**S9 Topic 8 People in Space**

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| **History of Space Exploration** |

Using the internet and information on pg. 420 – 428, answer the following questions:

1. What must be overcome before a spacecraft can be launched into space?

2. Fill out the following Space Timeline Table:

|  |  |  |
| --- | --- | --- |
| **Event/Person** | **Name** | **Date** |
| **First unmanned satellite in space** |  |  |
| **1st human in space** |  |  |
| **1st American in space** |  |  |
| **1st American to make a full orbital flight** |  |  |
| **1st man on the moon** |  |  |
| **Spacecraft that carried 1st humans to the moon** |  |  |

3. What was the 1st International Space Mission called, and what was its significance?

4. The Soviets and the Americans solved the problem of providing their astronauts with oxygen
 when they were in space in different ways. Fill in the following Table to explain the 2
 different solutions:

|  |  |  |  |
| --- | --- | --- | --- |
| **Country** | **Oxygen Solution** | **Advantages** | **Disadvantages** |
| US |  |  |  |
| Soviet Union |  |  |  |

5. What did the Americans design in the 1970s that was a reusable spacecraft?

6. Describe the 1st shuttle mission in 1981.

7. Name the following shuttle missions and their Canadian astronauts:

|  |  |  |
| --- | --- | --- |
| **Mission Date** | **Mission Name** | **Canadian Astronaut on the Mission** |
| 1984 |  |  |
| 1992 |  |  |

8a. What is the ISS?

8b. Which countries have been involved in the ISS?

8c. How many Canadians have been on the ISS? What are their names and when were
 they on the ISS?

9. What is the Canadarm 2?

10. What is **microgravity**? How is it different than **zero gravity**?

11. Read “Points For” and “Points Against” pg. 427. Think about the Chris Hadfield clips we watched. What is your opinion about sending humans vs. robots into space? What is Chris Hadfield’s opinion on this?

12. A space suit is an amazingly complex system. Using the internet find out how a space suit for a space walk keeps astronauts alive, lets them do the jobs they need to do, and lets them communicate. Provide your information in a Table. Discuss the helmet, arms, legs, and inside systems. Discuss at least 10 of the amazing innovations on a space suit.