



FIRST AID FOR THE FIRST MARTIAN

Overview

Book: *The Martian* by Andy Weir

Grades 6-12

Students will be presented with various injuries Mark Watney may have suffered during the large dust storm that left him stranded on Mars. Students will learn how to treat these wounds and use actual first aid equipment to do so.

Standards

Physical Development and Health 22.A.4c	Demonstrate various procedures in injury prevention and emergency care that can be used in the home, workplace, and community. (e.g., first aid, CPR)
CCR.R.1	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
SL.6-12.4	Present claims and finding, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

Objectives

Students will perform basic first aid in staged scenarios.

Students will present the logical steps for treating an injury.

Materials Required

Set of First Aid Injury Cards– separate download on the STEM READ site. Print and cut apart.

Materials so that each student has the items necessary to treat the type of injury on their Injury Card.

For stomach injury from antenna

- Piece of cloth with a medium-sized hole cut into it to mimic the injury
- Thread
- Sewing needle

For knee injury

- Rubbing alcohol
- Gauze
- Medical Tape

For shoulder injury

- A large piece of cloth that can be folded into an arm sling

For sprained ankle

- ACE bandage

For head injury

- Rubbing alcohol
- Gauze
- Medical Tape

For broken finger

- Tongue depressor/craft stick
- Medical tape

Procedure

1. Present students with the following situation.
Oh no! A dust storm has hit you and your crew on the surface of Mars, forcing an immediate evacuation of the planet. During the evacuation, you are struck by an antenna that broke loose. The force of the impact pushes you away from your crew and damages your bio-monitor, leading your crewmates to believe you are dead. Your crew must evacuate, leaving you stranded on Mars. Your first task as a Martian is to get back to your habitat (the Hab) and patch up your injuries.
2. Give each student a First Aid Injury Card.
3. Either separate the materials you need into individual boxes for each injury, or have a large supply of first aid equipment available for students to pick from.
4. Tell students to carefully read their Injury Cards, then come gather the specific supplies that they need to treat the injury.
5. Once students have treated their injuries, use formative assessment through observation to see if the treatment matches the description on the card.

6. Have students gather into groups corresponding to their injuries. Have students discuss the best way to describe the procedure and reasoning behind their treatment.
7. Provide time for groups to present their information to the class. Encourage students to ask questions about the various treatment procedures.

Extensions

1. Additional discussion questions:
 - What are the dangers facing Mark Watney if he does not treat his wounds properly?
 - List other possible injuries Mark may have incurred and how he could have treated them.
 - Why is it so important for Mark to carefully treat his wounds on Mars as opposed to Earth?
 - Explain which one of these injuries would be the worst to have when stuck on Mars, and why.
2. Invite a speaker to come in to demonstrate first aid and CPR.
3. Let students select a different First Aid Injury Card and practice treating the injury.
4. Encourage students to research other first aid and emergency care injuries and treatments, such as stroke, cardiac arrest, overdose, burns, or drowning.

STEM Read and SmartSpace@NIU are part of Northern Illinois University's STEAM Works Initiative.

