**JAG03 Unit 8 Innovations**

**Task 1 Speaking**

1. **Make a list of five items of technology that you possess which you consider the most useful and practical. If you had to live with only one, which one would it be?**
2. **For each of the five items on your list, note down at least one disadvantage.**

**Task 2 Plankton, pumps and carbon dioxide**

1. **Match the words to the definitions.**
2. pump
3. plankton
4. to excrete
5. pellets
6. algae
7. nutrients
8. carbon dioxide
9. to exploit
10. to disable
11. any substance which plants or animals need in order to live and grow
12. the solid waste produced by some animals
13. to stop something such as machine from working
14. very small plants and animals which float on the surface of the sea and on which other animals feed
15. to use something for advantage
16. a piece of equipment which is used to cause liquid, air or gas to move from one place to another
17. the gas formed when carbon is burned or when people or animals breathe out
18. very simple, usually small plants that grow in water and do not have ordinary leaves, stems or roots
19. to get rid of materials such as solid waste from the body
20. **You are going to hear an extract from a science broadcast about ocean pumps.**

**Look at the picture and read the questions. Then listen to the extract and answer the questions.**

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Salps (<https://www.newsobserver.com/news/local/article231929328.html>)

* What environmental problem(s) are ocean pumps designed to solve?
* How do they work?
1. **Listen again and circle the correct answer.**
2. Ocean pumps could reduce the carbon dioxide in the atmosphere ….
3. three times
4. by almost 3 per cent
5. by about 33 per cent
6. Salps are…
7. a type of plankton
8. a type of barrel
9. a type of algae
10. The pumps bring……. to the surface.
11. salps
12. nutrients
13. algae
14. The pumps could also….
15. increase fish stocks
16. reduce the fish population
17. damage the food chain
18. The ocean pumps could prevent hurricanes by ….. ocean´s temperature.
19. reducing the deeper
20. bringing up the upper
21. bringing down the upper
22. The pumps…
23. have already been tested
24. are being tested
25. are going to be tested

(adapted from Lane, S. *Instant Academic Skills.* CUP, 2010.)

**Task 3 Hedging**

1. **Read the text. What do the underlined words and phrases have in common? Why does the writer use them?**

*The pumps could potentially be used to bring down the temperature of a patch of water… The pumps could be quite effective.*

*The latest research appears to confirm that buildings are responsible for approximately 40% of energy consumption and 35% of EU carbon emissions. It has been suggested that companies should take a lead in adopting policies to reduce those emissions. Such policies might include retrofitting and energy reduction.*

In academic writing you need to make it clear when you are expressing a claim or

opinion as opposed to a fact. The best way of doing this is to distance yourself to some extent from the claim by ´hedging´, i.e. using less direct language in order to make your views more cautious.

1. **Rewrite the sentences as hedged statements, using the words in brackets and making any other changes necessary.**
2. Drought is the major problem in some parts of Sub-Saharan Africa. (appears)
3. Wasps with a greater number of black spots on their heads are more aggressive, according to research. (tend)
4. The report concludes that life expectancy gap between men and women is shortening in Canada. (indicates)
5. Space debris will damage key communication satellites. (might)
6. Changes in the chemical composition of the material occurred as a result of careless handling in the laboratory. (might)
7. There will be a worldwide shortage of rare earth metals in the near future. (likely)
8. **Would you change the formulation of the statements below?**
9. Playing video games causes more aggression, violence and fighting.
10. The pandemic has had a negative effect on people´s mental health.
11. Growth in cattle populations increases methane concentration.
12. Climate change is caused by human activities.