
Weird

1
00:00:00,220 --> 00:00:01,960
- [Narrator] Earth is awesome.

2
00:00:01,960 --> 00:00:03,890
What would be even more awesome,

3
00:00:03,890 --> 00:00:07,590
if we found another earth,
or a bunch of earths.

4
00:00:07,590 --> 00:00:10,100
That's one of the things
we're looking for at NASA

5
00:00:10,100 --> 00:00:15,100
as we study exoplanets, planets
outside our solar system.

6
00:00:15,450 --> 00:00:18,630
But maybe searching for a
planet similar to our own,

7
00:00:18,630 --> 00:00:19,920
where conditions might have led

8
00:00:19,920 --> 00:00:22,510
to an entirely unique origin of life,

9
00:00:22,510 --> 00:00:25,870
finally telling us that we're
not alone in the universe,

10
00:00:25,870 --> 00:00:27,530
maybe that's not your thing.

11
00:00:27,530 --> 00:00:28,480
That's cool.

12

00:00:28,480 --> 00:00:29,740
Maybe you're more interested

13
00:00:29,740 --> 00:00:32,910
in just how weird exoplanets can be.

14
00:00:32,910 --> 00:00:35,070
We think there are entire worlds

15
00:00:35,070 --> 00:00:38,500
covered by deep oceans, water worlds.

16
00:00:38,500 --> 00:00:39,770
Not weird enough for you?

17
00:00:39,770 --> 00:00:44,760
Okay. How about planets covered
entirely in oceans of lava?

18
00:00:45,890 --> 00:00:47,660
There are egg-shaped planets,

19
00:00:47,660 --> 00:00:50,470
worlds that orbit so close to their stars

20
00:00:50,470 --> 00:00:53,940
that they're pulled by
gravity into a lopsided shape.

21
00:00:53,940 --> 00:00:57,700
And there are planets where
conditions might be just right

22
00:00:57,700 --> 00:01:00,440
for it to rain things like glass,

23
00:01:00,440 --> 00:01:02,443
or even rubies and sapphires.

24
00:01:03,400 --> 00:01:07,490
There are planets that orbit
pairs and even groups of stars.

25
00:01:07,490 --> 00:01:11,160
Imagine having three or
four suns in the sky!

26
00:01:11,160 --> 00:01:13,140
On the opposite end of the spectrum,

27
00:01:13,140 --> 00:01:16,710
there are the loners, rogue
planets wandering out in space

28
00:01:16,710 --> 00:01:18,950
with no star to call their own.

29
00:01:18,950 --> 00:01:22,140
There are even planets
that orbit dead stars,

30
00:01:22,140 --> 00:01:24,720
stars that exploded long ago

31
00:01:24,720 --> 00:01:28,520
and left behind a rapidly
spinning core called a pulsar.

32
00:01:28,520 --> 00:01:30,220
Some of these pulsar planets

33
00:01:30,220 --> 00:01:32,640
could be among the oldest in our galaxy,

34
00:01:32,640 --> 00:01:35,280
pushing 13 billion years.

35

00:01:35,280 --> 00:01:36,570
Such planets would have witnessed

36
00:01:36,570 --> 00:01:39,030
most of the history of the universe,

37
00:01:39,030 --> 00:01:41,580
sadly, nearly all of it without tacos.

38
00:01:41,580 --> 00:01:44,850
Now, we think that we
haven't found one yet,

39
00:01:44,850 --> 00:01:46,940
that there probably are exoplanets

40
00:01:46,940 --> 00:01:48,880
pretty similar to earth out there.

41
00:01:48,880 --> 00:01:51,570
But in the meantime,
there are absolutely tons