



Article Guide: Can SpaceX's BFR send the first humans to Mars?

<http://scienceovereverything.com/2017/10/17/bfr/>

As you read each paragraph:

- Vocabulary – Box vocabulary words or words that you have not seen before
- Focus Questions – Underline in the text where these questions are as you read

Introduction paragraph:

1. What is the most consequential mission of SpaceX's new rocket, the BFR?

The BFR is one powerful rocket

2. Compare and contrast the Falcon 9 rocket with the BFR

	Falcon 9	BFR
Type of engine used		
Number of engines		
Thrust (in number of cars)		

3. Why is all the extra thrust from the BFR needed?

How do you get to Mars?

4. How many stages are there in the BFR? What is the purpose of each part of the rocket?

5. What are the different steps in flight plan of the BFR to Mars?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

6. **Predict:** Why is a booster rocket unnecessary when returning from Mars?

Big Effing Challenges

7. Why is it so important the BFR is 100% reusable?

8. What are some challenges with building the BFR? Are there other, unseen challenges that you think engineers may run into?

9. Why could financing the BFR prove to be challenging?

Why is this so important?

10. How could the BFR be beneficial to scientists?

11. What other benefits could the come from developing the BFR?

Discussion

Would you be interested in being one of the first passengers on the BFR to start a colony on Mars? Would you be able to live in a spaceship for 80 days? What sort of features or technology would you want to see put in place to ensure you and your fellow astronauts arrive safely?

Elon Musk says that humans must become an interplanetary species to ensure our long-term survival. Do you agree? Do you think that we should be exploring the Solar System or should we focus our efforts on making sure that Earth is habitable and sustainable?

Vocabulary Guide

Newton	
Rocket	
Orbit	
Payload	
Satellite	
Booster	
Thrust	