

## FOSTER AND PARTNERS - LUNAR HABITATION

MODULO CLIL - Tecnologie e tecniche di rappresentazione grafica prof. E. Bosin

EXERCISE. Watch the video about a recent work of Foster and Partners: Lunar Base, 3D printing to construct lunar habitation (4.48 minutes)

Look at the sentences below to decide if each sentence is correct or incorrect. If it is correct, mark T=true on the answer sheet. If it is not correct, mark F=false.

- 1 On the moon there isn't protection from meteoroids
- 2 The planned site for the lunar base is at the moon's Northern Pole
- 3 The lunar soil is known as "regolith"
- 4 The robot collects regolith from the moon surface
- 5 The lunar base is designed to house 6 people
- 6 The protection shell is built up with layers of moon dust
- 7 The shell protects the lunar habitation from high temperature fluctuations
- 8 The building process takes about three earth years
- 9 The moon has got an atmosphere
- 10 The temperature range on the moon is between -30°C and +20°C
- 11 There is a disadvantage about the protective shell of the lunar base: it is very heavy
- 12 The printing head is a robotic arm
- 13 The protective shell is made up of a hollow closed cellular structure similar to foam
- 14 Client of the project is ESA (European Space Agency)
- 15 The project was developed by Foster and Partners Architects
- 16 The process aims to demonstrate the potential of 3D printing to create structures close to natural biological systems (bones)
- 17 Conditions on the moon are quite similar to those on earth
- 18 An inflatable dome extends from the centre of the cylinder
- 19 Layers of regolith are built up over the dome by a manual scoop, which is moved by astronauts
- 20 The cylinder inside the lander contains an inflatable dome
- 21 Although the shell is very light, it ensures a good strength
- 22 This project investigates the use of lunar soil as "building matter"
- 23 Material for the construction of the shell is transported by space rockets from the earth to the moon
- 24 Inside the lunar base there is no light from the outside
- 25 This project explores the possibilities of 3D printing to construct lunar habitations
- 26 At the moon's Southern Pole there is almost perpetual sunlight on the horizon
- 27 The shell is made up of a hollow closed cellular structure in order to keep the amount of binding "ink" to a minimum

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