
EARTH
MARS
(NOT TO SCALE)

1
00:00:00,400 --> 00:00:01,034
[■]

2
00:00:01,067 --> 00:00:03,469
Mars in a Minute

3
00:00:03,502 --> 00:00:05,671
How did Mars get such
enormous mountains?

4
00:00:06,271 --> 00:00:07,139
Mount Everest may be the

5
00:00:07,172 --> 00:00:08,741
ultimate climbing
challenge on Earth,

6
00:00:08,774 --> 00:00:11,177
but it has nothing on
the volcanoes of Mars.

7
00:00:11,210 --> 00:00:14,147
Olympus Mons on Mars is
more than twice as tall!

8
00:00:15,014 --> 00:00:16,382
How did these mega-moutains
form?

9
00:00:17,350 --> 00:00:19,185
Early on, Mars had
really active volcanoes,

10
00:00:19,218 --> 00:00:22,288
fed by hot, rising blobs
of rock from deep inside.

11
00:00:23,589 --> 00:00:25,725
But Mars doesn't have tectonic

plates that move over hotspots,

12
00:00:25,758 --> 00:00:26,926
like in Hawaii.

13
00:00:26,959 --> 00:00:28,861
So instead of getting
a chain of volcanoes,

14
00:00:28,894 --> 00:00:30,863
you could keep building
one huge one.

15
00:00:31,730 --> 00:00:32,698
And, with the lower
gravity on Mars,

16
00:00:32,731 --> 00:00:34,901
that magma could be
pushed to great heights.

17
00:00:36,002 --> 00:00:38,037
On any planet, a lot of
what it looks like outside

18
00:00:38,070 --> 00:00:39,872
is tied to what goes on inside.

19
00:00:41,140 --> 00:00:43,142
Studying how heat flows out from
a planet can tell us a lot.

20
00:00:44,243 --> 00:00:45,945
NASA's InSight mission
carries a special probe

21
00:00:45,978 --> 00:00:47,980
to burrow down and
measure heat flow.

22
00:00:49,181 --> 00:00:50,983
That can teach us not just
about how Mars works today,

23
00:00:51,016 --> 00:00:53,319
but how it - and all
rocky planets - form,

24
00:00:53,352 --> 00:00:56,689
including Earth, and even
planets in other solar systems.

25
00:00:57,423 --> 00:00:58,291
NASA Jet Propulsion Laboratory