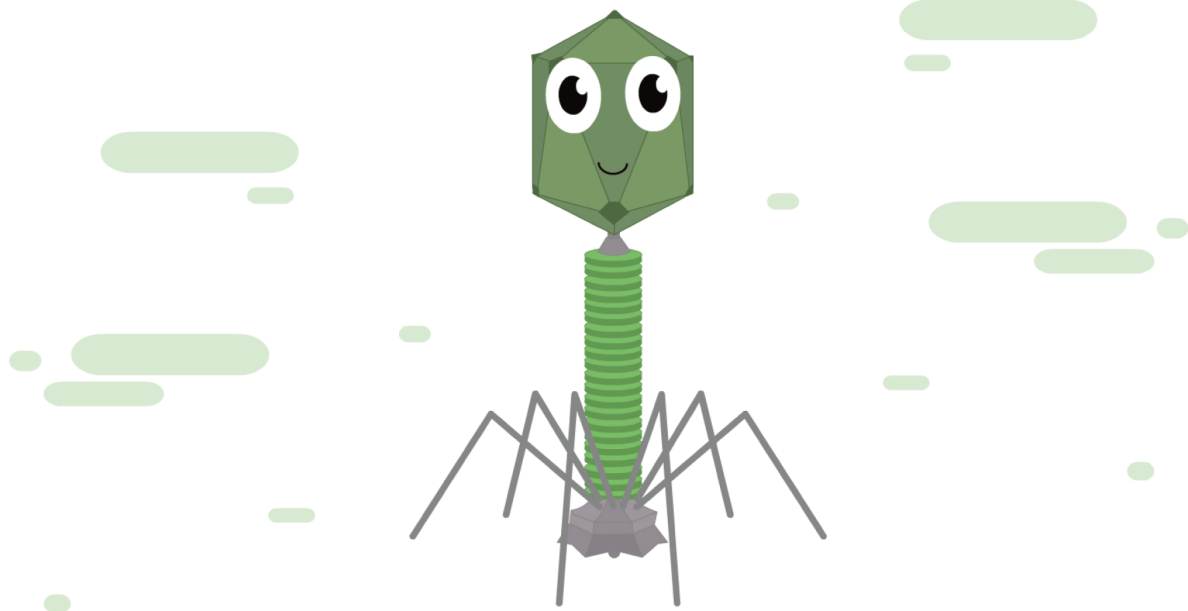


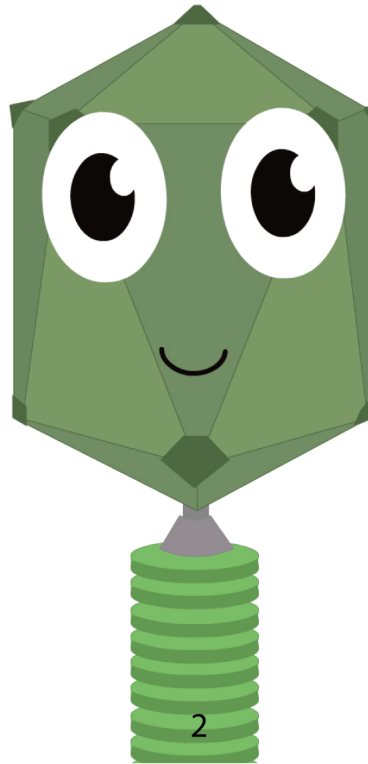
Phage Fred in search of his friend

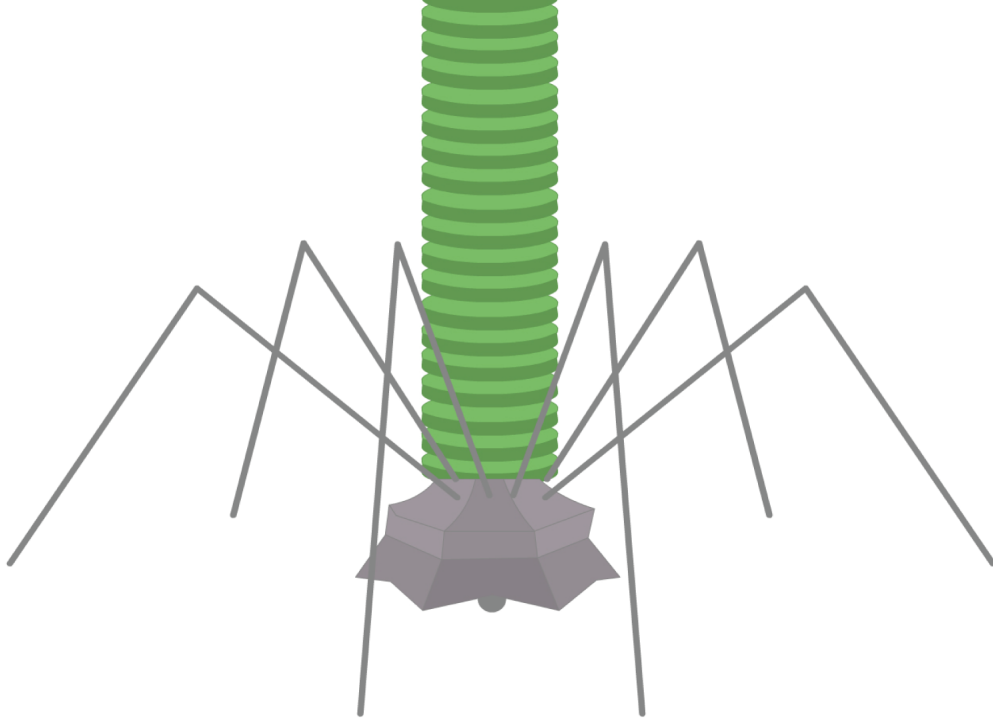




Once upon a time there was a phage named Fred.

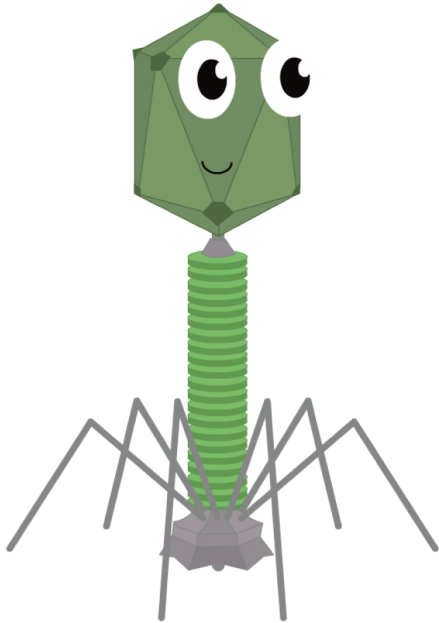
Phage Fred's head is very angular. It has as many as twenty triangles!





Phage Fred also has a body with as many as six legs!

Phage Fred has many hobbies. Fred likes soccer, playing with dolls and reading.



But Phage Fred has no one to play with and that makes Phage Fred very sad.



Every Phage can find a bacterial friend who is the perfect match, but where can we find the bacterial friend of Phage Fred?

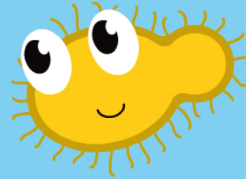
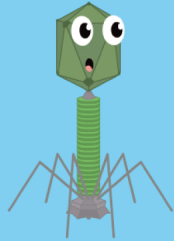


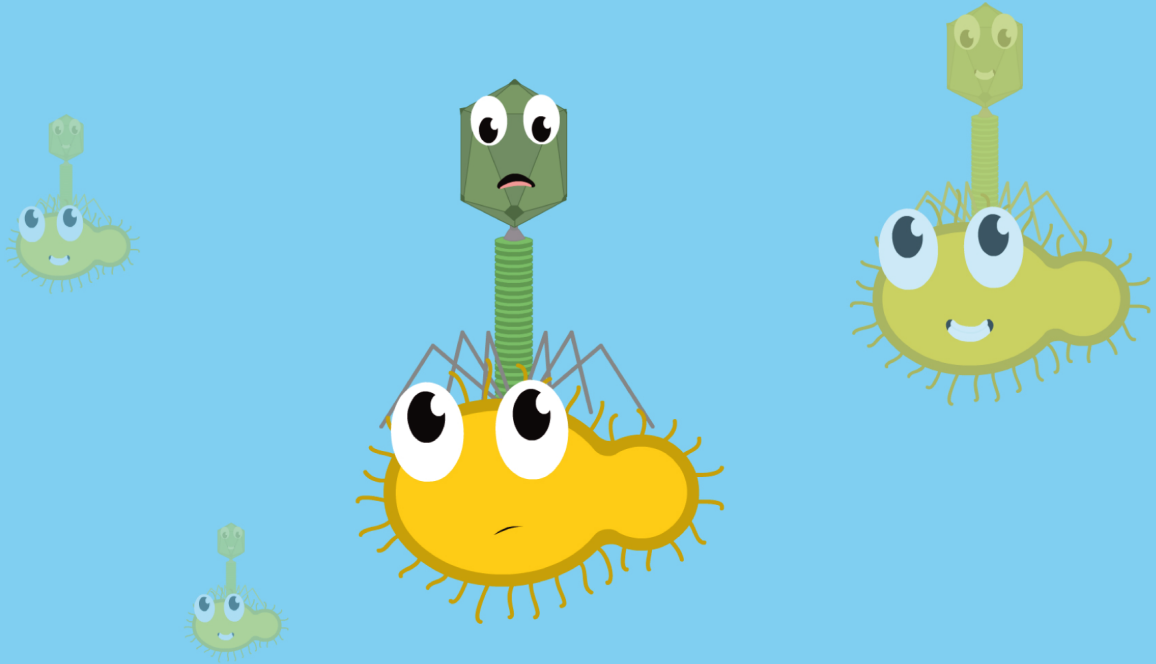
Bacteria live everywhere after all!

It is a nice day, the sun is shining and Phage Fred starts looking near the sea.

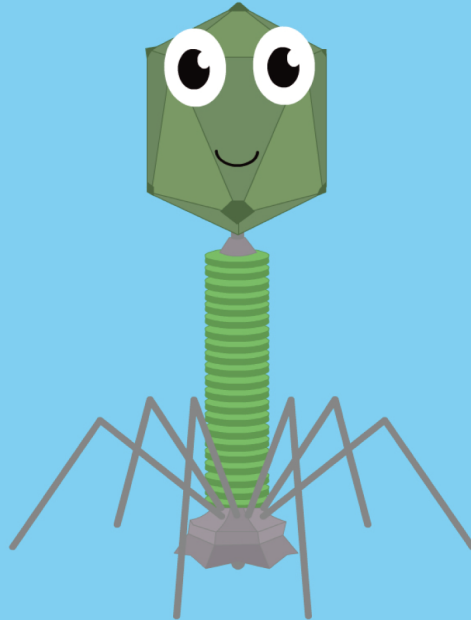


Phage Fred goes swimming. Fred sees fish, plants and a bacterium. This is Bob. Could Bob the bacterium be Phage Fred's friend?





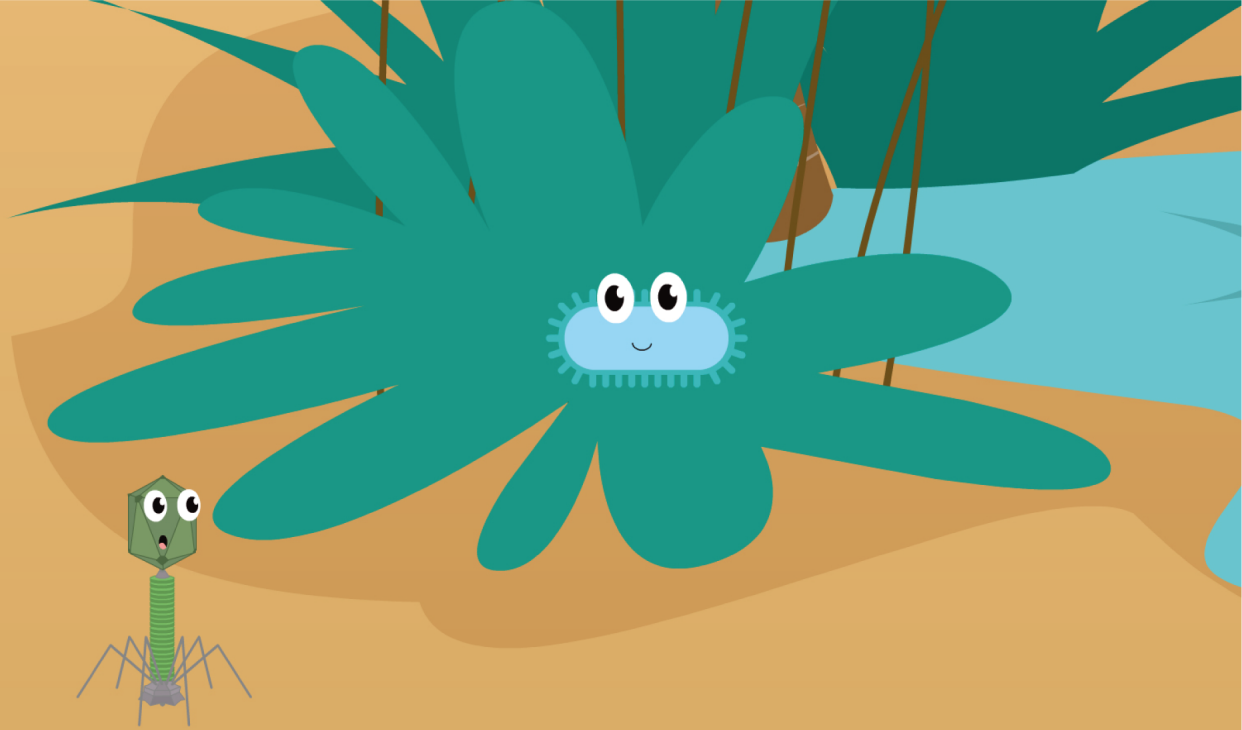
Phage Fred hugs Bob the bacterium, but Fred's legs do not fit around Bob. That is a shame! Who is Fred's friend then?



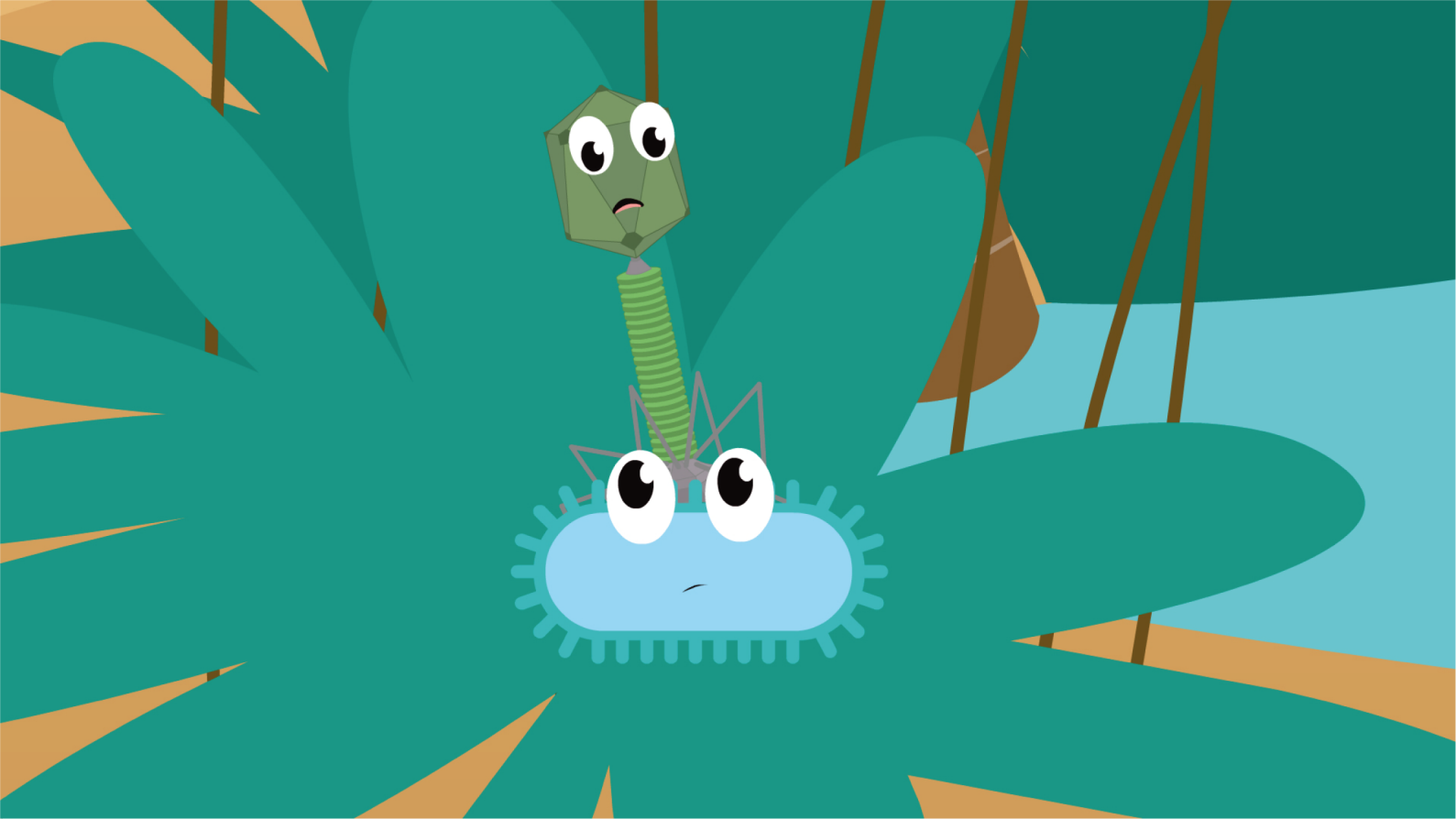
Phage Fred does not give up. Fred looks further.



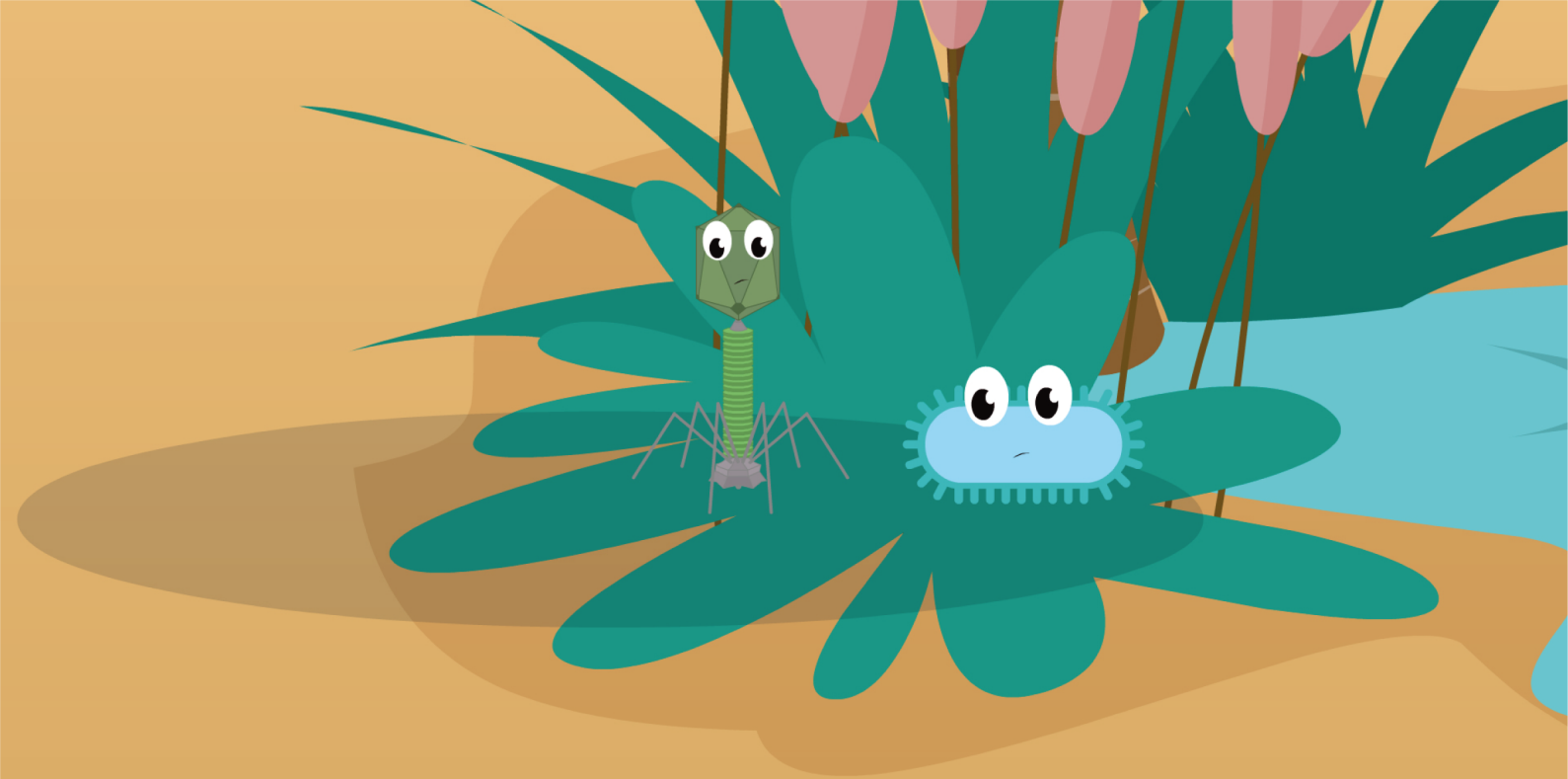
Phage Fred goes looking in the desert. Perhaps there is a friend for Fred. In the desert are camels, palm trees and some grass.



Phage Fred finds Betty the bacterium on the grass. "Hi Bettie, would you like to be my friend?"



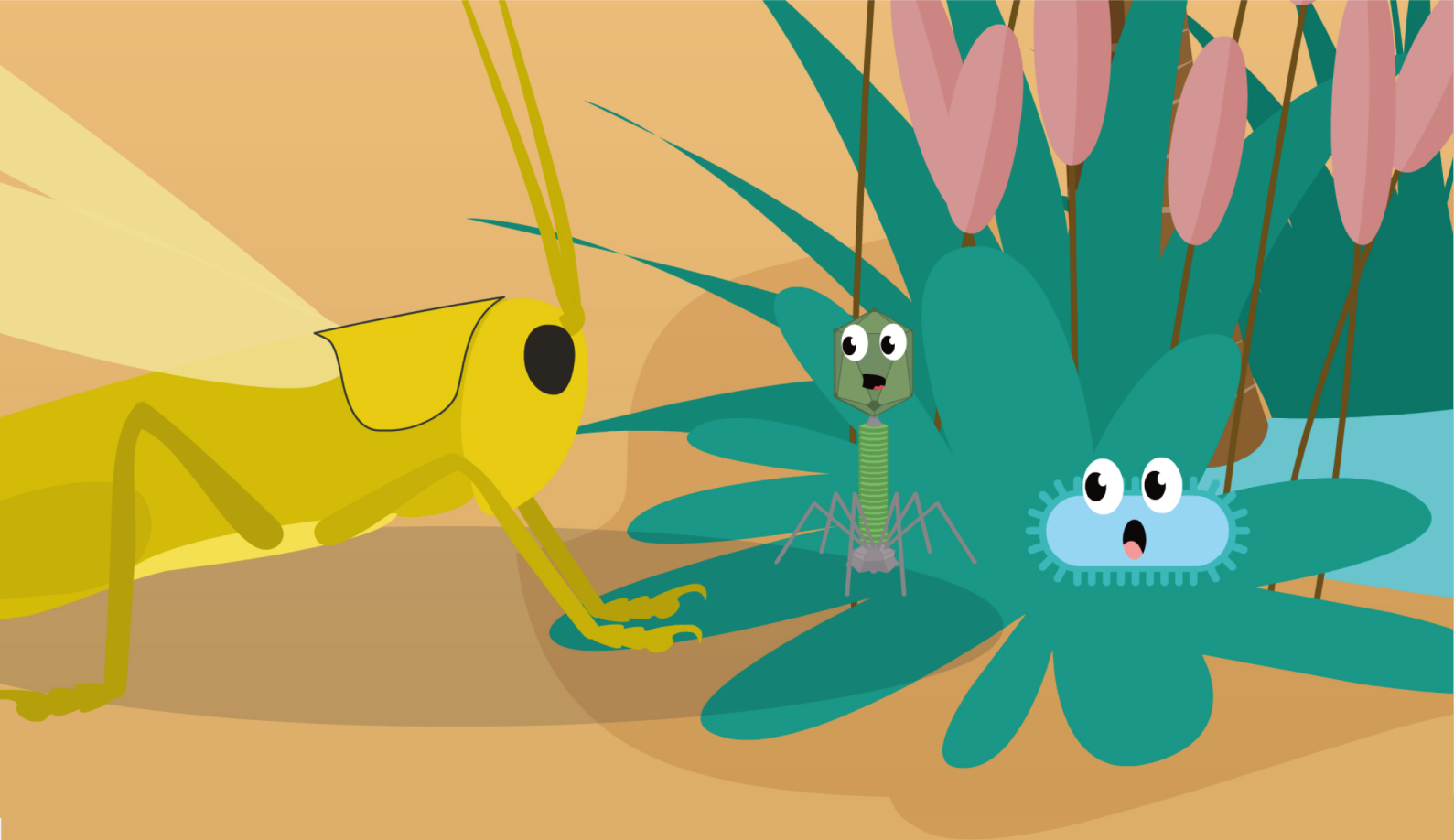
Fred hugs Bettie. "Oh no, I can't give you a hug either!"
says Fred.

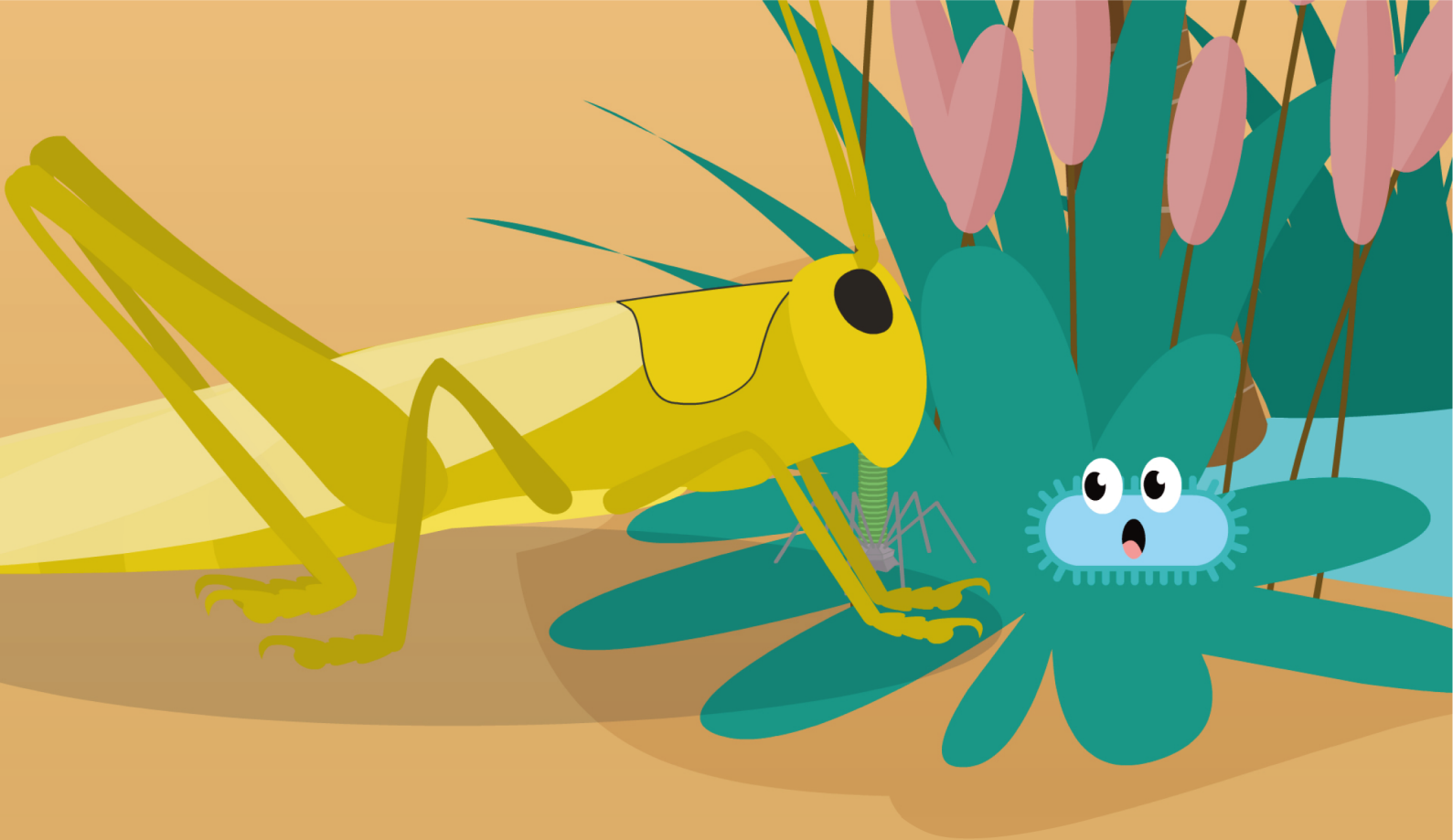


Oh no, what is coming?



It is a hungry locust! Locusts like to eat grass and other plants.





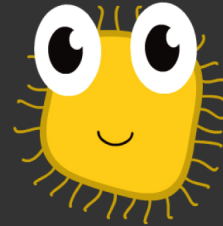
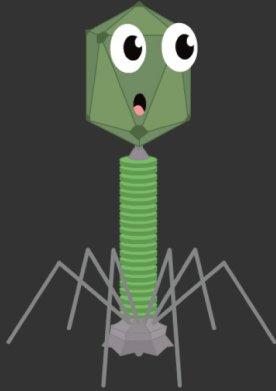
Oh no! Phage Fred has been eaten!



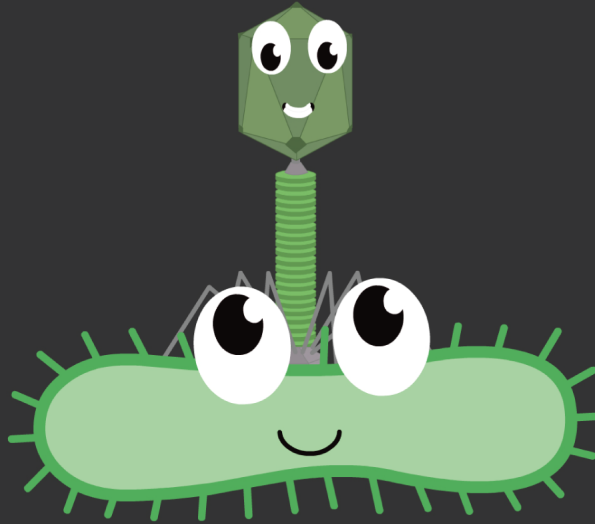
It is pitch black. Phage Fred is afraid and does not know where he is. Poor Fred.



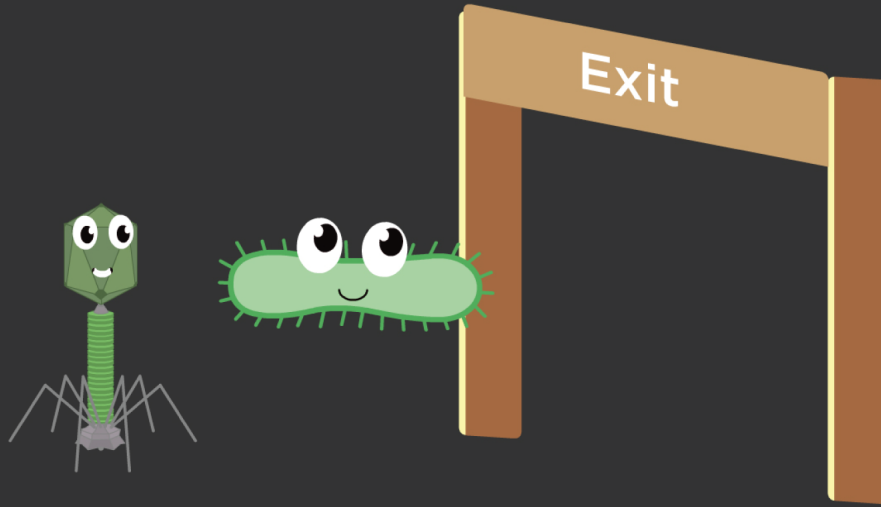
Once Phage Fred looks closer, Fred sees that he is in the stomach of the locust. Huh, what does he see?



There are lots of different bacteria. Is Fred's friend among them?



Bas the bacterium is happy to see Fred. Do Bas and Fred match? Fred hugs Bas, his legs fit perfectly around Bas. "Shall we play together?" Bas asks.



Bacterium Bas and Phage Fred together find their way out
the locust.



They play together and live happily ever after.

Creative content done by TU Delft iGEM team of 2020: PHOCUS

Illustrations done by Albert Animation

With thanks to our partners, particularly De Bink for printing our book.
Thanks to them we can reach multiple schools the old-fashioned way:
through books



Phage Fred is one of the millions of bacteriophages that exist on Earth. The authors of this book are aiming to tackle the locust crisis. One locust is cute, but when thousands of them come together, they are scary and eat our food! The authors are using a bacteriophage, like Phage Fred, to do this. The phage and the bacterium work together to kill the locusts.

This book was written by a passionate team of students that strives to raise awareness on synthetic biology. Fage Fred is an example of this. Did you like our book? We would love to hear how much! Draw a picture of Phage Fred and send it to us!

