Task

Cut out the statements and put them in chronological order.

Answer the following questions.

➢ Which period has seen the greatest development in prosthetic limbs?
➢ Why do you think this is?

Blacksmiths in the Middle Ages sometimes made limbs of iron to replace those lost by knights in battles, jousts and tournaments.

In 2007 research into a motorised ankle joint designed to mimic normal movement was carried out.

A Dutch surgeon, Pieter Verduyn, refined the design of prosthetic legs by adding hinges and a leather cuff in the 1690’s.

A prosthetic foot was designed in 1987 to include a carbon fibre shank and heel spring which enabled the whole foot to flex, absorb and then return energy to the moving limb.

A prosthetic toe made of wood and attached by leather straps was discovered on a 3000 year old Egyptian mummy.

Anaesthetics, developed in the 1840’s, and sterile surgery improved the success and effectiveness of amputation operations. Prosthetic limbs were still made of wood and metal in Victorian times.

Double amputee, Oscar Pistorius qualified for both the Olympic and Paralympic Games held recently in London, using carbon fibre running blades.

In 2006, a man was able to control his prosthetic lower leg by thinking about moving it. Signals from his sensory nerves were relayed to the artificial limb.
Teaching notes and answers

It may be helpful to have a discussion about artificial limbs before or after the sequencing activity.

Class discussion

If a person loses a lower limb (e.g. members of the armed forces, children who have stepped on a land mine, road traffic accidents) what do they want a replacement artificial limb to do?

- give you normal movement, change gait, climb stairs, play sport
- be comfortable to wear, easy to attach, not too heavy, not to rub
- look good/natural
- easy to maintain/hardwearing
- for a child: easy to replace as child grows

A useful video clip is the following from the BBC, ‘Prosthetic limbs give military amputees a new lease of life.’ (Nov 2013, http://www.bbc.co.uk/news/uk-25116869 (link available at the time of publishing)).

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