



CE.E33 Reading and Comprehension (Non-Fiction) Set 8

ISEB COMMON ENTRANCE CE.E33 · Calculators not allowed · about 70 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

Losing the Dark

An original persuasive article written for Revision Library.

[1] Step outside on a clear night in the middle of a city and look up. If you are lucky, you might make out the Moon, a handful of the brightest stars, and perhaps one wandering planet glowing steadily among them. Step outside on a clear night in a genuinely dark place, far from streetlights and neon signs, and the sky changes completely: thousands of stars appear, a pale river of light called the Milky Way stretches overhead, and for a moment it becomes obvious just how much of the universe we have quietly stopped being able to see. Astronomers now estimate that more than a third of the world's population can no longer see the Milky Way from where they live, not because it has vanished, but because artificial light has drowned it out. This is not a small, sentimental loss. It is a genuine environmental problem, and one that is entirely within our power to fix.

[2] Light pollution, the excessive or misdirected artificial light that spills upward into the night sky, is often dismissed as a trivial side effect of modern life, the price we pay for safe streets and busy cities. Yet its consequences reach far beyond an obscured view of the stars. Many nocturnal animals, from moths to migrating birds, rely on natural darkness and the position of the Moon and stars to navigate, feed and breed. Streetlights and illuminated buildings can disorient these creatures so badly that exhausted migrating birds sometimes collide with brightly lit skyscrapers by the hundred in a single night, and moths drawn helplessly towards a single bulb can spend their entire short lives circling it instead of pollinating the plants that depend on them.

[3] Human beings are not immune either. Our bodies evolved to expect real darkness at night, and the hormone that regulates healthy sleep is suppressed by exposure to bright artificial light, particularly the harsh blue-white light used in many modern street lamps and phone screens. Poor sleep has been linked, in study after study, to concentration problems at school and work, low mood and a weakened immune system. We have filled our nights with brilliant light, yet many of us sleep worse than our candlelit ancestors ever did. Is that really progress?

[4] The good news is that light pollution is one of the few environmental problems that can be reversed almost overnight, simply by switching things off or pointing them the right way. Unlike carbon dioxide, which lingers in the atmosphere for centuries after it is released, excess light disappears the instant a lamp is turned off or properly shielded. A growing number of towns and rural areas around the world have applied for official Dark Sky status, a recognition given to places that commit to using carefully directed, low-glare lighting and switching off unnecessary illumination after certain hours. Visitors to these dark sky reserves often report seeing more stars in one night than they have seen in their entire lives.

[5] Critics sometimes argue that dimming streetlights will make roads and public spaces more dangerous, and safety matters far too much to be ignored. Yet studies from several dark sky reserves suggest that well-designed, carefully directed lighting, aimed downward onto the pavement rather than sideways into windows or upward into the sky, can be just as safe as older, brighter designs while using a fraction of the electricity and causing far less disruption to wildlife and sleep. The choice, in other words, is rarely between light and darkness; it is between wasteful, careless lighting and lighting that is designed with real thought.

[6] None of this requires abandoning modern life or plunging our towns into total blackness. It requires something much simpler: noticing the light we do not need, and switching it off. A shielded lamp here, a timer there, a street that commits to genuinely dark hours after midnight; none of these changes cost the Earth, and together they might just give the next generation back something previous generations always had without a second thought: a sky full of stars.

- 1** Give the meaning of the following words as they are used in paragraph [1]: (a) 'drowned' (b) 'sentimental'.

(Total for Question 1 is 2 marks)

- 2** According to paragraph [1], what fraction of the world's population can no longer see the Milky Way from where they live?

(Total for Question 2 is 1 mark)

- 3** According to paragraph [1], why can so many people no longer see the Milky Way?

- ☐ A) because it no longer exists
- ☐ B) because artificial light has drowned it out
- ☐ C) because of cloud cover
- ☐ D) because of pollution in the atmosphere

(Total for Question 3 is 1 mark)

- 4** Explain the effect of the writer opening paragraph [1] with the repeated instruction 'Step outside on a clear night...'.

(Total for Question 4 is 2 marks)

5 According to paragraph [2], give one way that light pollution affects nocturnal animals.

(Total for Question 5 is 1 mark)

6 Give two details from paragraph [2] that show light pollution seriously harms wildlife.

(Total for Question 6 is 2 marks)

7 Explain the effect of the phrase 'by the hundred in a single night' (paragraph [2]).

(Total for Question 7 is 2 marks)

8 According to paragraph [3], what does exposure to bright artificial light suppress?

- ☐ A) appetite
- ☐ B) the hormone that regulates healthy sleep
- ☐ C) eyesight
- ☐ D) the immune system directly

(Total for Question 8 is 1 mark)

9 Explain the effect of the rhetorical question 'Is that really progress?' at the end of paragraph [3].

(Total for Question 9 is 2 marks)

10 Using evidence from paragraph [3], explain in your own words why poor sleep matters.

(Total for Question 10 is 3 marks)

- 11** According to paragraph [4], name one substance that lingers in the atmosphere for centuries, unlike excess light.

(Total for Question 11 is 1 mark)

- 12** Explain the effect of the contrast drawn between light pollution and carbon dioxide in paragraph [4].

(Total for Question 12 is 2 marks)

- 13** According to paragraph [4], what can towns and rural areas apply for if they commit to careful, low-glare lighting?

- ☐ A) a research grant
- ☐ B) official Dark Sky status
- ☐ C) a UNESCO World Heritage listing
- ☐ D) a government subsidy

(Total for Question 13 is 1 mark)

- 14** Using evidence from paragraph [5], explain in your own words how the writer responds to the argument that dimmer lighting is more dangerous.

(Total for Question 14 is 3 marks)

- 15** Explain the effect of the writer directly acknowledging an opposing view in paragraph [5] ('Critics sometimes argue...').

(Total for Question 15 is 2 marks)

- 16** Explain the effect of the list of three in paragraph [6]: 'A shielded lamp here, a timer there, a street that commits to genuinely dark hours after midnight'.

(Total for Question 16 is 2 marks)

- 17** Explain how the writer uses language and structure across the whole passage to persuade the reader that light pollution is a problem worth solving. Refer to at least two points in the passage in your answer.

(Total for Question 17 is 6 marks)

- 18** Using your own words as far as possible, summarise the problems caused by light pollution and the solutions the writer suggests. Write no more than 60 words.

(Total for Question 18 is 4 marks)

19 In your opinion, how successfully does the writer persuade you that we should take action against light pollution? Refer to the whole passage in your answer.

(Total for Question 19 is 8 marks)

Mark scheme · CE.E33 Reading and Comprehension (Non-Fiction) Set 8

Question 1

- **B1** (a) completely covered or overwhelmed so it cannot be seen or heard (oe)
- **B1** (b) based on feeling or emotion rather than practical importance (oe)
- **Answer: (a) Completely covered or overwhelmed so it can no longer be seen. (b) Based on feeling or emotion rather than practical importance.**

Question 2

- **B1** more than a third, cao
- **Answer: More than a third.**

Question 3

- **B1** B only, cao
- **Answer: B) because artificial light has drowned it out.**

Question 4

- **B1** identifies the direct address to the reader, and the repeated structure used to set up a contrast between two scenes (oe)
- **B1** comment on effect, e.g. draws the reader in personally and makes the contrast between the city sky and the dark sky feel immediate and vivid, rather than abstract (oe)
- **Answer: Repeating the instruction 'Step outside...' directly addresses the reader and sets up a clear contrast between two different scenes. This draws the reader in personally, making the difference between a city sky and a genuinely dark sky feel immediate and vivid, rather than abstract.**

Question 5

- **B1** any one of: disorients migrating birds, causing them to collide with buildings; distracts moths from pollinating (oe)
- **Answer: It disorients migrating birds so badly that they sometimes collide with brightly lit buildings.**

Question 6

- **B1** migrating birds collide with brightly lit skyscrapers by the hundred in a single night (oe)
- **B1** moths circle a single bulb for their entire short lives instead of pollinating plants (oe)
- **Answer: Migrating birds sometimes collide with brightly lit skyscrapers by the hundred in a single night; and moths drawn to a single bulb can spend their entire short lives circling it instead of pollinating plants.**

Question 7

- **B1** identifies the emphasis on scale and frequency of harm caused (oe)
- **B1** comment on effect, e.g. shocks the reader by showing this is not a rare, isolated event but a large-scale, repeated problem, strengthening the persuasive argument (oe)
- **Answer: The phrase 'by the hundred in a single night' emphasises the scale and frequency of the harm caused. This shocks the reader by showing that bird deaths are not a rare, isolated event but a large-scale, repeated problem, strengthening the writer's persuasive argument.**

Question 8

- **B1** B only, cao
- **Answer: B) the hormone that regulates healthy sleep.**

Question 9

- **B1** identifies the question as rhetorical, inviting the reader to question an assumption rather than expecting a literal answer (oe)
- **B1** comment on effect, e.g. the short sentence, after longer explanatory ones, makes the challenge feel direct and memorable, persuading the reader to reconsider whether modern life is truly an improvement (oe)
- **Answer: The rhetorical question invites the reader to question the assumption that modern life is automatically an improvement, without expecting a literal answer. Coming after longer, explanatory sentences, its short, direct phrasing makes the challenge feel memorable and persuasive.**

Question 10

- **B1** poor sleep is linked to difficulty concentrating at school or work (oe)
- **B1** poor sleep is linked to low mood (oe)
- **B1** poor sleep is linked to a weakened immune system (oe)
- **Answer: Poor sleep has been linked to difficulty concentrating at school or work, to low mood, and to a weakened immune system, making it harder for the body to fight off illness.**

Question 11

- **B1** carbon dioxide, cao
- **Answer: Carbon dioxide.**

Question 12

- **B1** identifies the contrast between a problem that lingers for centuries and one that can be reversed instantly (oe)
- **B1** comment on effect, e.g. makes light pollution seem uniquely solvable compared with other environmental problems, giving the reader hope and encouraging action (oe)
- **Answer: The contrast highlights that, unlike carbon dioxide, which lingers for centuries, light pollution can be reversed the instant a lamp is switched off. This makes the problem feel uniquely solvable compared with other environmental issues, giving the reader hope and encouraging them to believe action is worthwhile.**

Question 13

- **B1** B only, cao
- **Answer: B) official Dark Sky status.**

Question 14

- **B1** the writer first acknowledges the safety concern as a genuine, serious issue (oe)
- **B1** the writer then presents evidence that well-designed lighting aimed downward can be just as safe as brighter, older designs (oe)
- **B1** this well-designed lighting also uses less electricity and causes less disruption to wildlife and sleep (oe)
- **Answer: The writer first acknowledges that safety is a genuine, serious concern, rather than dismissing it. They then present evidence that well-designed lighting, aimed downward rather than sideways or upward, can be just as safe as older, brighter designs, while also using less electricity and causing far less disruption to wildlife and sleep.**

Question 15

- **B1** identifies that the writer fairly presents a counter-argument before responding to it (oe)
- **B1** comment on effect, e.g. makes the writer appear balanced and credible, strengthening the overall persuasive argument by showing they have considered objections (oe)
- **Answer: By fairly presenting a counter-argument before responding to it, the writer appears balanced and credible. This strengthens the overall persuasive argument, since the reader can see that objections have genuinely been considered, not just ignored.**

Question 16

- **B1** identifies the list of three small, specific, achievable actions (oe)
- **B1** comment on effect, e.g. builds a sense of cumulative, manageable change, making the solution feel practical and attainable rather than overwhelming (oe)
- **Answer: The list of three small, specific actions builds a sense of cumulative, manageable change. This makes the solution feel practical and attainable rather than overwhelming, encouraging the reader to believe that everyday actions can genuinely make a difference.**

Question 17

- **Level 1** (1-2): Identifies language or details with little or no explanation of their effect; may rely on narrative retelling with minimal reference to the text.
- **Level 2** (3-4): Explains, with some development, how specific words or details (for example the statistic in paragraph [1], or the direct authorial comment in paragraph [5]) persuade the reader, supported by relevant quotation.
- **Level 3** (5-6): Gives a clear, well-developed explanation of how the writer's precise choices of language and structure work together across the passage to build a persuasive argument, integrating apt quotations fluently and showing secure understanding of the effect on the reader.
- **Indicative content:**
 - the direct address and repeated structure of paragraph [1] ('Step outside...') draws the reader into a personal, vivid experience before any argument is made explicitly
 - the statistic that 'more than a third of the world's population can no longer see the Milky Way' grounds the argument in scale, making the problem feel widespread and urgent
 - the passage moves logically from the problem (paragraphs [1] to [3]) to the solution (paragraphs [4] to [6]), giving the argument a clear, persuasive structure
 - the writer's acknowledgement of an opposing view in paragraph [5], followed by a reasoned rebuttal, strengthens the argument's credibility
 - the final paragraph's list of three small actions and its closing image, 'a sky full of stars', ends the passage on a hopeful, achievable note rather than a purely critical one

Question 18

- **B1** light pollution stops most people from seeing the night sky properly (oe)
- **B1** it harms wildlife, disorienting migrating birds and moths (oe)
- **B1** it disrupts human sleep and health (oe)
- **B1** the solution is using carefully directed, lower, shielded lighting, such as in Dark Sky reserves, rather than removing lighting altogether (oe)
- **Answer: Light pollution stops most people from seeing the night sky, disorients wildlife such as migrating birds and moths, and disrupts human sleep and health. The writer argues the solution is not removing lighting altogether, but using carefully directed, shielded lighting, as in official Dark Sky reserves.**

Question 19

- **Level 1** (1-2): Simple or surface-level response with little reference to the passage; limited personal engagement with the question.
- **Level 2** (3-4): Some relevant explanation with limited textual reference; makes a straightforward personal comment on how successfully the writer persuades the reader.
- **Level 3** (5-6): Clear, developed response with relevant textual reference and some apt quotation; explains effectively how particular techniques (for example the statistic, or the concession and rebuttal in paragraph [5]) contribute to the passage's persuasiveness.
- **Level 4** (7-8): Perceptive, well-evaluated response with sustained and precise reference to the passage as a whole; explores subtlety in the writer's choices (for example the balance of emotive and factual appeal, or the tone of the closing paragraph) and their effect on the reader.
- **Indicative content:**
 - the opening direct address and vivid contrast between a city sky and a dark sky engages the reader emotionally before any factual argument begins
 - the statistic of 'more than a third of the world's population' and specific details such as 'twenty-three pounds' style factual grounding (here, precise details like sleep hormone suppression and the carbon dioxide comparison) lend the argument credibility
 - the concession and rebuttal structure in paragraph [5] pre-empts the reader's objections, arguably making the argument feel more balanced and trustworthy than a one-sided appeal would
 - the rhetorical question 'Is that really progress?' invites the reader to actively question their own assumptions, rather than simply being told what to think
 - the closing image of 'a sky full of stars' ends the passage on a hopeful, achievable note, which may make readers more likely to feel persuaded than a purely alarming conclusion would