

# **The Battle of the Planets**

**VRC MS - Theme It Up 2023**



**Participant: Shuban and Danyal**

**Team: 20785X**

**Team Location: London, United Kingdom**

# The Battle of the Planets

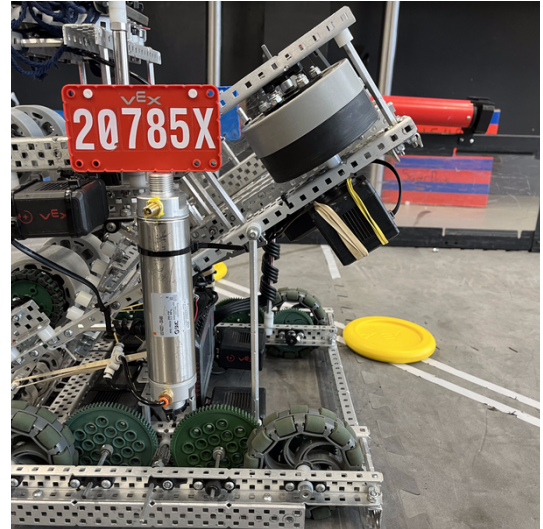
## Back-story:

It is the year 3023 and Mars (*red high goal*) is finally inhabitable. The discovery of this has led to billions of humans now travelling to Mars, in yellow UFOs (*foam discs*), to start a new life. However, planet Earth (*blue high goal*) is witnessing a huge decline in its population and its officials are becoming increasingly concerned about this. In order to save the planet's reputation and keep hold of its legacy, the officials of planet Earth have declared war on Mars in hopes of restoring their population.

## The Game:

As soon as war had been declared, both planets sent two of their best designed robots out into space. The robots only have two minutes before they run out of fuel. With no time to spare and pilots not being ready, the robots were set into autopilot mode while the pilots geared up ready for war. (*This represents the Autonomous Period*)

As soon as the pilots were prepared, they set off, flying the robots around space between the two planets to complete their mission. (*Start of Driver Control Period*)



**A MarsBot**

Their main task was to collect as many UFOs as possible and shoot them back into their planet's orbit. This way, they would have secured the UFO and the opposing planet could no longer get it back. The more UFOs a planet secures, the higher its population would be. A higher population would give that planet more power and authority and they would be declared as superior. However, there were limitations to the robots. The robots were only capable of carrying a maximum of 3 UFOs at once because it would be too heavy otherwise and the robots would not be able to manoeuvre themselves. (*This represents the 3 disc limitation*)

As the war proceeded, it came to the realisation of the EarthBots and MarsBots that some attempted shots would miss the planet's orbit. The UFOs would fly past, making it difficult to collect again. Therefore, officials from both planets decided to set up Border Lines, which acted as a net. The Border Lines were located behind each of the planets which meant that if any shots missed the planet's orbit they would fly past into the nets. Behind planet Earth was the Mars Border Line and behind Mars was the Earth Border Line. This way, if one of the robots missed a shot at their planet's orbit, it would be in the favour of the opposing planet. However, the planets were given a chance to resolve their mistake of inaccuracy. Any UFOs in either of the border nets could be retracted by any of the robots during the war. At the end of the war, any UFOs that remained in either of the border nets would now be owned by that planet. (*This represents the Low Goal and the idea that a missed shot at the high goal scores a point for the opposing team*)

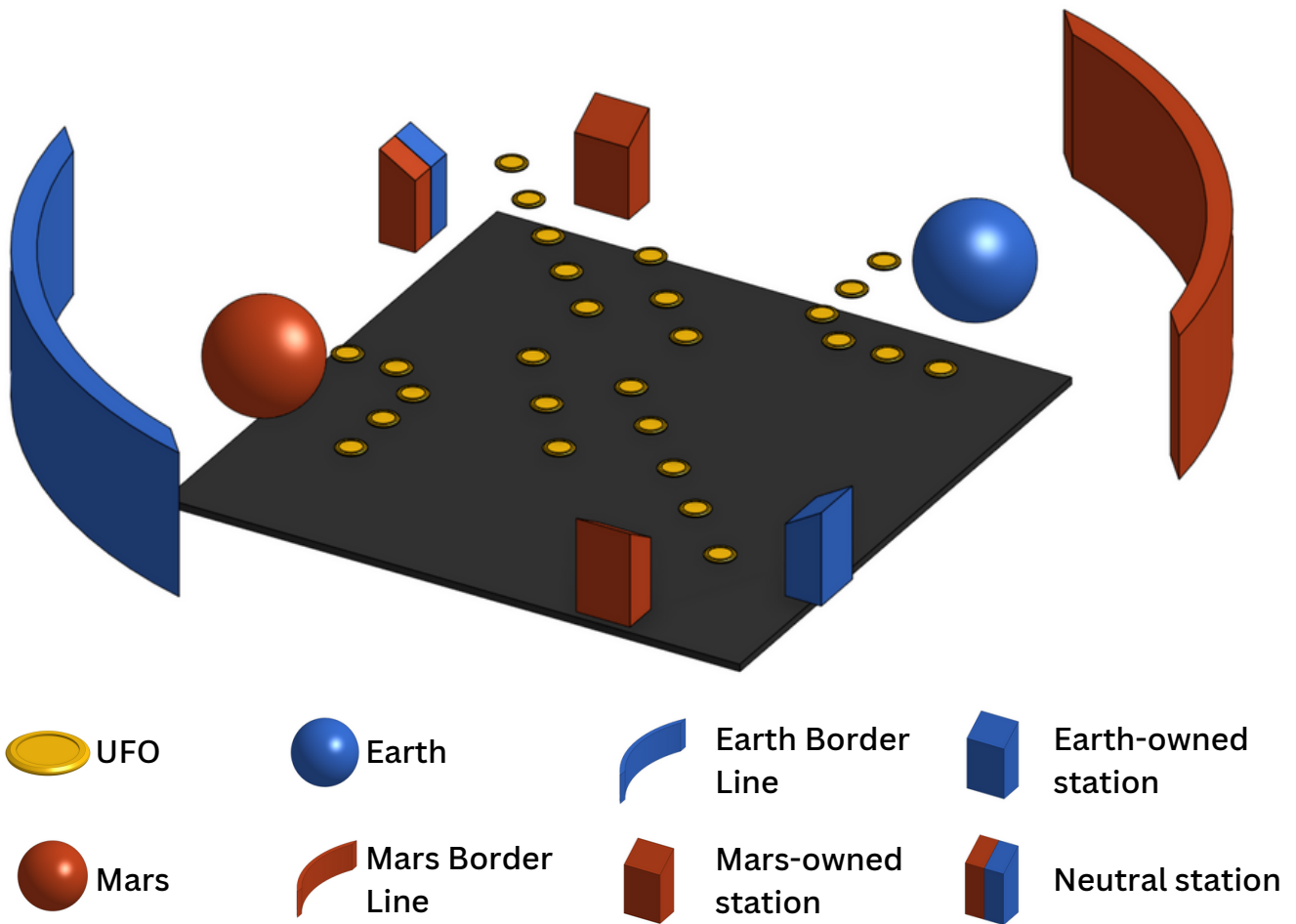


Figure 1: Transformed game field with theme-based elements

The war continued and both the EarthBots and the MarsBots continued to collect and shoot UFOs back into their planet's orbits in hopes of being victorious, prioritising accuracy to ensure that none of the missed UFOs ended up in the opposing planet's border net.

When the war had been declared, officials from both Mars and Earth decided that any UFOs that remained after the war was over, had to be given a home. This was determined through the use of four stations that were placed between the two planets. Each station started off by hovering at a neutral colour. If either of the planets wished to own that station, they had to fly over and press their designated button to change the colour of the station. Red was for Mars and blue for Earth. Once the war was over, whichever planet owned more stations would receive the remaining UFOs. If both planets owned an equal number of stations, the remaining UFOs would be equally distributed. *(This represents the 4 rollers) - See Figure 1 for reference*

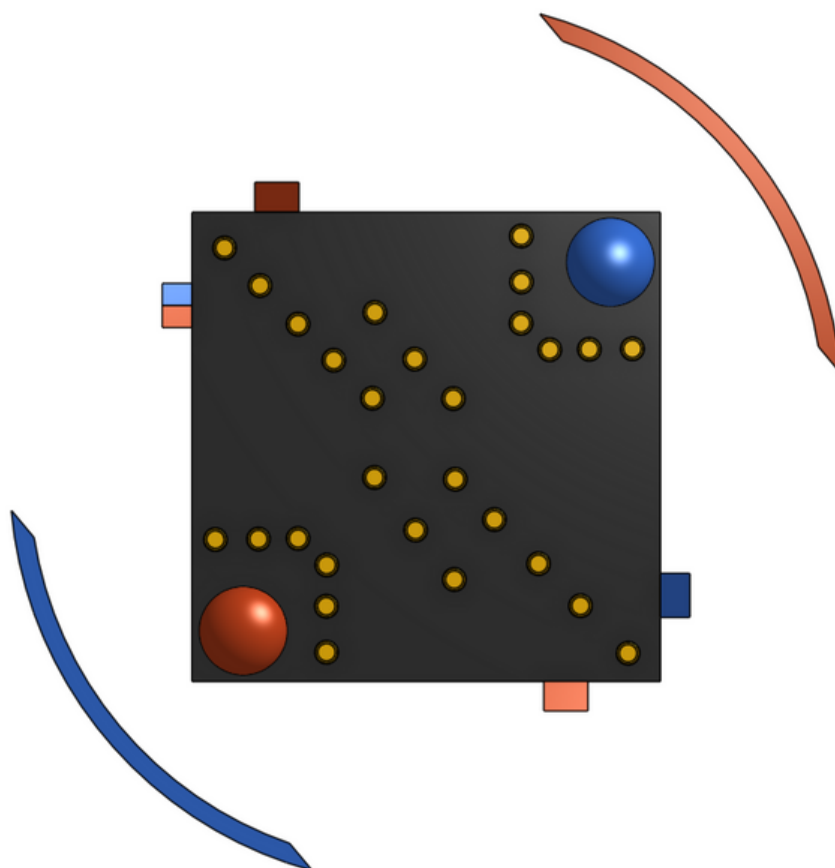
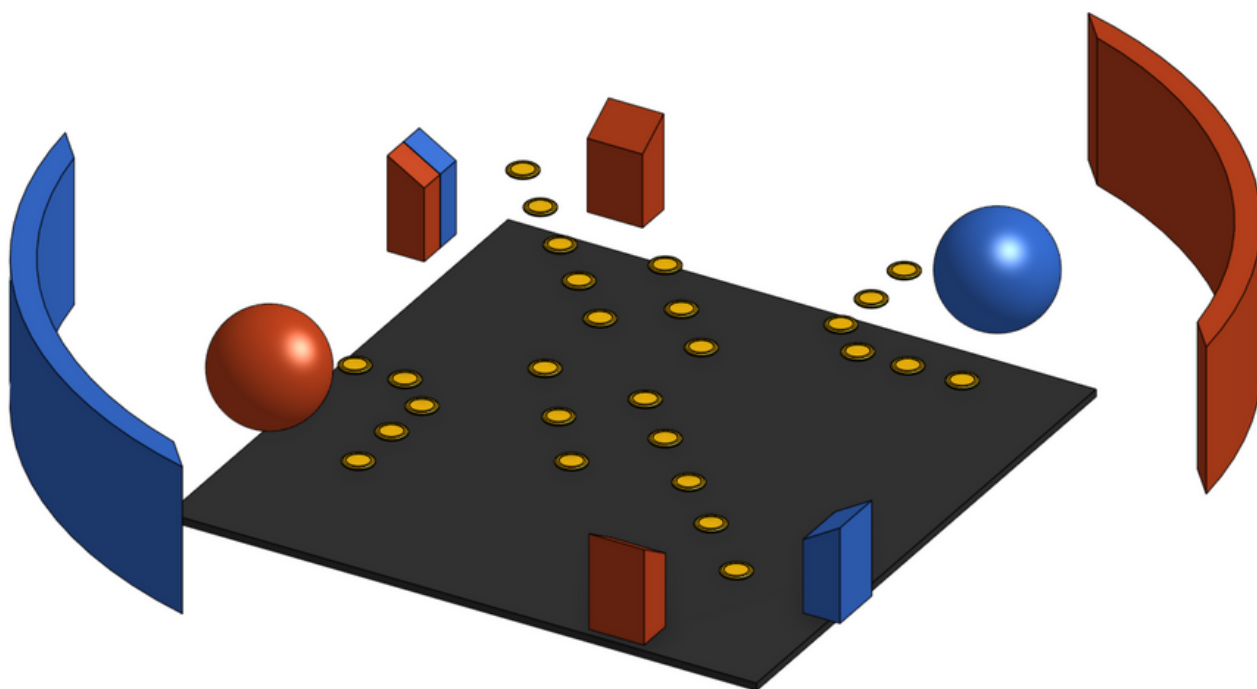
As the war came to an end, all disputes had to be settled once and for all between Earth and Mars. All 4 of the robots were given a chance to expand horizontally in order to capture as much space as possible. Any space captured by either of the EarthBots was now part of planet Earth's territory and any space captured by either of the MarsBots was now part of Mar's territory. If any space was captured by both planets, it was declared as a neutral zone where common rules were formed. *(This represents the horizontal expansion during the last 10 seconds of the game)*

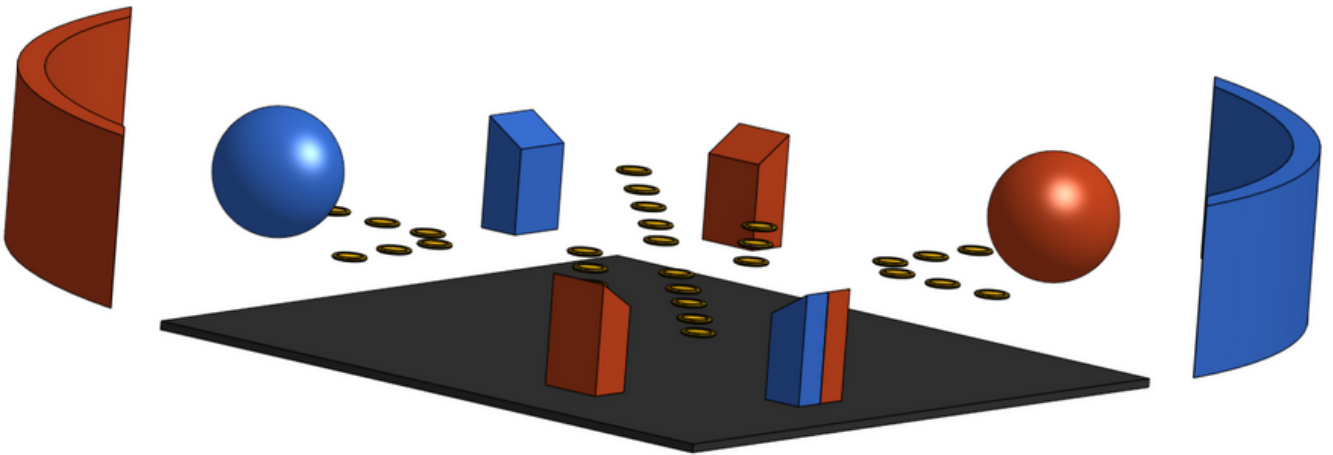
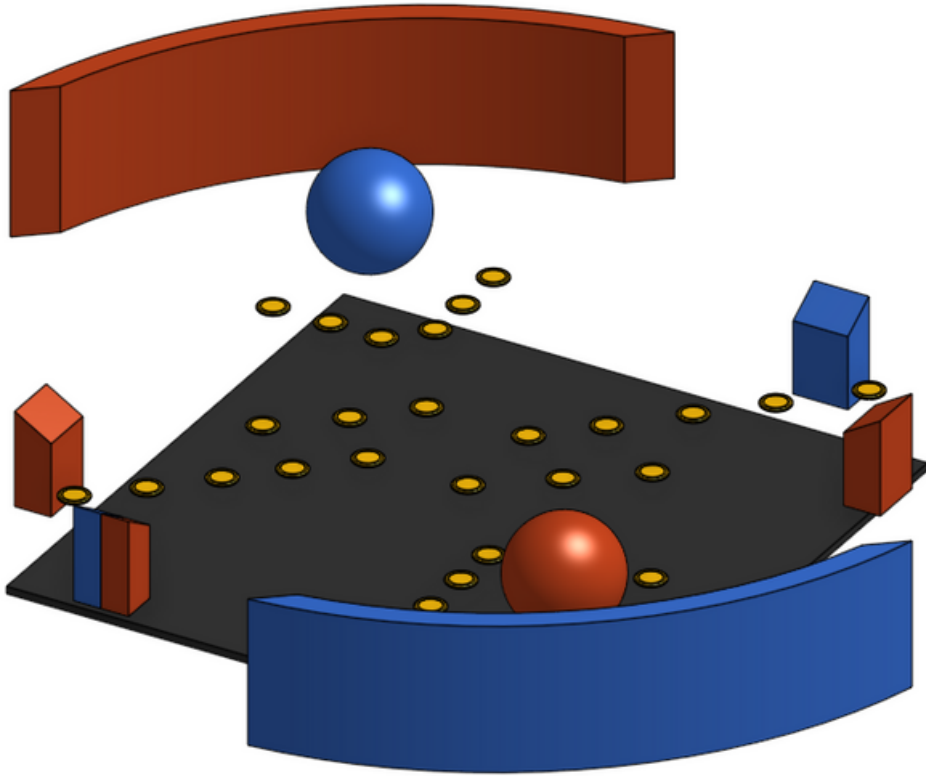
When the two minutes had come to an end, both the MarsBots and the EarthBots ran out of fuel and in turn stopped moving. The winner had to be determined and was done so by counting the population of the planets. Any UFOs that were shot into the planet's orbits counted as a population of 5 people per UFO. Any UFOs that remained in either of the planet's border nets counted as a population of only 1 person per UFO. On top of that, each station that was owned by either planet was worth a population of 10 people per UFO.

Methods of Scoring	Population Count (per UFO)
UFO in orbit	5
UFO in Border Net	1
Owned Station	10

Both Earth and Mars put up a good fight. However, there was only one winner. This planet now had more inhabitants and was more superior. The planet was... Mars!!!

Pictures of the transformed game field:







Project Name: The Battle of the Planets

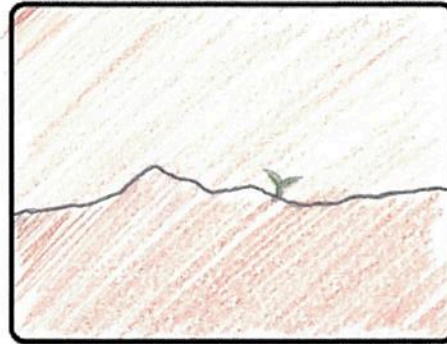
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By: Shuban and Danyal

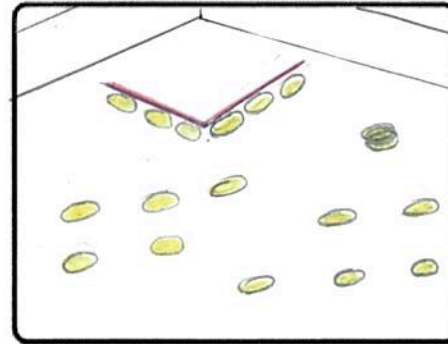
Date: 12 / <sup>Jan</sup> 2023



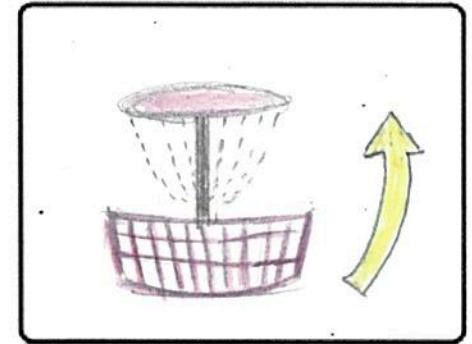
Audio: voice over  
that sets the scene.



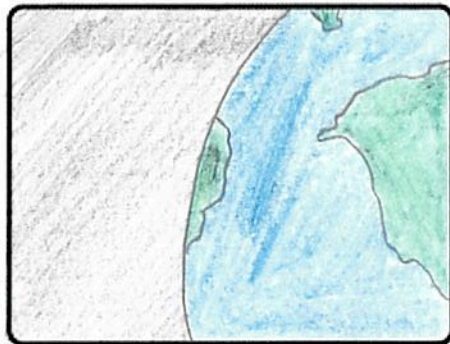
Audio: voiceover that  
explains Mars is  
inhabitable.



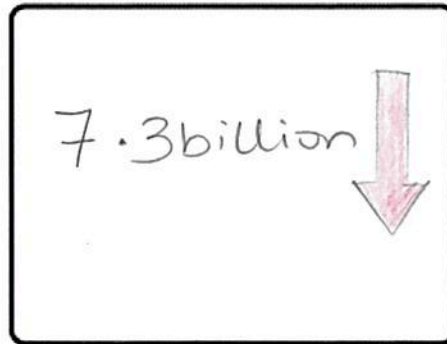
\* Camera pans to  
show a shot of the  
UFOs\*



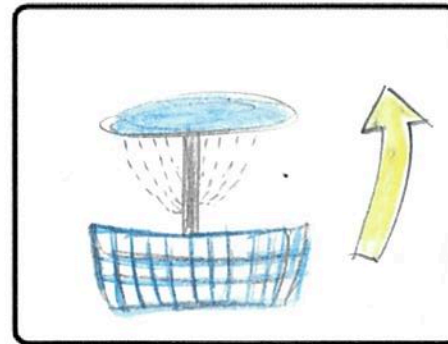
Audio: voiceover  
that explains everyone  
is travelling to Mars.



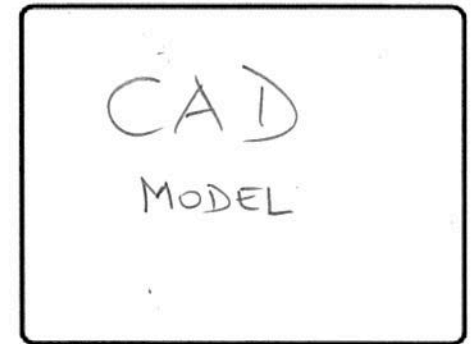
\* Shot of planet  
Earth\*



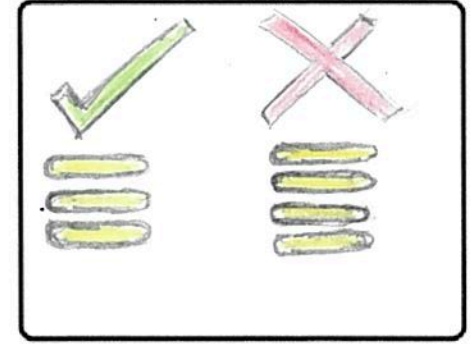
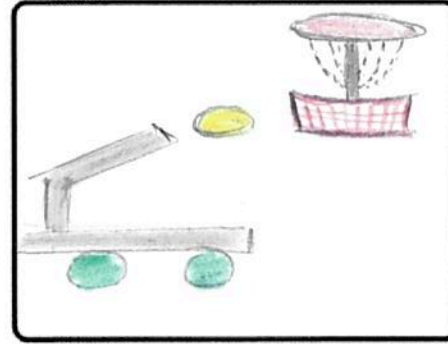
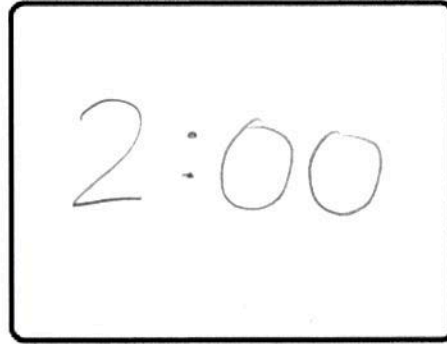
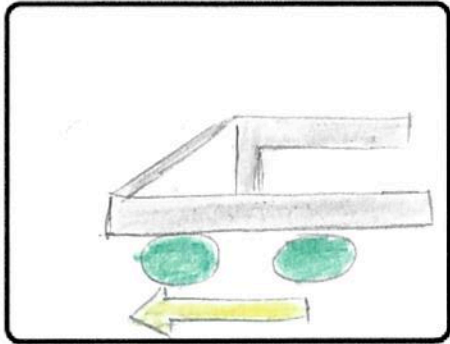
Audio: voice over explain  
ing Earth's population  
decrease.



\* Camera shot of  
blue goal (planet  
Earth)\*



\* Shot displaying  
transformed game  
field\*

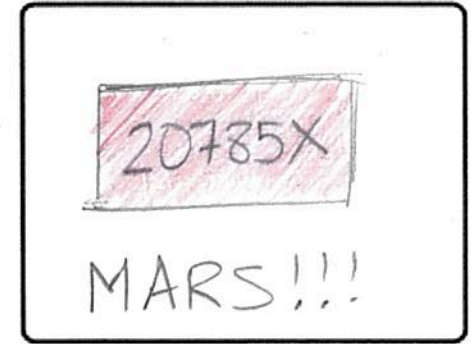
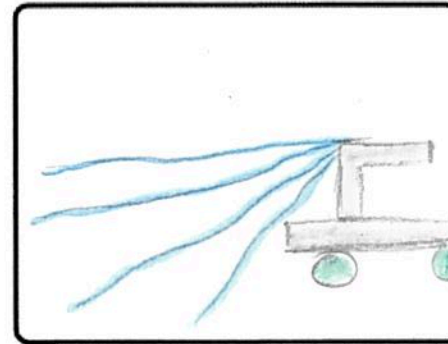
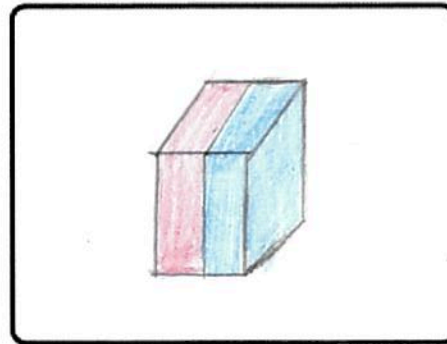
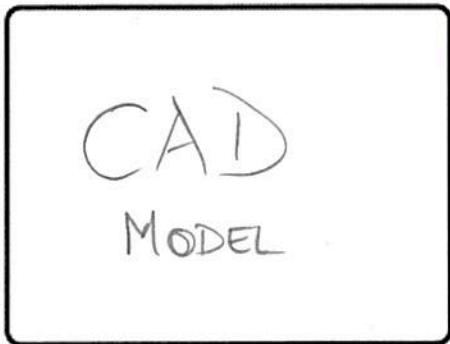


Audio: voiceover that  
introduces the  
robots.

Audio: voiceover  
explaining the 2 min.  
time limit.

\* Multiple shots of  
robot intaking and  
shooting discs\*

Audio: explanation  
of 3 UFO limit.



Audio: voiceover  
introduces border  
lines.

Audio: voice over  
explains the role  
of the 4 stations.

Audio: voice over  
explains expansion  
rule

Audio: Mars declared  
as winner.