

SPACESUIT ENGINEERS

Student Worksheet

Build It!

Students will learn about Spacesuit Engineers that work with NASA to create spacesuits for astronauts.

Materials:

Markers, crayons, or colored pencils.

Instructions:

Your spacesuit must be able to provide/have the following:

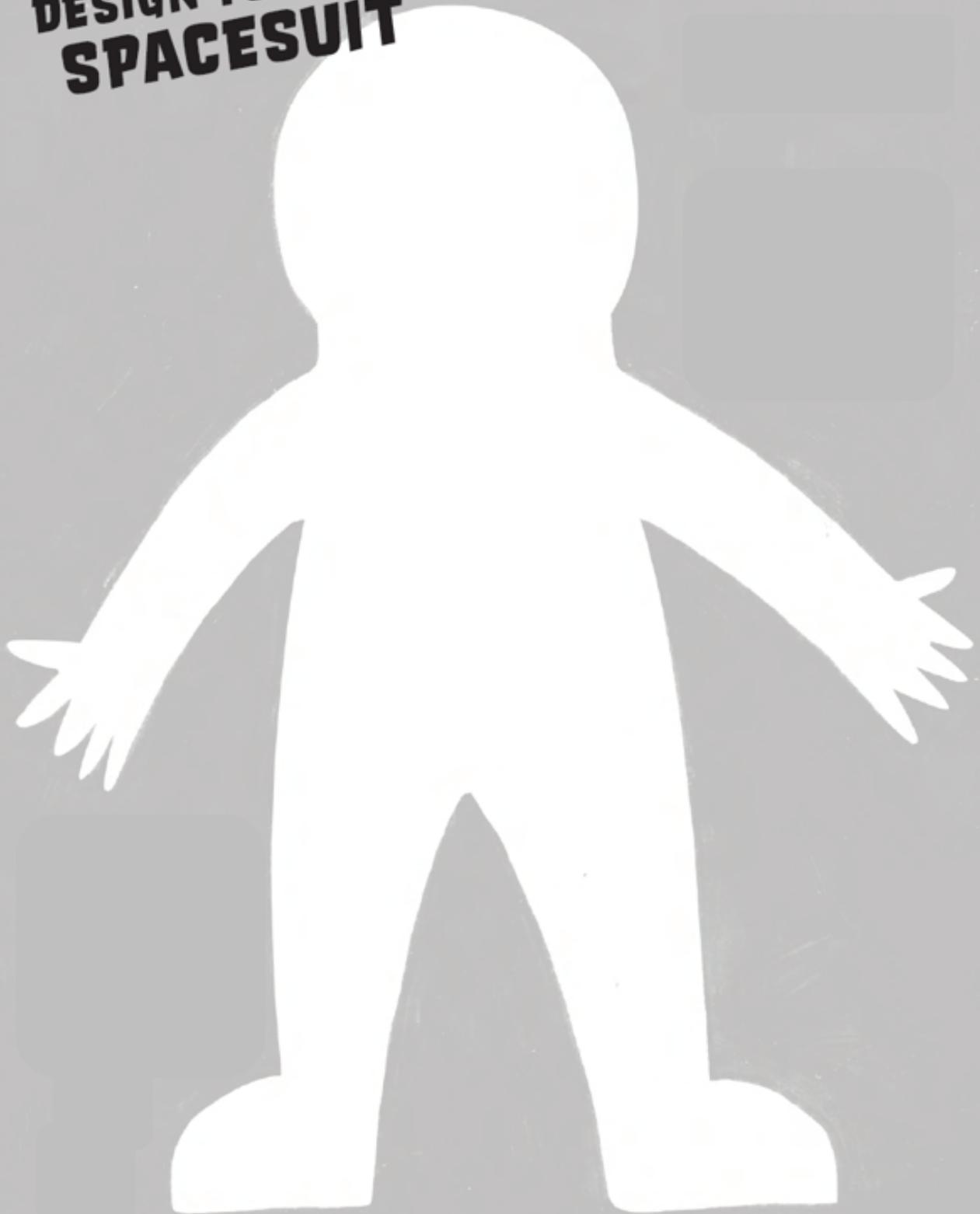
- a. Communications
- b. Oxygen
- c. Air pressure
- d. Flexibility
- e. Logo
- f. Leak prevention
- g. Helmet, gloves, and boots

Begin by designing your spacesuit. It must have the previously listed parts.

Use the image provided to design your spacesuit.



**DESIGN YOUR
SPACESUIT**



SPACESUIT ENGINEERS

Teacher Guide

Design It!:

Students will learn about Spacesuit Engineers that work with NASA to create spacesuits for astronauts. Students will then design their own spacesuits.

Materials:

Markers, crayons, or colored pencils.

Please be sure to share photos or videos of your students completing the activity!

Upload here: <https://www.dropbox.com/request/TvTdwFAJFUyjk1vnC6YT>

Background Information:

A spacesuit is not just a uniform, it's like a personal human-shaped spacecraft that keeps humans alive in space. To survive the hostile environment, humans have to be covered with a protective suit. There are two types of space suits: one for travelling to and from space, and one for doing spacewalks (EVAs). The EVA suits provide the astronaut with air to breathe, keep them warm or cool, protect them from debris flying through space, allow the astronaut to move, and they have rocket boosters! The



suits are heavy on Earth but zero gravity in space makes them feel light. Engineers and technicians must spend lots of time picking the right materials, and then figure out a way to put them together to help keep the astronaut safe. The suits must be powerful but flexible so astronauts can move while using the suit. Spacesuits need to function in a lot of different ways; like maintaining a good temperature for the astronaut while they are wearing the suit, but also protect them from the freezing temperatures of space. The suit must also maintain the right amount of air pressure and oxygen so astronauts can still live and breathe even while in space. Finally, spacesuits also need to provide a way for astronauts to communicate with each other and the scientists back on Earth!