STUDENT WORKSHEET

THE SOCIAL IMPACT OF 3D PRINTING

BACKGROUND

3D printing is becoming more and more affordable and opening up a range of opportunities, both good and bad. In this activity you will find out about different uses of 3D printing. You will then discuss the advantages and disadvantages of 3D printing. Finally, you will weigh up the advantages and disadvantages to make a decision: should 3D printers be available to the public?

WHAT YOU NEED

- A video introducing 3D printing
- Access to the internet to find articles about 3D printing
- 12 small pieces of paper

FIND OUT MORE

The Institution of Engineering and Technology has lots of information and activities you can get involved with.

faraday.theiet.org/index/cfm

ACKNOWLEDGEMENT

BRITISH SCIENCE ASSOCIATION

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Find out more at

www.britishscienceassociation. org/british-science-week

Part 1

What is 3D printing?

3D printing makes three-dimensional objects from layers of material, often plastic. Objects of any shape can be designed with computer programs and made in this way.

Part 2

Possible benefits of 3D printing

In your group, use information from the internet, or information sheets from your teacher, to find out about uses of 3D printing that might benefit people. One example is using 3D printing to make prosthetic body parts.

Write each use on one small piece of paper. Choose one of these uses to describe to the rest of the class, and plan what you will tell them about this use.

Part 3

Possible problems of 3D printing

In your group, use information from the internet, or information sheets from your teacher, to find out about uses of 3D printing that might cause problems. One example is using 3D printing to make plastic guns.

Write each problem on one small piece of paper. Choose one of these uses to describe to the rest of the class, and plan what you will tell them about this use.

Part 4

Should 3D printing be available to the public?

In your group, discuss the benefits and problems of 3D printing. Weigh up these benefits and problems to answer the question Should 3D printers be available to the public? An alternative might be to require people who want 3D printers to get a licence. The printers would then only be sold to people or organisations who would use them wisely.

Plan what to tell the rest of the class about your decision, and why you made it.

Group discussion task   Internet research task

Information to read