

Moving to Mars

Lesson Plan – Key Stages 3-5

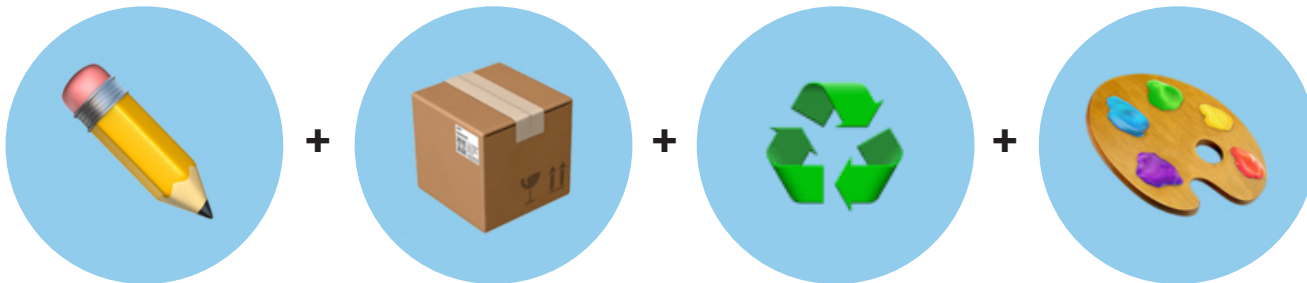
Skills that you'll use

- You will consider the properties of materials and their suitability for particular tasks.
- You will communicate an idea by making a drawing that uses labelling known as annotation.



Materials needed

- Pencil or pen
- Some paper
- Cardboard (reusing delivery boxes are ideal)
- Rubbish or recycling materials
- Sellotape, a stapler or anything that you have available
- Felt tips, colouring pencils or paints if you have them



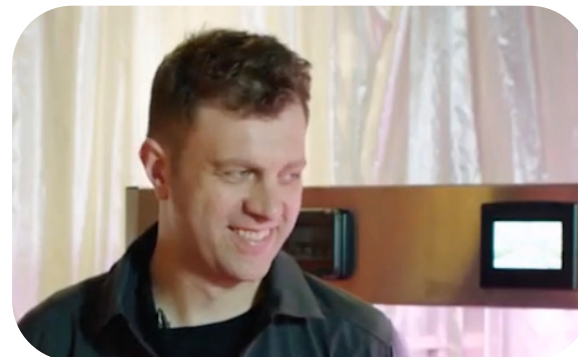
Activity plan

Introduction

(10 mins)

[Xavier De Kestelier](#), Head of Design Technology and Innovation at design company HASSELL, have set out to design the perfect habitat for the first space explorers to Mars as part of NASA's 3D Printed Habitat Challenge. The company came up with the idea of using robots to collect the Martian dust and rock before heating it into liquid magma which can be layered into roofing for a Martian Habitat.

[Watch the video](#) with Xavier De Kestelier.



Activity plan

Discuss

(5-10 mins)

- Would you go to Mars if it was only a one way trip (you don't get to come back)?
- What do you think of HASSELL's Mars habitat design?
- Should humans go to Mars or just stay on Earth? Why?

Research

(10 mins)

A Mars habitat needs to have some familiar objects that remind you of home and keep you entertained in your downtime.

Have a look around your home and collect five objects that you couldn't live without.

Give a reason as to why you would want to take each to Mars. Remember, it takes a lot of fuel to get things into space so the lighter the thing you're taking, the better.



Activity plan

Activity

(20 mins)

- Design your own Mars habitat building. Create a drawing of your perfect Mars habitat and label your drawing with descriptive labels known as annotations. These annotations should list materials that the habitat is made out of, functions of the habitat and what each section will be used for.

Before you start there are some questions that you will need to think about:

- What materials can you use from the planet itself?
 - What materials will you take with you?
 - What shape will you make your habitat building?
 - Which rooms are essential for living?
 - Which rooms are you creating for astronauts and cosmonauts to relax in?
- Optional task: Build your own model of your Martian habitat from cardboard, old cartons and paints. You can use anything that you have to hand.
 - You can give your habitat a name and even name your design company.
 - Share your designs with the Design Museum online using **#DesignFromHome**

