

If you were moving to the moon next week, what 3 objects would you take with you?



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MOON QUIZ - TRUE OR FALSE

Q 1.

The moon is the brightest object in the sky.

MOON QUIZ - TRUE OR FALSE

Q 1.

The moon is the brightest object in the sky.

FALSE! It comes second to the sun!

MOON QUIZ - TRUE OR FALSE

Q 2.

The longest anyone has lived on the moon is 3 days.

MOON QUIZ - TRUE OR FALSE

Q 2.

The longest anyone has lived on the moon is 3 days.

TRUE!

MOON QUIZ - TRUE OR FALSE

Q 3.

It gets as cold as minus 200 degrees at night.

MOON QUIZ - TRUE OR FALSE

Q 3.

It gets as cold as minus 200 degrees at night.

TRUE! It also reaches over 100 degrees during the day!

MOON QUIZ - TRUE OR FALSE

Q 4.

Days and nights last the same amount of time on the moon and earth.

MOON QUIZ - TRUE OR FALSE

Q 4.

Days and nights last the same amount of time on the moon and earth.

FALSE! A day on the moon lasts about 30 earth days!

WHAT SHALL WE USE TO BUILD OUR MOON BASE?

MATERIALS

BRICK
PAPER
RECYCLED PLASTIC
WOOD

THE TASK

In teams, we're going to write down a pro and a con for each of the different building materials.

- Discuss in your teams
- Write your ideas on the show me boards
- Share with the whole group!

THINGS TO CONSIDER

HOW HEAVY WOULD IT BE TO
TRANSPORT FROM EARTH?

HOW SUSTAINABLE IS IT?
(is it good for the environment)

HOW STRONG AND PROTECTIVE
WOULD IT BE?

HOW ABOUT USING A 3D PRINTER?

3D printers work in a similar way to regular 2D printers. Using a special computer programme, you send a 3D image to the printer and it prints it out layer by layer! You can use all kinds of materials, from chocolate, to plastic and even, potentially....moon dust!

The ESA, at the moment, are experimenting with using volcanic soil (which is very very like moon dust) to 3D print buildings.

So, how's a building 3D printed?



Let's build a Moon Base

THINK ABOUT

- Who's going to use the moonbase?
- What will people do there?
- What different sections will you include?

1. SHAPE YOUR BASE
2. MAKE YOUR SAUSAGES
3. COIL YOUR WALLS + ROOF
4. REMEMBER WINDOWS + DOORS



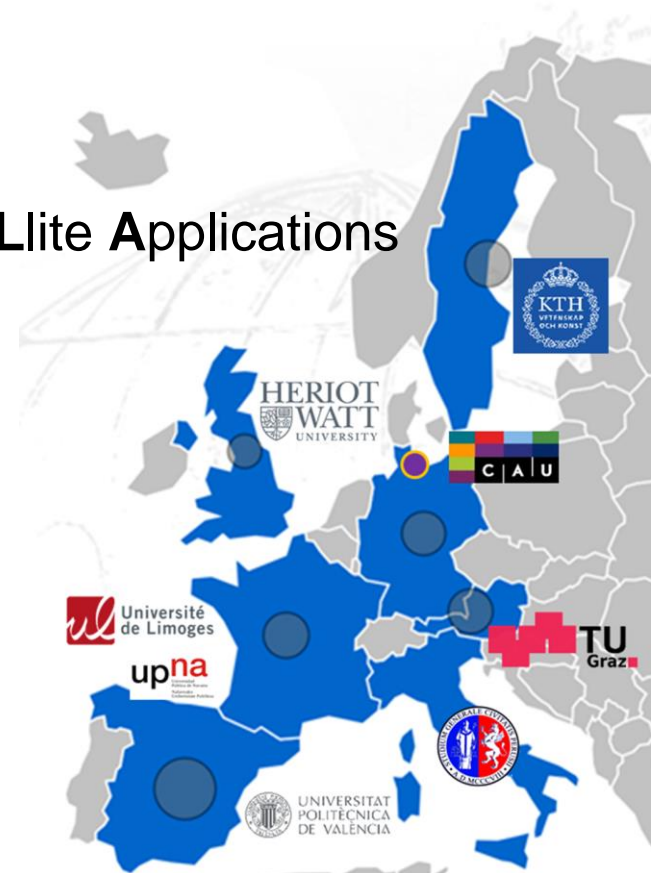


Advanced Technologies for future European SateLite Applications

Find out more : <https://tesla-itn.hw.ac.uk/>

HOW TO SET YOUR MOON BASE IN THE OVEN

1. Preheat the oven to 110 C.
2. Stick the moon base in, on a baking tray.
3. Bake for 15-30 minutes, checking regularly after 15 minutes, that it's not discolouring.



DID YOU KNOW.....3D printing is also being used in satellites?

A man-made satellite is a machine that's sent into space to collect information or as part of a communications system. They're used for things like.....

Carrying internet data



Helping forecast the weather



GPS



Carrying telephone calls



TO LEARN MORE ABOUT HOW 3D PRINTING IS BEING USED IN SPACE, CHECK OUT THIS VIDEO!

3D printing is great because it helps engineers to make parts **smaller** and **lighter** and it **reduces waste!**

This makes launching satellites cheaper because it uses less fuel-which is **also better for the environment.**

It's a win win!