

## **Tutorial 4: Impersonal forms**

### **Activity one**

#### **Self evaluation – entry test**

- **Complete the sentences with a passive form.**

**Example:**

*In 1911, Amundsen discovered the South Pole.*

→ *In 1911, the South Pole **was discovered** (by Amundsen).*

1. The UK government has sent research teams to the Antarctic since as far back as 1923.  
→ *Since as far back as 1923, research teams .....*
2. It was only in 1943, during World War II, that the government set up the first regular station.  
→ *It was only during World War II that the first regular station .....*
3. The first stations were set up because enemy shipping was using the whaling bases for shelter.  
→ *The first stations were set up because the bases .....*
4. Medical care in the Antarctic is crucial. Not many people know how this is organised.  
→ *It ..... not widely .....*
5. In an emergency, evacuation is always costly and sometimes impossible. Hence BAS (The British Antarctic Survey) have taken measures to avoid it.  
→ *Measures .....*
6. BAS provides a 24 hour telemedicine support service via satellite telephone.  
→ *A 24 hour telemedicine support service .....*
7. Currently, BAS is recruiting medical staff to work in the Antarctic.  
→ *Medical staff .....*
8. Prior to posting, BAS will give specialist training to all selected candidates.  
→ *Specialist training .....*
9. Candidates will have to master unfamiliar techniques such as dentistry, taking and processing X-ray films and plastering<sup>1</sup>.  
→ *Unfamiliar techniques .....*
10. Before applying, potential candidates should realise that contracts of employment may stretch for a period of 33 months.  
→ *It .....*

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1 Plastering: to immobilise a broken bone with gypsum.

## Activity two:

"All generalisations are dangerous, even this one", said Alexandre Dumas fils. We can make them more acceptable by qualifying them. Match the phrases.

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| <ol style="list-style-type: none"> <li>1. It is hardly ever acknowledged that ...</li> <li>2. It is sometimes claimed that ...</li> <li>3. It is commonly thought that ...</li> <li>4. It is seldom admitted that ...</li> <li>5. It is widely believed that ...</li> <li>6. It has often been suggested that ...</li> </ol> | <ol style="list-style-type: none"> <li>a. the rich are too rich and the poor are too poor.</li> <li>b. efficient government is impossible in a democratic society.</li> <li>c. after the age of 55, the accident rate of surgeons increases sharply.</li> <li>d. the stars influence our health.</li> <li>e. incest is not uncommon in Western Europe.</li> <li>f. university examination procedures are unreliable.</li> <li>g. simple people are more honest than intellectuals.</li> </ol> |
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## Activity Three:

### "e-noses" and tuberculosis

The more sophisticated technology becomes, the more it spreads to areas which, in the past, were the sole responsibility of human beings. This text offers just one more example of machine replacing man.

- Reformulate the underlined phrases with passive forms.
- There are 6 phrases written in **bold**. Suggest the missing agent (**by whom** / **by what**).

**It is reported** from Cranfield University that a research team is developing an electronic nose using artificial smell sensors to detect tuberculosis-carrying bacteria. The device **has been modelled** on techniques that were first pioneered by the food production industry to recognise smells in industrial food production.

Underlying this new technology is the principle that certain materials are reactive to the environment. Molecules in vapours, for example, may bind to materials causing changes in fundamental properties, such as electrical conductance. In "e-noses", the most commonly used materials are metal oxides or polymers, the latter being particularly favoured as it is possible to engineer their molecular structure for specific applications with great precision.

In the Cranfield project, an array of polymeric thin film sensors, not more than a few microns thick and responding in ppm (parts per million), **are enclosed** in a hermetically sealed<sup>2</sup> container. A circulation pump ensures the airflow of the previously gasified sample via the inlet and outlet pipes. An electric current is passed through the sensors which transduce the acidic chemical quantities into electrical signals. The unique signature of the gas **can then be identified** after processing the data with pattern recognition software and matching it to a memory bank.

The Cranfield project, which analyses samples of patients' sputum<sup>3</sup> and lung material containing potential TB bacteria, is a significant breakthrough in medical technology. Foremost among its advantages is that it speeds up the detection process considerably, returning results in four hours compared to the two days taken by conventional methods. Besides being faster, the device provides much more comprehensive results; different strains of bacteria present in the sputum spray **can be immediately distinguished**. Up until now, biologists have had no other option but to grow laboratory cultures which then **have to be analysed** under a microscope in a process that may take as much as six weeks.

If the "e-nose" proves successful, in the long term it would constitute a very significant advance in the fight against TB. The disease kills around three million people each year and is on the increase in Europe owing to growing poverty. It is in the UK that the highest number of cases is recorded, with a rate of almost 4,000 per year. This corresponds to a 20% increase over the last 10 years.

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2 Sealed: closed.

3 Sputum: saliva and mucus.