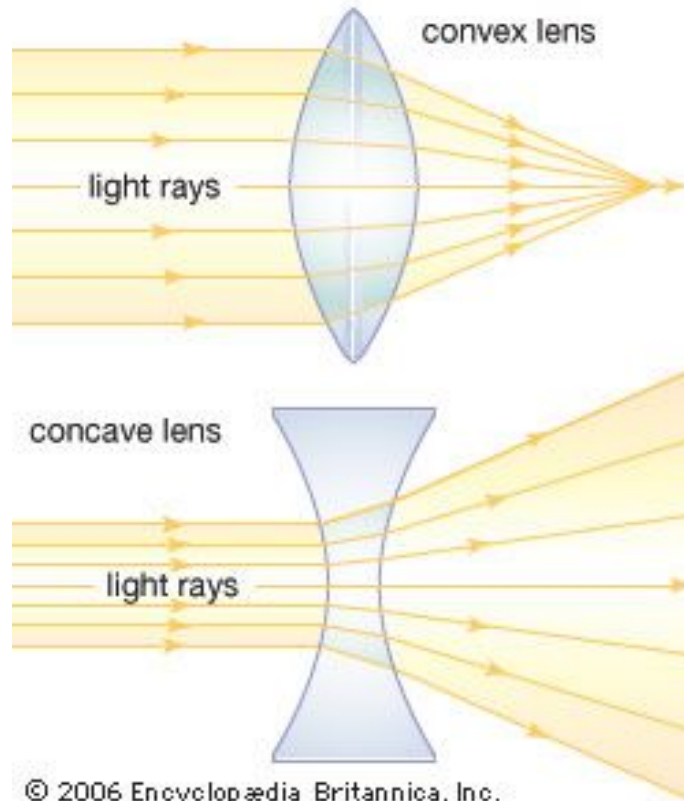


Lenses and telescopes

What do lenses do?



How do scientists use lenses?

How do scientists use lenses?

microscopes

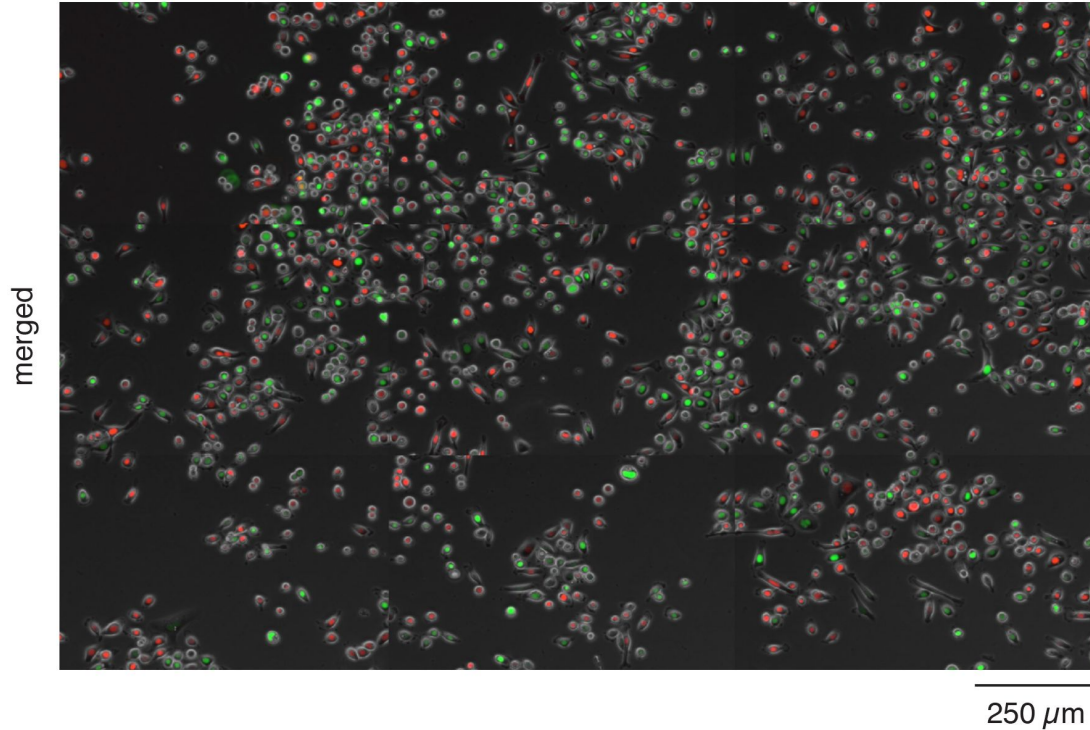
binoculars

telescopes

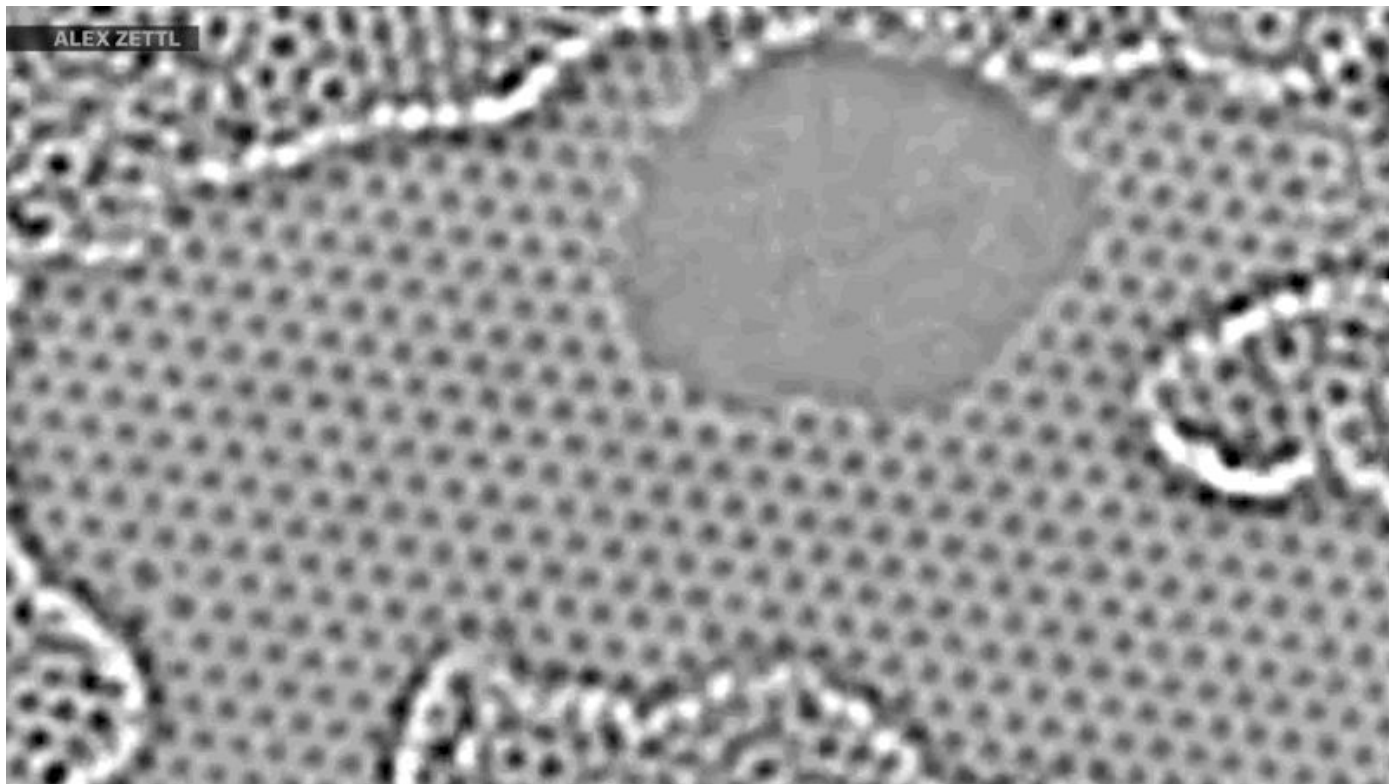
glasses

cameras

We can use lenses to help us see very small things:



ALEX ZETTL



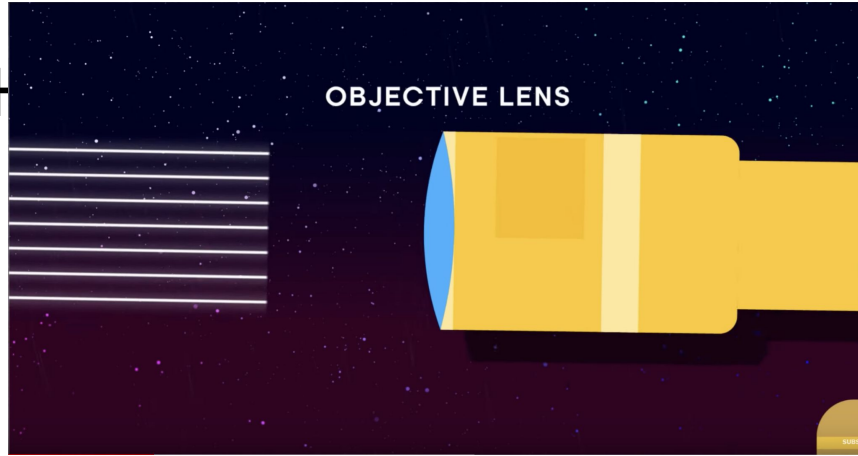
We can use lenses to create images:

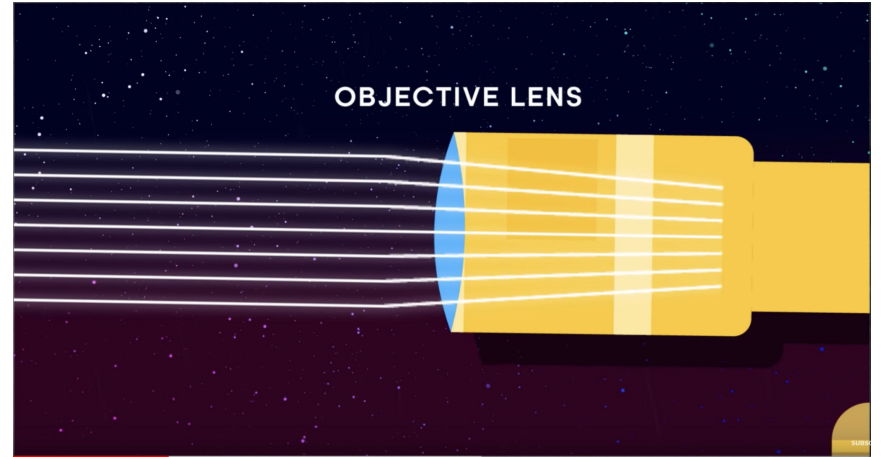
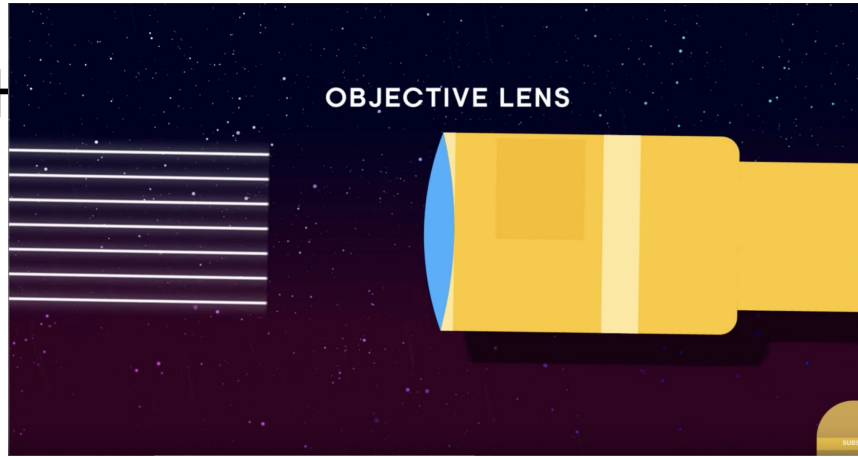


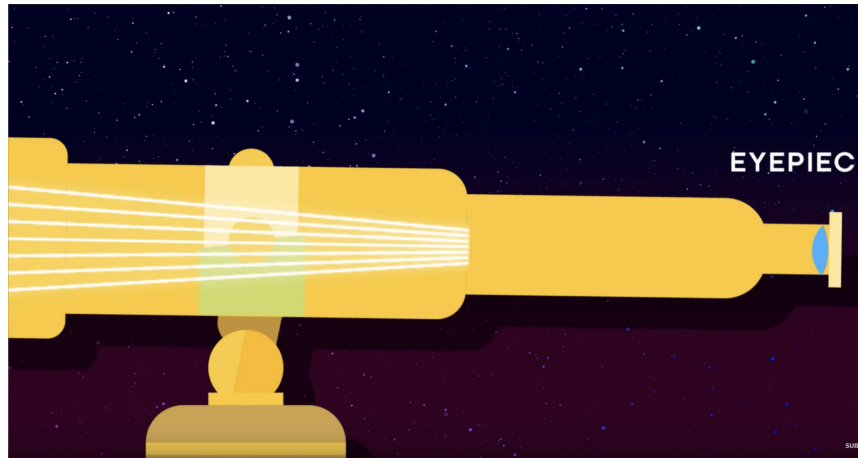
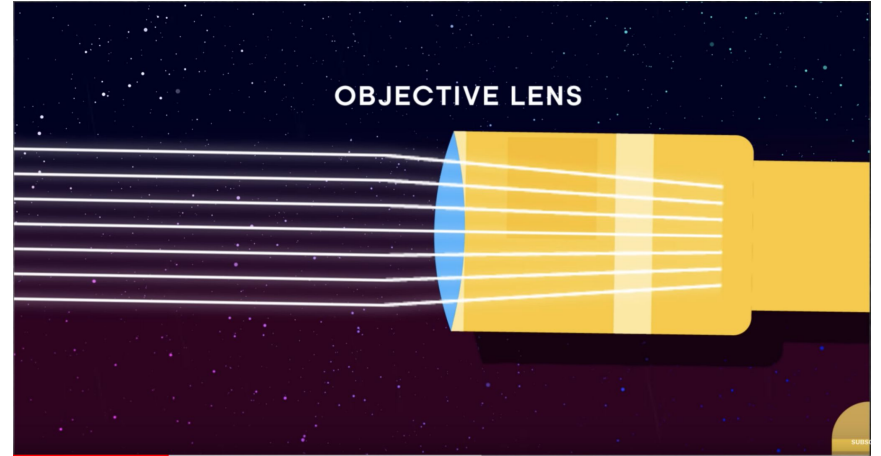
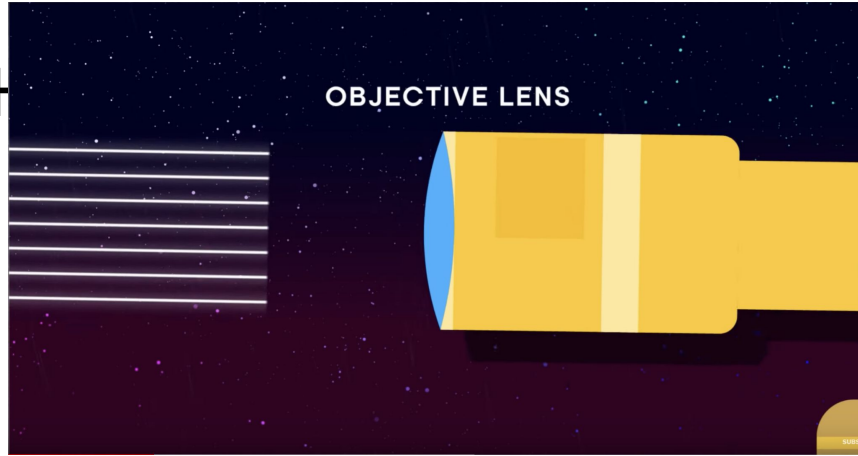
We can use lenses to help us see very far away things!

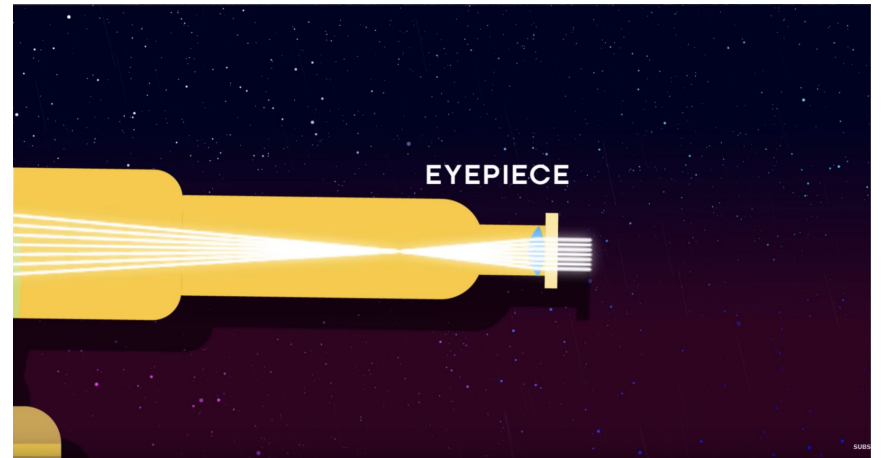
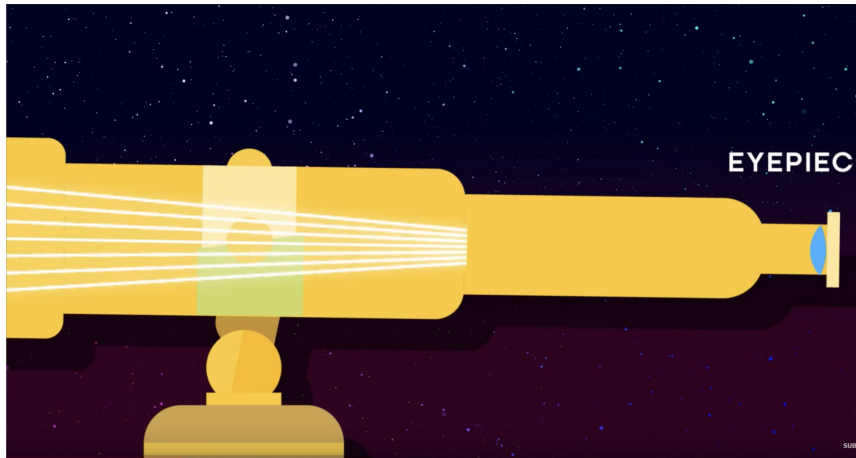
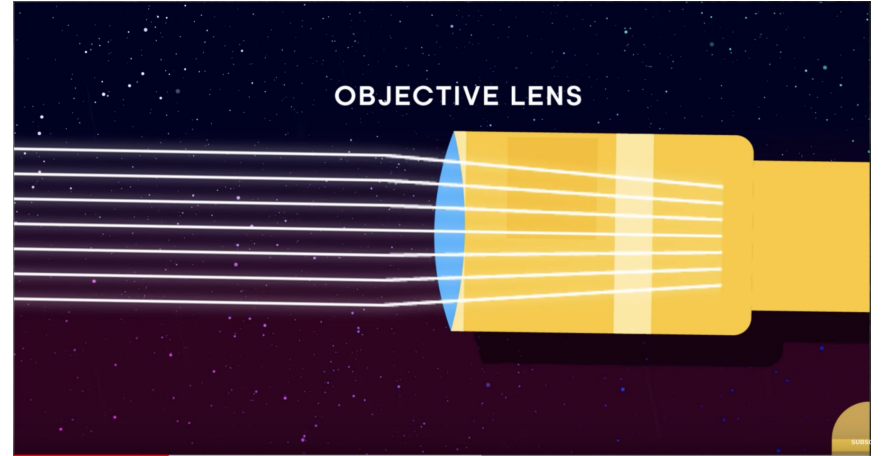
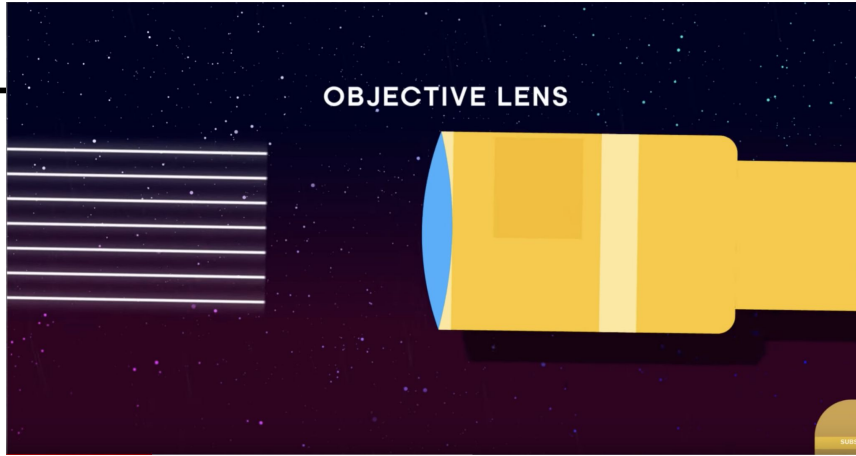


Image from
stevecoleimages/Getty Images









Hubble Space Telescope



James Webb Space Telescope

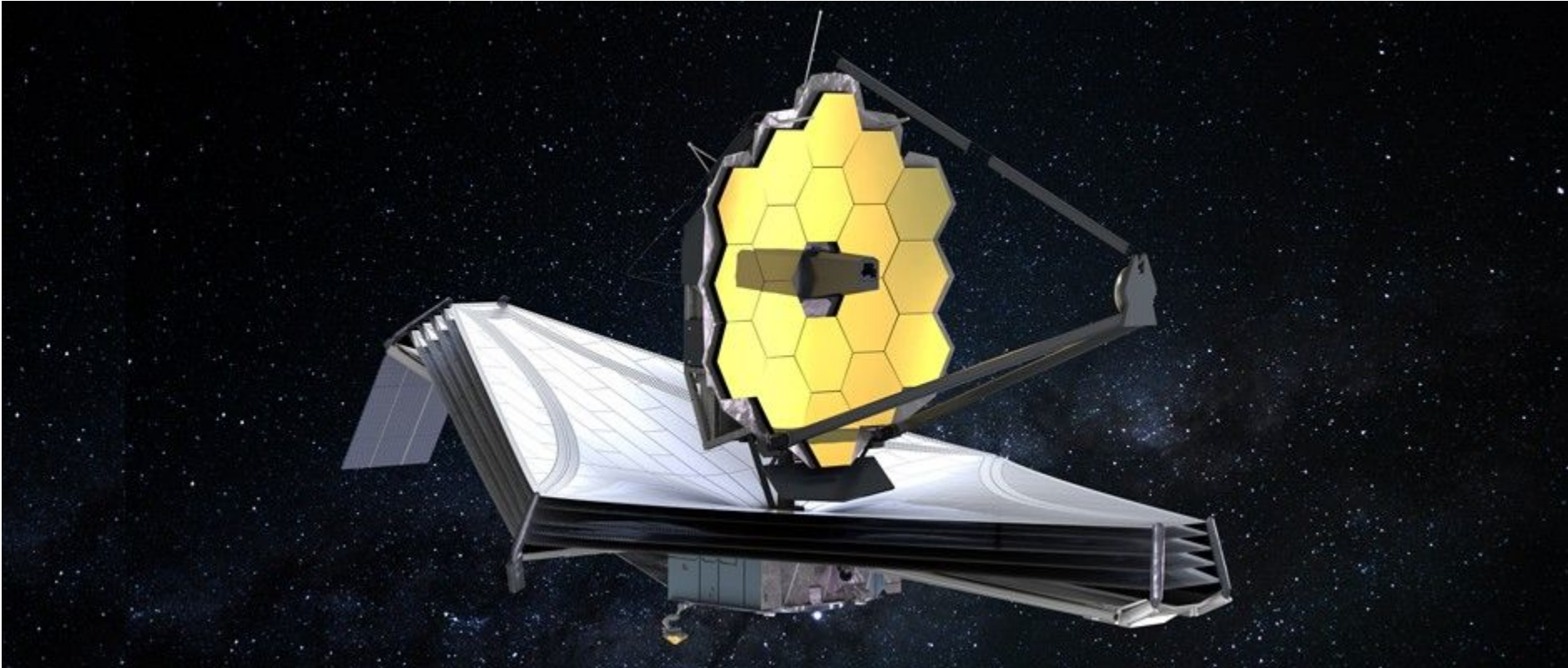
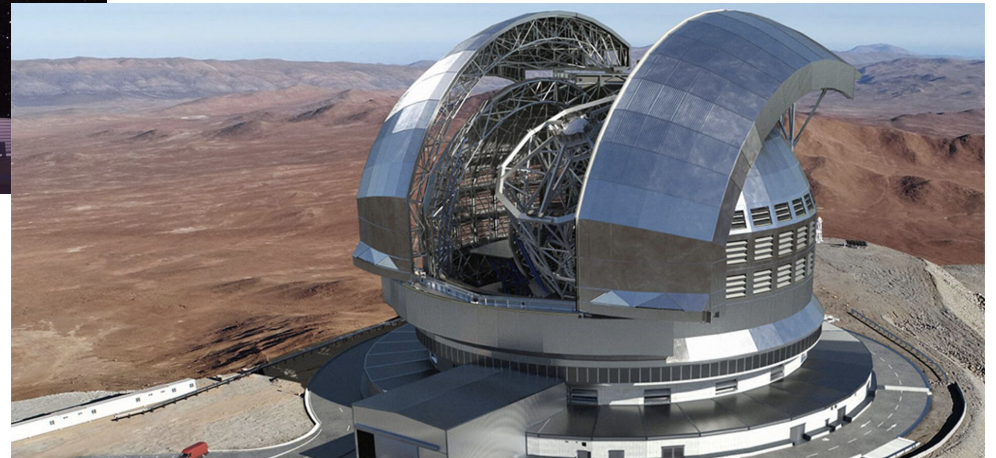


Image from <https://www.sciencefocus.com/space/james-webb-space-telescope/>

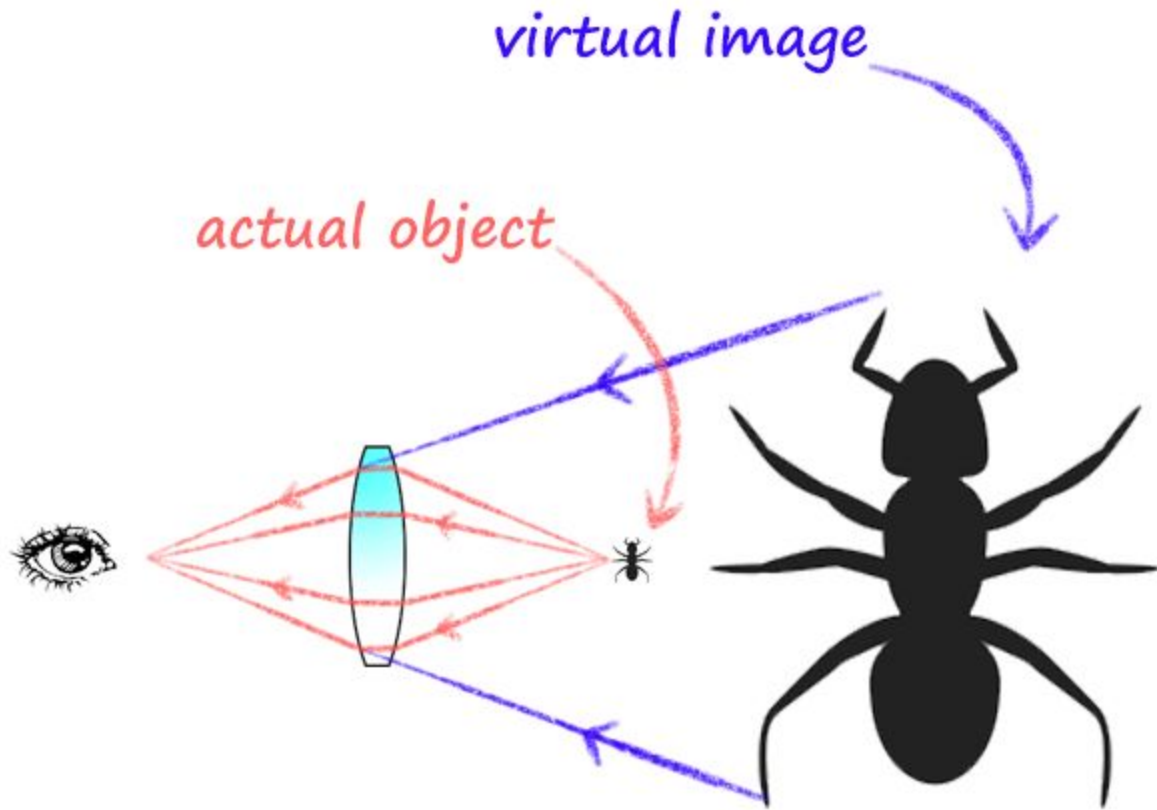
Giant Magellan Telescope and Extremely Large Telescope



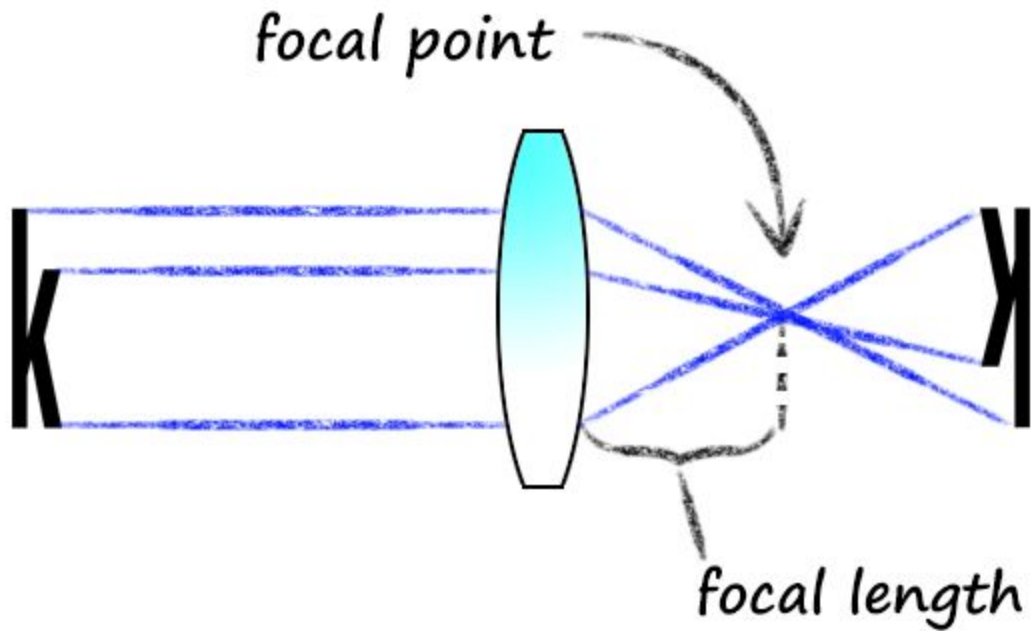
Images from GMT and ESO

for tutors:

Activity 1: Image



Activity 1: Image



Activity 2: Camera



What has this got to do with a camera?

A camera works on exactly the same principle, there is a lens at the front and where the screen would be there is a piece of film which will change chemically when light falls on it. When you change the focus setting it changes the distance between the lens and the film.

A digital camera works on the same principle but instead of a piece of film it has a CCD, an electronic sensor which is read by a small computer in the camera.

text and image from:

<https://www.thenakedscientists.com/get-naked/experiments/images-magnifying-glass>

Activity 3: Telescope

