

THIS IS
ONE OF THOSE
TIMES.

*EhV - EMILIANIA HUXLEYI VIRUS







... ON A MORE IMPRESSIVE SCALE!

MARINE MICROBES LIKE ALGAE PRODUCE A GAS CALLED DIMETHYL SULFIDE THAT INCREASES CLOUD COVER, WHICH REFLECTS SUNLIGHT BACK INTO OUTER SPACE, COOLING THE PLANET TO MAKE LIFE POSSIBLE.



BUT...TOO MUCH OF THAT WOULD BE A VERY BAD THING.

ALTHOUGH OUR GIANT ALGAE MONSTER IS AN EXAGGERATION, THE ULTIMATE DESTRUCTION THAT IT'S CAPABLE OF IS VERY REAL AND VERY DEADLY.



IF SUCH RAMPANT GROWTH WERE LEFT UNCHALLENGED, EARTH COULD BECOME INCAPABLE OF SUPPORTING MOST PLANT LIFE. THE ENTIRE FOOD CHAIN WOULD BE DESTROYED, TRIGGERING GLOBAL MASS EXTINCTIONS...




...INCLUDING HUMAN BEINGS.

WITHOUT THE EXISTENCE OF OCEAN VIRUSES, THE ALGAE WOULD CONTINUE TO GROW UNTIL THEY EXHAUSTED THEIR OWN FOOD SUPPLY, EVENTUALLY STARVING THEMSELVES INTO EXTERMINATION...**SHATTERING** THE WHOLE ECOSYSTEM.



GAAAROOOKKK!



PHOTOSYNTHETIC ALGAE LIKE *EMILIANIA HUXLEYI* ARE RESPONSIBLE FOR HALF OF THE CARBON DIOXIDE FIXATION AND OXYGEN PRODUCTION ON THE PLANET. WITHOUT THEM, WELL, THINGS JUST WOULDN'T BE THE SAME.

WE KNOW HOW MUCH YOU HUMANS LIKE YOUR OXYGEN.

IT'S EHV'S JOB TO RESTORE BALANCE, PLAIN AND SIMPLE.

SOMETHING ONLY WE CAN DO.

ZZZ-RAAAKK!

ZZ-RRRRRRK!

KA-ZZZZZZ!





DOWN AND DOWN, WE DRIVE THE ALGAE.
HUGE AS THE MONSTER IS, IT DOESN'T
STAND MUCH OF A CHANCE AGAINST EHV.

HOWEVER, WE CAN ONLY WIN
THE BATTLE...NEVER THE WAR.



KILLING TOO MUCH OF
EMILIANIA HUXLEY!
WOULD BE A BAD THING.
FORTUNATELY THE ALGAE
HAS EVOLVED A SUPER
POWER OF ITS OWN...



... TRANSFORMING ITSELF INTO A
MUCH SMALLER FREE-SWIMMING
FORM, FULLY CAPABLE OF A VERY
SPEEDY ESCAPE.

IN CASE YOU THINK I'M JOSHING ABOUT THAT PART, HERE'S WHAT THEY REALLY LOOK LIKE WHEN REDUCED TO THEIR TRUE MICROSCOPIC PROPORTIONS.

IS THAT WEIRD, OR WHAT?

EhV

SCIENTISTS NOW UNDERSTAND THAT OCEAN VIRUSES PLAY A SERIOUS PART IN THE BIG PICTURE, PROFOUNDLY INFLUENCING ALL LIFE ON EARTH.

IN FACT, WITHOUT EHv, THESE KIDS WOULDN'T BE ENJOYING THEIR FUN IN THE FRESH AIR.

NOTHING LASTS FOREVER, AND SOMEDAY THE WORLD WE ALL KNOW WILL END.

BUT NOT TODAY.

NOT SO LONG AS OCEAN VIRUSES ARE HERE TO FIGHT THE NEVER-ENDING BATTLE!

END.