Worksheet 1: Introduction to 3D printing

Task 1

Disruptive technologies are ones which shake up the norm. For example, 3D printing makes it possible for people to design and make parts and products without the need for specialist manufacturers or tool makers. In 1962, Phillips introduced the cassette tape which transformed the way people listened to, and recorded music. In 1979 the Sony Walkman used this technology and created the first ever fully portable music system that wasn’t a radio. Even this technology has been disrupted and replaced a number of times since then.

Name **three** technologies which could be described as ‘disruptive’ and describe which existing technologies, products or industries have been affected by it.

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| **No.** | **Name of disruptive technology** | **How is it disruptive?** Describe how it has changed the way we do things. |
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 **Task 2**

The industries listed in the table below all use 3D printing technology to make products, but what exactly do you think they are making?

Work in pair or small groups to discuss and note down what products, parts or components are 3D printed for each of the different areas of manufacturing.

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| **Area of manufacture** | **List what is being 3D printed and from which materials** |
| **Aerospace** |  |
| **Automotive** |  |
| **Architecture** |  |
| **Food** |  |
| **Textiles** |  |
| **Medicine** |   |
| **Jewellery** |  |

**Task 3**

While you watch the videos about industries using 3D printing, list as many common advantages and disadvantages as you can recognise.

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| **Advantages of 3D printing** | **Disadvantages of 3D printing** |
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 **Task 4**

**Which subjects in school might benefit from using 3D print technology?**

3D printing is most commonly associated with D&T in education.

Name **three** other subjects which could use a 3D printer to enhance the learning for pupils and suggest what might be printed?

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| **Subject** | **What could be printed to help understanding?** |
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