



# COUNTDOWN TO MARS

1  
00:00:13,153 --> 00:00:18,640

The Perseverance rover mission is really an  
outcome of decades of research and planning

2  
00:00:18,640 --> 00:00:24,000

for astrobiology. It's just really the coming  
together of a lot of work and a lot of thoughts.

3  
00:00:24,000 --> 00:00:30,240

The most exciting part about the Mars Perseverance  
rover is it will look for signs of ancient life

4  
00:00:30,240 --> 00:00:36,640

forms, or microbial life forms, on Mars. We might  
actually have our first opportunity to find the

5  
00:00:36,640 --> 00:00:42,400

best evidence for preserved traces of life. So  
Mars 2020 Perseverance is going to Jezero crater.

6  
00:00:42,400 --> 00:00:47,440

For my research, I'm really excited to see what  
the rover finds. What I'm really excited about,

7  
00:00:47,440 --> 00:00:51,760

with this particular mission, is the fact that  
we're actually going to bring, you know, samples

8  
00:00:51,760 --> 00:00:57,920

back from the surface. These are drill cores we're  
bringing back, and so, we'll be able to look at

9  
00:00:57,920 --> 00:01:04,880

chemistry at depth in those rocks. This will allow  
us to undertake the most sophisticated analyses

10  
00:01:04,880 --> 00:01:10,720

that humans know how to do. I also hope that they  
would be filled with really juicy, organic carbon

11  
00:01:10,720 --> 00:01:16,800  
molecules! A detection of a possible biosignature,\h  
something that's really unambiguously biological\h\h

12  
00:01:16,800 --> 00:01:22,480  
in nature. And as an astrobiologist who\h  
spends my life working on biosignatures,\h\h

13  
00:01:22,480 --> 00:01:27,040  
there could be nothing better. And if it\h  
finds that, that's going to revolutionize\h\h

14  
00:01:27,040 --> 00:01:30,640  
what we think about the present day\h  
habitability of Mars. This is why\h\h

15  
00:01:30,640 --> 00:01:35,120  
we go and explore other worlds; to find\h  
what's out there that we can't even imagine\h\h

16  
00:01:35,120 --> 00:01:40,320  
based on our experiences here on Earth. My\h  
mantra on this comes from Carl Sagan who said,\h\h

17  
00:01:40,320 --> 00:01:46,160  
that "if it's just us, it seems like an awfully\h  
big waste of space." Perseverance just really\h\h

18  
00:01:46,160 --> 00:01:51,600  
shows how if you get a diverse group of very\h  
creative people together, you can solve problems\h\h