JOIDES Resolution:

Scientific Ocean Drilling & the Search for Life

1
00:00:00,000 --> 00:00:03,949
thank you

2
00:00:08,210 --> 00:00:06,470
welcome aboard the jordy's resolution a

3
00:00:11,570 --> 00:00:08,220
massive research vessel for scientific

4
00:00:13,549 --> 00:00:11,580
ocean Drilling and a floating Laboratory

5
00:00:15,169 --> 00:00:13,559
did you know that scientists all over

6
00:00:17,269 --> 00:00:15,179
the world are conducting research in

7
00:00:19,010 --> 00:00:17,279
Earth's ocean much of which will help us

8
00:00:20,750 --> 00:00:19,020
better understand the search for life in

9
00:00:22,550 --> 00:00:20,760
outer space

10
00:00:24,230 --> 00:00:22,560
that's right this research is known as

11
00:00:26,570 --> 00:00:24,240
astrobiology and it strives to

12
00:00:28,310 --> 00:00:26,580
understand how life came to be how life

13
00:00:31,070 --> 00:00:28,320

evolved and whether or not life is

14
00:00:32,870 --> 00:00:31,080
elsewhere in the universe

15
00:00:34,250 --> 00:00:32,880
in order to understand the origin of

16
00:00:36,709 --> 00:00:34,260
life on Earth we need to look at the

17
00:00:38,270 --> 00:00:36,719
past luckily the Jody's resolution is

18
00:00:40,790 --> 00:00:38,280
also a time machine

19
00:00:43,010 --> 00:00:40,800
well sort of a lot of Earth's histories

20
00:00:44,869 --> 00:00:43,020
actually stored within ancient rocks and

21
00:00:47,869 --> 00:00:44,879
months which are collected on this ship

22
00:00:49,970 --> 00:00:47,879
in what we call of course by Julian dip

23
00:00:52,190 --> 00:00:49,980
into the ocean floor and examine in this

24
00:00:54,049 --> 00:00:52,200
pores we can travel back in time and

25
00:00:55,910 --> 00:00:54,059
learn much more about what the air used

26
00:00:57,709 --> 00:00:55,920
to be like

27
00:00:59,990 --> 00:00:57,719
we can learn about Earth's ancient

28
00:01:01,970 --> 00:01:00,000
atmospheres for molecules trapped within

29
00:01:04,310 --> 00:01:01,980
the course

30
00:01:06,530 --> 00:01:04,320
about how our planet evolved and Morse

31
00:01:08,690 --> 00:01:06,540
through volcanoes and earthquakes we 've

32
00:01:11,810 --> 00:01:08,700
learned about how life began and evolved

33
00:01:13,609 --> 00:01:11,820
through microfossils

34
00:01:14,990 --> 00:01:13,619
and we can even learn about the limits

35
00:01:16,690 --> 00:01:15,000
of Life by looking for organisms that

36
00:01:20,990 --> 00:01:16,700
live in extreme environments

37
00:01:23,510 --> 00:01:21,000
places are extremely cold hot lack

38
00:01:24,609 --> 00:01:23,520

oxygen or don't rely on the sun to

39
00:01:26,810 --> 00:01:24,619
survive

40
00:01:28,370 --> 00:01:26,820
this can help NASA scientists and

41
00:01:30,230 --> 00:01:28,380
Engineers understand if it's possible

42
00:01:32,050 --> 00:01:30,240
for life to exist on other planets that

43
00:01:34,249 --> 00:01:32,060
might have harsh environments as well

44
00:01:35,990 --> 00:01:34,259
and speaking of other lives in other

45
00:01:38,030 --> 00:01:36,000
worlds that you know one of the

46
00:01:40,429 --> 00:01:38,040
precursors for one of the instruments on

47
00:01:42,590 --> 00:01:40,439
Mars 2020 Rover was tested and developed

48
00:01:44,569 --> 00:01:42,600
right here

49
00:01:46,730 --> 00:01:44,579
the Sherlock instrument is on Mars right

50
00:01:48,770 --> 00:01:46,740
now using its cameras lasers and other

51
00:01:52,490 --> 00:01:48,780
technology to search for chemical clues

52
00:01:55,429 --> 00:01:52,500
that may provide signs of past life

53
00:01:57,350 --> 00:01:55,439
so from below the sea floor to the outer

54
00:02:02,200 --> 00:01:57,360
reaches of space there's inspiration for

55
00:02:16,550 --> 00:02:12,090
[Music]