Thor, Punctured EVA Suit

Storyboard Title, Sequence, & Description

In this simulated scenario, the participants will respond to a puncture in a EVA suit while on the Martian surface. The individuals must expeditiously apply a fast patch to both themselves and their team mate, in a sequence that conforms with specified time frames and procedures. The scenario will also include external stressors that will challenge the participants to maintain a calm demeanor, exhibit clear and effective communication, and adhere to the required procedures. The ultimate objective of this simulation is to foster the development of the participants' crisis management abilities in the context of extraterrestrial activities.

Assets Available in this Storyboard

- EVA Suit
- Fast Patch
- Slide Hammer
- Radio

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Actions Executable in this Storyboard

- Team briefing and task overview.
- Perform preventative maintenance wearing EVA suit.
- After explosion, must correct communication issue, locate leak in suit, perform self aid, and buddy aid applying fast patch.

- Expected Duration: 4 Minutes.

Frame Descriptions

1 Team briefing: Review of executables.

2 Navigation to maintenance panel.

3 Explosion causing chaos and panic.

4 Self aid to apply fast patch to leak.

5 Buddy aid to apply fast patch to leak.

Thor, Decompression

Storyboard Title, Sequence, & Description

Amid the vast expanse of space, disaster strikes as a medical emergency unfolds onboard the spacecraft. With quick thinking and unwavering focus, a skilled astronaut must navigate the chaotic environment to save the life of an injured crew member. The crew member gasps for air, a collapsed lung becomes apparent. With no time to lose, the astronaut inserts a catheter into the pleural space between the lung and chest wall, creating a crucial pathway for air to escape. This life-saving procedure, known as needle decompression, must be performed in a timely and precise manner to prevent the crew member's condition from worsening.

Assets Available in this Storyboard

- EVA Suit
- First Aid Trauma Kit
- Decompression Needle

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Actions Executable in this Storyboard

- Team briefing and task overview.
- Astronaut in lower bay performing tasks.
- A medical emergency occurs causing an astronaut to have a collapsed lung.
- Task requires quick medical response to perform a needle decompression.

- Expected Duration: 10 Minutes.

Frame Descriptions

1 Team briefing: Review of executables inside of the flight deck.

2 Team has just returned from performing a task when they are encountered with an emergency situation.

3 An astronaut sustains a collapsed lung that requires you to perform a needle decompression in a timely manner.

4 Following the procedure, you perform a health check and update the flight deck on current status of the astronaut.

5 The final scene is dependent upon the success or failure of your medical procedure. Two possible scene scenarios.

Thor, ECLS Failure

Storyboard Title, Sequence, & Description

During a spacecraft's flight, a warning alert is issued for the ECLS system. Teams are then tasked with quickly troubleshooting the issue, utilizing technical expertise and adhering to standard operating procedures.

Assets Available in this Storyboard

- ECLS Dashboard
- Shutoff Valves
- Servers
- Oxygen Generator System

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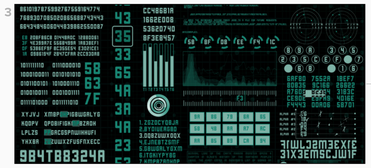

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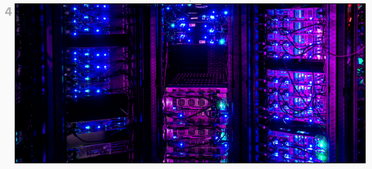

Actions Executable in this Storyboard

Teams experience an ECLS failure while in transit. They must quickly identify the problem, isolate the issues, implement backup systems, troubleshoot the issue, mitigate the impact, and test the system.

Expected Duration: 12 Minutes

Frame Descriptions

1 The team experiences an ECLS failure and immediately begin to troubleshoot the issue.

2 Following SOPs, teams must switchover to the reserve oxygen supply system.

3 Teams must troubleshoot the error and identify a technical issue within the application (API).

4 Following resiliency standards, teams perform a switchover to the secondary server and environment.

5 All systems return to normal values, mitigating the issue.