

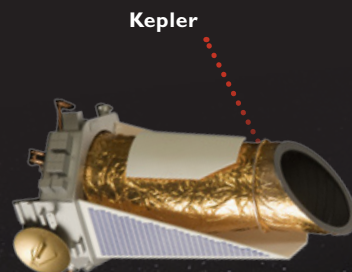


Exoplanets

In 5 billion years' time, the Sun will begin to die. NO Sun = NO life! Don't panic. Astronomers have discovered many other stars that also have planets, just like the Sun does. These planets are known as exoplanets. Time to move!

Kepler space telescope

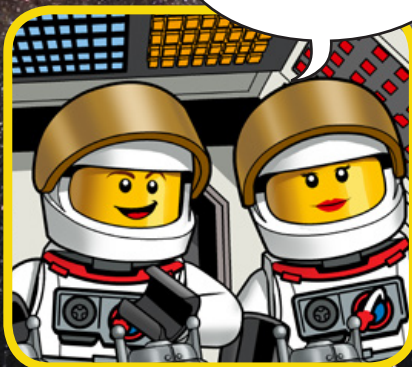
Kepler, a huge telescope, stares at the same patch of sky all the time. It has spotted over 1,000 exoplanets.



There could be 160 billion exoplanets out there in the Milky Way.



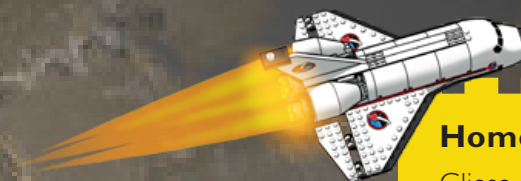
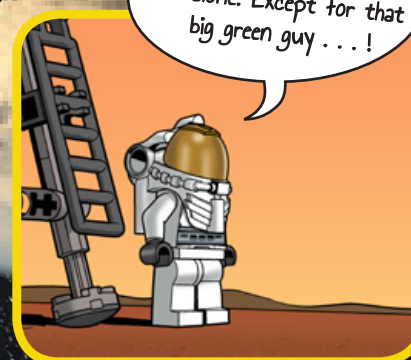
I can't wait to see our new home! Are we there yet?



Do you think we'll find water? Or tiny traces of life?



Nope, looks like we're all alone. Except for that big green guy . . . !

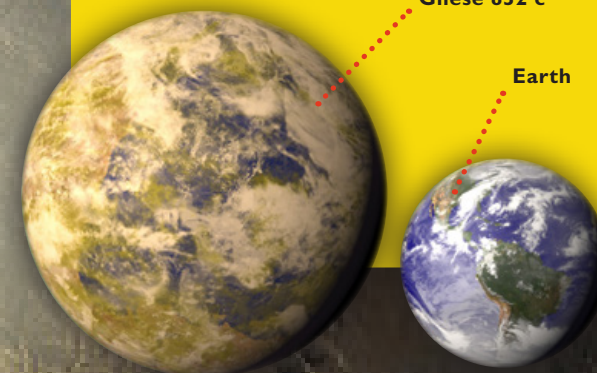


Home away from home

Gliese 832 c has a similar temperature to Earth's, though its sun is not as bright as ours. It could have water on it. BUT, big problem—it would take us 400,000 years to get to it!

Gliese 832 c

Earth



GLIESE 832 C

Kepler is always looking for Earth's twin planet. Gliese 832 c is the planet most similar to Earth that has been found so far.

Build it! Think big about an exoplanet,

then build one that humans could maybe live on!

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There are lots of mega-strange exoplanets that no one would ever want to live on!

An exoplanet's name says
which mission spotted it.
Not catchy!

**OGLE-2005-
BLG-390L b**

You'll need your skates
to get around on this
icy planet. It's the
coldest planet
ever found.
Brrrr.

55 Cancri e

This planet is
thought to be
made of diamonds—
bling! And it's twice
the size of Earth.
Double bling!

Ouch!
This exoplanet
rains rocks!

WASP-12 b

This superhot
exoplanet orbits its
star so closely that
the star is eating it.
It has only 10 million
years left before it's
swallowed whole!

GJ 1214 b

This planet might
be nothing but a
hot, giant ocean.
That's one huge,
scorching hot tub!

PSO J318.5-22

This planet has no
sun! It just drifts around
in space with nowhere
to go. No sunrises
or sunsets—
that's too sad.

TrES-2 b

This planet has no
light at all. That makes it
seriously dark. Nobody
knows why. It just is.



Stargazing

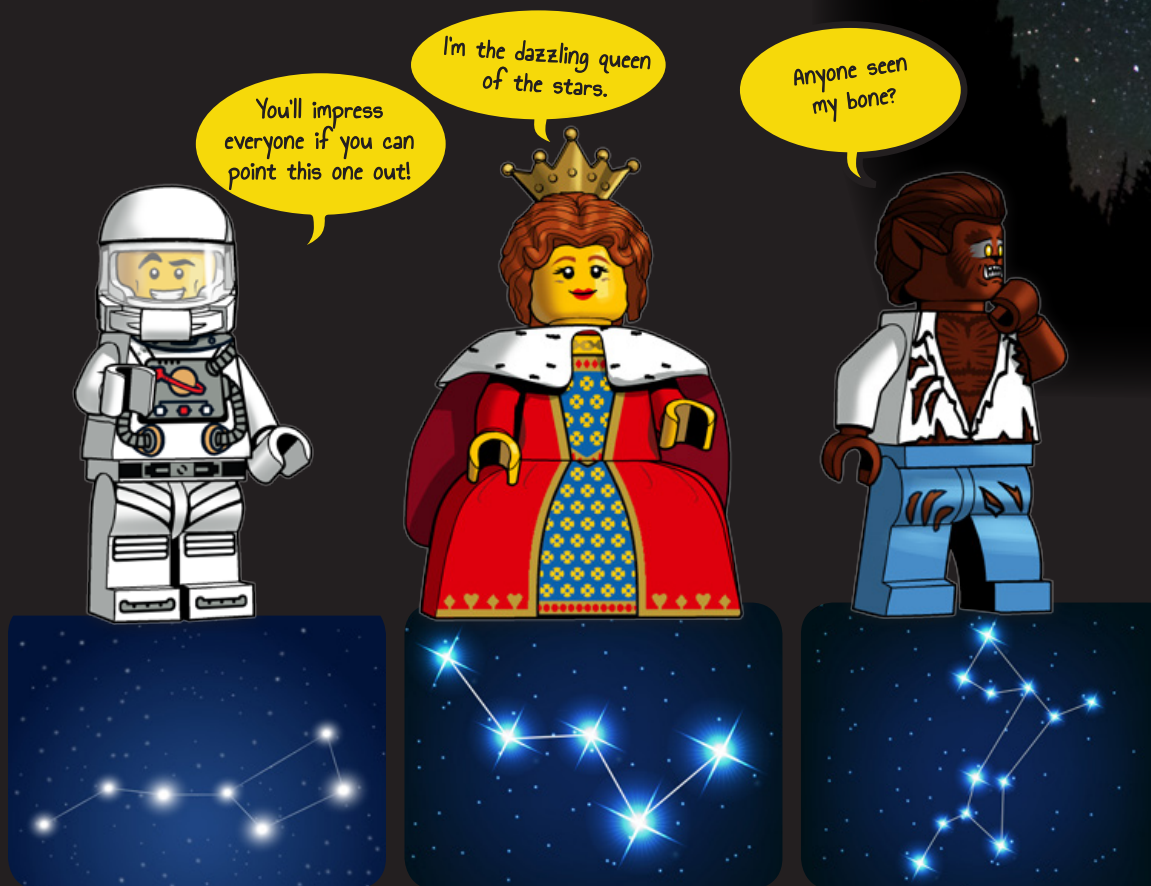
Build it!

One starry night, pick out your own star patterns. Now build a pattern and watch it shine.

Look into the sky on a clear night. It's full of stars. Thousands of years ago, people joined the stars into shapes that they could recognize, like making connect-the-dots drawings. The shapes are called constellations. Here are some to spot.

The Milky Way

All the stars that we can see are in our galaxy, the Milky Way. A galaxy is a vast family of stars that move together.



The Big Dipper

This shape is one of the easiest to spot in the night sky.

Cassiopeia, the queen

This constellation was named after Cassiopeia, a Greek queen.

Canis Major, the dog

Sirius, the brightest star of all, is part of this group of stars.



Pisces, the fish

The fish constellation is huge but quite faint.

Taurus, the bull

10,000-year-old cave paintings show the bull.

Draco, the dragon

Draco wraps itself around the North Star.