

JAF04 Unit 5 Connection

Task 1 Discussion

Many things can have an effect on our daily lives. Work in pairs and discuss the impact of two or more of the following phenomena on your lives. Give reasons and examples.

- Transport
- Accommodation
- Technology
- The environment
- Education

Task 2 Cause and effect – searching for connections

Work in pairs. Speculate on how two or more of the following phenomena can be connected using cause and effect relationships. Suggest possible reasons.

1. drug abuse and increasing alcohol consumption among younger people
2. rapidly increasing urban populations
3. social problems such as homelessness
4. more reporting by doctors of cases of depression
5. more students dropping out of school
6. greater awareness of environmental issues
7. an increase in the number of single-person households
8. a widening gap in attainment levels between high-achievers and low-achievers at school

Task 3 Reading

In the following text identify

- a) the human impact on the marine environment
- b) the effect on the rising sea temperatures on the marine environment

Ecological role of disturbance

Various processes operating in the marine ecosystem affect ecological processes and the structure of communities and habitats, such that they are in a continuous process of change. These natural fluctuations form the backdrop against which the relative importance of human activities should be assessed. Almost any human intervention in the marine environment, whether positive (e.g. habitat restoration), or negative (e.g. dumping of waste), leads to some form of ecological disturbance. Pickett and White (1985) defined disturbance as 'any discrete event in time that disrupts ecosystem, community or population structure and changes resources, ... or the physical environment.'

Disturbances act at different scales and frequencies. Changes in sea level, ocean temperature, and water circulation modify habitats and their associated fauna over large areas and usually over long timescales. Natural phenomena such as cyclones and hurricanes have regional impacts on a seasonal basis and affect a wide range of marine habitats to different extents (Hall, 1994). Periodic outbreaks of ecosystem engineering organisms such as starfishes and sea urchins can lead to periods of prolonged habitat modification. Rising sea temperatures may facilitate the proliferation of non-indigenous species, which can alter the existing community assemblage through the process of competition for space and other resources. Human agents of change vary from the direct effects of an oil spill, habitat damage by bottom fishing on the sea bed, to walking across the seashore. Whatever the source of disturbance, it is a fundamental process that contributes to the maintenance of diversity in all ecosystems.

(Kaiser, M. J., et al. *Marine Ecology*. Oxford University Press, 2005)

Task 4 Academic language Cause and Effect (1)

In the text above, identify examples of the language used to express cause and effect relationships.

Now identify the nouns and verbs relating to cause and effect in sentences 1-6.

1. Sea fishing on an industrial scale has led to a considerable transformation of the marine development.
2. The safety of modern wards in hospitals owes much to early pioneers in hygiene such as Lister.
3. The financial collapse was triggered by a computer failure.
4. Ideas and discoveries from past civilizations such as the Greeks and Sumerians still have a huge impact on our lives today.
5. The main cause of change in the modern world is not technological advances, but human imagination.
6. Human behaviour has contributed most to the changes that we see in the planet today.

Write sentences showing the cause and effect relationships between the phenomena. Use the cause and effect language in brackets.

Example: *natural phenomena / earthquakes / other catastrophes (trigger)*

Natural phenomena such as earthquakes can trigger other catastrophes.

1. a range of marine processes / constantly / marine environment (change)
2. science and medicine / well-being / society (impact)
3. many illnesses / general public / pollution / accidents (cause)
4. a knowledge / marine ecosystems / planet / future generations (save)
5. people's lives / greatly / science and the arts (improve)

Task 5 Academic language Cause and Effect (2)

Compare the sentences below using the word *result* and notice the word class.

One key result of rising house prices is unaffordability. (noun)

Rising house prices is a significant phenomenon. As a result, houses become unaffordable for many people. (adverbial)

The phenomenon of unaffordability may occur as a result of rising house prices. (preposition)

Rising house prices may result in unaffordability. (verb)

Unaffordability may result from rising house prices. (verb)

Now complete the sentences with prepositions *in, of, from*.

1. Headaches may result ___ stress and dehydration.
2. One result ___ improving secondary school education is likely to be greater competition for university places.
3. Sudden adoption of a low-calorie diet may not result ___ weight loss as intended.
4. Arguably this phenomenon results ___ three major causes.

Write at least three sentences containing the phrases *result in, from, as a result* about your area of study.

(Tasks 1-5 adapted from Chazal, E.; McCarter, S. *Oxford EAP. A Course in English for Academic Purposes. Upper-Intermediate*. OUP, 2012)

Task 6 Listening – Doppler Effect

<http://science.discovery.com/video-topics/space-videos/time-doppler-effect.htm>

Watch the video and answer the question.

1. What causes the Doppler effect?
2. What other discoveries did the Doppler effect discovery bring about?

Task 7 Passive Voice

Complete the following sentences using the given verbs. Decide whether each verb should be used in the passive or in active voice. A number of tenses are possible in each case.

base belong depend design estimate happen link rise subject undergo

1. The global incidence of malaria _____ to be nearly 120 million cases each year.
2. Interviewers _____ extensive training prior to the research.
3. 35 years later, the population of the city _____ to 490,000.
4. This analysis _____ on the works of Lenin and Mao.
5. The present study _____ to compare quantitatively the relative effectiveness of these two methods.
6. They argue that global economic development _____ on a strong American economy.
7. Vitamin D deficiency _____ to higher risk of heart disease.
8. The caracal is an animal found in Africa and western Asia which _____ to the cat family.
9. The water temperature rise in the lake _____ at the same time as increased seismic activity in the area.
10. Tiny cracks appeared in the concrete when it _____ to high temperatures.

Task 8 Word formation

Complete the sentences using a noun form of the verbs in brackets, and adding any other words necessary. Give alternatives where possible.

1. Objective _____ of the severity of the problem was difficult. (assess)
2. The model provided a framework for _____. (analyse)
3. He played a fundamental role in _____ the discipline of biomechanics. (establish)
4. When the changes were introduced, we noted the _____ of employees. (respond)
5. The World Wide Web has grown rapidly since its _____ in 1991. (create)
6. The first stage of the project was _____ of strengths and weaknesses in the company. (identify)
7. We developed a technique for _____ feedback from students. (obtain)
8. _____ trees from the mountains has led to severe erosion. (remove)

(Task 7,8 adapted from Hewings, M. *Cambridge Academic English*. CUP, 2012)