

# Les sciences et le progrès

Durée : 55 min

Barème : / 20 points

Barème : 1 point par question, soit 4 points par exercice

Unités : réponse sans unité = 0,5 point retiré

## 1 Compréhension de l'écrit : un article

/ 4 pts

- a. Milkmaids who had caught cowpox never caught smallpox; this led him to test the idea that cowpox could protect against smallpox.
- b. He injected liquid from a cowpox blister into the arm of James Phipps, an eight-year-old boy. A few weeks later, he exposed the boy to smallpox and James did not fall ill.
- c. They laughed at him: « many doctors laughed at him and newspapers published cartoons of people turning into cows ».
- d. In 1980, the World Health Organization declared that smallpox had disappeared from the planet; it was the first time humans had completely eliminated a disease, thanks to vaccination.

**Méthode** — Un récit de découverte suit toujours le même fil — observation, hypothèse, expérience, résultat, conséquences — et les questions le suivent dans l'ordre.

## 2 Compréhension de l'écrit : lecture d'un tableau

/ 4 pts

- a. The smartphone, with 88 votes: 44 % of the teenagers ( $88 \div 200$ ).
- b. The vaccine (1796) is the oldest invention in the table, and the smartphone (2007) is the most recent.
- c. Tim Berners-Lee, a British engineer, invented the World Wide Web in 1989. One drawback is that fake news spread fast on the Web.
- d. Ex.: In my opinion, it is surprising, although it is easy to understand: teenagers use their smartphone every day, whereas vaccines protect them silently. I think the vaccine has saved far more lives.

**Repère** — Dans un tableau de sondage, calcule le pourcentage sur le total de répondants, et distingue les faits (dates, inventeurs) des opinions citées entre guillemets.

## 3 Grammaire : prétérit, indéénombrables et argumentation

/ 4 pts

- a. flew ; built ; became.
- b. « Scientists have made a lot of progress, but there is still little evidence that this treatment works. » (made progress ; a lot of / much progress ; little evidence)
- c. allow families to save money ; prevent them from producing energy.
- d. Although AI can diagnose diseases, it can make mistakes. / On the one hand, AI can diagnose diseases; on the other hand, it can make mistakes.

**Erreur fréquente** — Progress, research, evidence, equipment et knowledge sont indéénombrables : ni article a, ni pluriel ; on dit make progress, do research, a piece of evidence.

## 4 Lexique des sciences et du progrès

/ 4 pts

- a. an invention ; a discovery ; an improvement ; a development.
- b. a breakthrough ; cutting-edge (state-of-the-art) ; a drawback (a disadvantage) ; life expectancy.
- c. An experiment is a scientific test in a laboratory (Fleming's experiment with bacteria); an experience is something you live through (my experience in London). To invent is to create something new (Bell invented the telephone); to discover is to find something that already existed (Fleming discovered penicillin).
- d. Fleming – penicillin – 1928 ; Bell – the telephone – 1876 ; Darwin – the theory of evolution – 1859 ; Berners-Lee – the Web – 1989.

**Attention** — Les faux amis scientifiques (experiment / experience, physicist / physician, evidence / évidence) sont testés chaque année : apprends-les par paires.

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## 5 Expression écrite guidée

/ 4 pts

- a. Ex.: In 1928, the Scottish scientist Alexander Fleming discovered penicillin in his laboratory in London. It became the first antibiotic.
- b. Before antibiotics, people used to die of simple infections; today, a course of tablets cures them in a week.
- c. On the one hand, antibiotics have saved millions of lives; on the other hand, bacteria are becoming resistant because we use too many.
- d. All things considered, I think it is the most important discovery of the 20th century, and I hope scientists will find new antibiotics soon.

**Le point clé** — Une présentation réussie mêle faits datés au prétérit, comparaison avant / après et argumentation équilibrée avant l'opinion personnelle.