

Homework: Unit 7: Lesson 9: Unit Review

Writing

Academic Writing Task 1

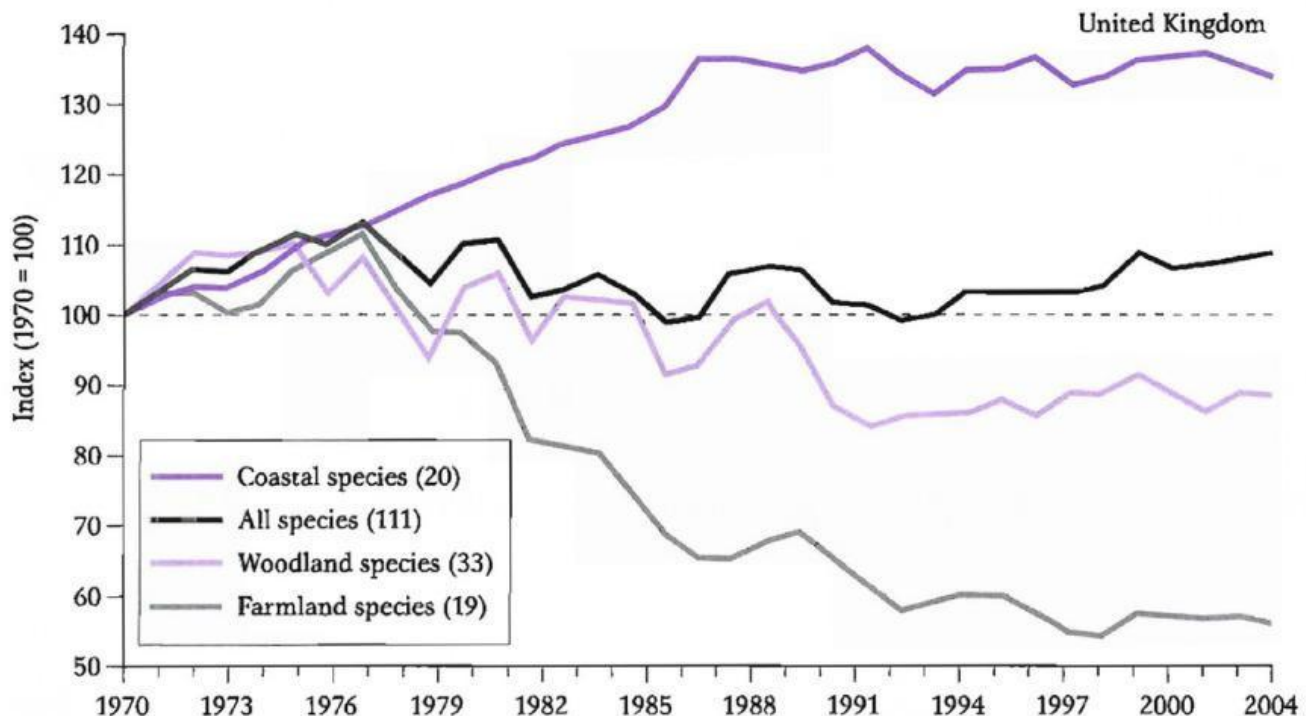
You should spend 20 minutes on this task.

The graph below shows the population figures of different types of wild birds in the United Kingdom between 1970 and 2004.

Summarise the information by selecting and reporting the main features, and make comparisons where relevant.

Write at least 150 words.

Population of wild birds: 1970–2004



Grammar focus task

Look at the extracts from a model answer and underline all examples of nominalisation.

- 1 Since 1994 there has been an improvement in numbers of all species, although the graph shows a slight decrease in 2000.
- 2 There was also a fall in the number of woodland birds of around 30% between 1974 and 1998.
- 3 It is only the coastal birds that have seen a steady increase in population over this period.

Reading

READING PASSAGE 1

You should spend about 20 minutes on Questions 1–13, which are based on Reading Passage 1.

Fact Sheet on Meteorites

Western Australian Museum

A

Meteorites are travellers through time and space that plunge to Earth, sometimes trailing a brilliant light and with a noise like thunder, at the end of a journey that began in the farthest reaches of the solar system as long ago as 45,000 million years.

They are solid bodies of crystalline matter thought to have originated deep inside planet-like bodies that were later fragmented. Unlike Earth rocks, the oldest of which date back about 3,800 million years, they have been isolated in deep space since the birth of the solar system.

While in space, they are known as meteors. Though their origins cannot be known for sure, there are indications that they are associated with comets, and that they originate from the asteroid belt between Mars and Jupiter. There they remain orbiting the Sun, but any that stray too close to Earth find themselves caught in its gravitational pull and begin to plummet towards its surface. Tearing through the atmosphere they are heated and their surfaces melted by friction. Between 100 and 150 kilometres above Earth they become incandescent and the larger ones are visible as bright lights trailing luminous tails. Some explode with a brilliant flash and a roar like thunder.

Most meteors burn up completely on entering the atmosphere, but some survive the journey and land on Earth's surface. They then become known as meteorites.

Meteorites vary in size. Some are the size of small pebbles, others weigh many tonnes. Scientifically, they are extremely valuable. Studying their chemical and mineralogical composition helps us to interpret the origins and nature of the solar system, as well as of Earth itself.

B

The study of meteorites is a comparatively young science, but meteorites have been known to man since the earliest days of prehistory.

Meteorite falls were described by writers of the Han Dynasty in China and by the philosophers of ancient Greece. In Mecca, Moslems pay homage to the sacred stone of Kaaba, which is apparently a meteorite. American Indians are also known to have paid homage to meteorites and members of two tribes made yearly pilgrimages to a hill in southern Alberta where the Iron Creek meteorite lay.

During the Iron Age, many meteorites were destroyed to make implements and weapons – among some peoples, these weapons were believed to confer supernatural powers on the bearer.

In the Middle Ages meteorites were regarded with awe as signs of God's wrath, so they were rarely preserved. It was not until the early 19th century that scientists became convinced that they were perfectly natural bodies; the scientific study of them is only about 150 years old.

C

There are three main types of meteorite – irons, stones and stony-irons.

Irons are mainly composed of nickel-iron alloy and have a characteristically dense and metallic appearance. They originate from the 'core' of their parent body and because of their metallic nature are more resistant to atmospheric friction than other meteorites. The largest meteorites are usually irons. The first meteorites found in Western Australia were irons discovered by a policeman named Alfred Eaton towards the end of the 19th century.

Stones consist largely of magnesium-rich silicate minerals, with varying amounts of nickel-iron. There are two main classes of stony meteorites – those that contain substances called chondrules, and those that do not. The chemical composition of the first group – known as chondrites – is very similar to that of the Sun.

Stony-irons contain about equal amounts of metallic nickel-iron alloy and silicate material. They are less common than the other two types of meteorite. The stony portion generally occurs as fragments welded by metal. They are probably the result of a high-speed collision in space between a body of iron and one of stone – the metal would have melted at the time of impact.

D

A meteorite 'fall' is a meteorite recovered after a witnessed fireball. A meteorite 'find' is a meteorite found by chance long after it fell to Earth.

Seeing a meteorite fall can be quite spectacular. For example, residents and visitors in Wiluna, Western Australia, for the Annual Race Meeting festivities on 2 September 1967 saw the night sky lit by a flash 'like a welding arc – white and blue'. One man reported seeing 'an object about 20 feet [six metres] long throwing out balls of fire'. Others reported 'a terrific rumbling noise' and 'six or seven bangs'. These explosive noises were caused by atmospheric shock waves as the meteorite fragmented on its journey to Earth.

E

The surface of a meteorite is quite different from that of most ordinary rocks. This is a result of entering the atmosphere at high speed and the outer portions of the meteorite being melted or burned off.

Stony meteorites have a glassy, dull black to deep brown fusion crust. This coating is only a few millimetres thick and if part of the surface is broken, the interior looks quite different.

Iron and stony-iron meteorites also have fusion crusts, but they are not quite so obvious.

Most meteorites contain some metallic iron. This can be recognised as silvery areas or grains on broken surfaces. It means that meteorites are usually heavier than ordinary rocks of the same size. Also, they will attract a magnet.

Making a positive identification and classifying a meteorite requires expert knowledge and sophisticated equipment.

QUESTIONS 1-5

Reading Passage 1 has five sections, A-E.

Choose the most suitable heading for each section from the list below.

Write the correct letter **A-E** in boxes **1-5** on your answer sheet.

1. Meteorites: *Falls* or *Finds*
2. Types of meteorites
3. Origins and journeys
4. Early beliefs
5. Appearance and other features

QUESTIONS 6-10

Complete the sentences below using words from the passage.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in boxes **6-10** on your answer sheet.

6. Meteorites consist of solid bodies of ...
7. Some American Indian tribes went on ... to a meteorite in southern Alberta.
8. The chondrites are very similar to the Sun in their ...
9. The surface of a meteorite gets melted as a result of travelling at ...
10. To identify and classify a meteorite requires specialist knowledge and ...

QUESTIONS 11-13

Do the following statements agree with the information given in Reading Passage 1?

In boxes **11-13** on your answer sheet, write

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

11. On Earth we can find meteorites, but never meteors.
12. A meteorite 'find' may also have been a meteorite 'fall'.
13. Meteorites are like any ordinary Earth rock.