SECTION 4 *Questions 31–40*

Complete the notes below.

*Write **ONE WORD ONLY** for each answer.*

Effects of urban environments on animals

Introduction

Recent urban developments represent massive environmental changes. It was previously thought that only a few animals were suitable for city life, e.g.

- the **31** ..... – because of its general adaptability
- the pigeon – because walls of city buildings are similar to **32** .....

In fact, many urban animals are adapting with unusual **33** ..... .

Recent research

- Emilie Snell-Rood studied small urbanised mammal specimens from museums in Minnesota.
  - She found the size of their **34** ..... had increased.
  - She suggests this may be due to the need to locate new sources of **35** ..... and to deal with new dangers.
- Catarina Miranda focused on the **36** ..... of urban and rural blackbirds.
  - She found urban birds were often braver, but were afraid of situations that were **37** ..... .
- Jonathan Atwell studies how animals respond to urban environments.
  - He found that some animals respond to **38** ..... by producing lower levels of hormones.
- Sarah Partan's team found urban squirrels use their **39** ..... to help them communicate.

Long-term possibilities

Species of animals may develop which are unique to cities. However, some changes may not be **40** ..... .

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LESSON 13 – LISTENING SECTION 4

TAPESCRIPT

Hi. Today we're going to be looking at animals _____ and I'm going to _____ you about some _____ how they're _____ these environments.

Now, _____, urban developments represent _____ _____, the sorts of _____ that usually happen over millions of years. And we _____ that only a few species could _____ this new environment. One species which is well known as being highly adaptable is _____, and there've been various studies about how they _____ new skills. Another _____ is the pigeon, because they're _____ perch on _____ of city buildings, just like they once _____ by the sea.

But in fact, we're now finding that these _____ were just _____ a more _____ of animals into cities, and of adaptation by these animals to city life. And one thing that researchers are finding especially interesting is the speed _____ they're doing this – we're not talking about _____ here – these animals are changing fast.

Let me tell you about some of the studies that have been _____ in this area. So, in the University of Minnesota, a biologist called Emilie Snell-Rood and _____ looked at _____ urbanized small mammals such as mice and _____ that had been collected in Minnesota, and that _____ _____ in museums there. And she looked at specimens that _____ _____ over the last hundred years, which is a very short time in _____. And she found that during that time, these small mammals had experienced _____ when _____ rural mammals. Now, we can't be sure this means they're more intelligent, but since the size of _____ of the body didn't change, _____ something cognitive was going on. And Snell-Rood thinks that this change might _____ the _____ of adjusting to city life – having to _____ to find food, _____, and _____ a whole new _____.

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Then over in Germany at the Max Planck Institute, there's another biologist called Catarina Miranda who's done _____ with blackbirds _____ urban and rural areas. And she's been looking not at _____ but at their _____. So as you might expect, she's found that the urban blackbirds _____ quite bold – they're prepared to _____ a lot of threats that would _____ their country _____. But there's one type of situation that _____ the urban blackbirds, and that's anything new – anything they haven't experienced before. And if you think about it, that's quite _____ a bird living in the city.

Jonathan Atwell, in Indiana University, is looking at how _____ animals _____ urban environments. He's found that when they're _____ _____, their _____ react by reducing the amount of hormones such as corticosterone into their blood. It's a _____ adaptation. A rat that _____ every time a subway train _____ won't be very successful.

There's just one more study I'd like to mention which is by Sarah Partan and her team, and they've _____ how squirrels communicate in an urban environment, and they've found that _____ of their communication is carried out by _____. You do also see this in the country, but it's _____ in cities, possibly because it's effective in a noisy environment.

So what are the _____ of this? One possibility is that we may see completely new species developing in cities. But on the other hand, it's possible that not all of _____ will be _____. Once the animal's _____ its new environment, it may _____ the features it's developed.

So, now we've had a look…

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VOCABULARY

Translate these following expressions into Vietnamese

1. research on
2. affected by
3. in evolutionary terms
4. huge upheavals
5. massive changes
6. adapt to
7. the crow
8. manage to
9. ledges on the walls
10. perched on cliffs
11. gradual evolution
12. carried out
13. specimens of
14. gophers
15. a jump in brain size
16. compared to
17. reflect
18. cognitive demands
19. a whole new set of dangers
20. living in
21. their anatomy
22. face up to
23. frighten away
24. sensible for
25. endocrine systems
26. sensible-seeming adaptation
27. a subway train rolls past
28. waving their tails
29. much more prevalent
30. long-term implications
31. permanent
32. got accustomed to

LIVEWORKSHEETS