



SACHSEN-ANHALT

Ministerium für Bildung

SCHRIFTLICHE ABITURPRÜFUNG 2022

ENGLISCH
(ERHÖHTES ANFORDERUNGSNIVEAU)

Prüfungsaufgaben Prüfungsteile 2 und 3

Auswahlzeit:	30 Minuten
Bearbeitungszeit:	290 Minuten

Wählen Sie aus dem Prüfungsteil 2 ein Thema zur Bearbeitung aus und kreuzen Sie dieses an. Bestätigen Sie Ihre Entscheidung mit Ihrer Unterschrift.

Der Prüfungsteil 3 ist verpflichtend zu bearbeiten.

Prüfungsteil 2: Schreiben mit integriertem Leseverstehen

Thema A: DNA ancestry tests may look cheap. But your data is the price

Thema B: The Secret History

Prüfungsteil 3: Sprachmittlung

Wertevermittlung in der Schule

Unterschrift des Prüflings:

Prüfungsteil 2: Schreiben mit integriertem Leseverstehen

Thema A: DNA ancestry tests may look cheap. But your data is the price

by Adam Rutherford

Do customers realise that genetic genealogy companies like 23andMe profit by amassing huge biological datasets?

In 1884, at the International Health Exhibition in South Kensington, four million punters came to view the latest scientific marvels: drainage systems, flushing toilets and electrically illuminated fountains. There, the scientist Francis Galton¹ set up the Anthropometric Laboratory, where common folk would pay 3d (around 80p today) to enter, and anonymously fill out a data card. Galton's technicians recorded 11 metrics, including height, hair colour, keenness of sight, punch strength and colour perception, and the ability to hear high-pitched noises, tested via whistles made by Messrs² Tisley & Co, Brompton Road. Over the course of a week, 9,337 people went home with some trivial information about themselves, and Galton amassed the largest dataset of human characteristics ever compiled up to that time – and a stack of cash.

There is nothing new under the sun. In the past decade, millions of punters have parted with their cash and a vial of saliva, and in exchange they received some information about their DNA. Our genomes are a treasure trove of biological data, and an industry has sprung up to sell products based on our newfound ability to quickly and cheaply read and interpret DNA.

The biggest of these companies is 23andMe: five million paying customers since 2006, usually nosing for clues about their ancestry. Unlike most genetic genealogy companies, 23andMe also offers health-related information, on traits such as eye colour, predisposition to a handful of diseases, and the tendency to puke when drinking alcohol.

As with Galton's scheme, 23andMe was never interested in your personal history or your eyes. What it wants is to own and curate the biggest biological dataset in the world. So it was no surprise when the company announced a \$300m (£233m) deal with pharmaceutical mammoth GlaxoSmithKline last month to develop drugs based on the data you paid to give them. This is not illegal in any way. 23andMe told users that it was planning to do this, and in 2015 had done something similar, but on a smaller scale, concerning Parkinson's disease. The new deal is the biggest commercial venture of its sort so far.

This is all unknown territory, and warrants serious thought by regulators as well as by customers. 23andMe is unambiguous about its plans: board member Patrick Chung told Fast

¹ Galton

Sir Francis Galton (1822-1911), an English Victorian-era scientist

² Messrs

plural of Mr

Company³ in 2013: “Once you have the data, [the company] does actually become the
30 Google of personalised healthcare.” Genomes can be mined for subtleties that only become
visible with such voluminous data. I’ve little doubt that interesting science will emerge from
this, and new drugs may well be developed to treat awful diseases. I also have no doubt that
these drugs will be sold back to you.

By buying into 23andMe you are not a consumer or user, you are in fact the product.
35 Again, 23andMe was explicit about this, and gave all its customers the option of not giving up
their genomic data to commercial ventures beyond their control. But of the five million people
on its database, more than four million did not opt out, and their data is now fair game. By
tinkering with some fun ancestry trinkets, you relinquish control over information that is
unique to you, and allow it to become a commodity to be traded.

40 The concerns this raises are similar to many of those created by our new online lives:
privacy, data breaches, security, anonymisation. It hasn’t happened yet, but can genome
data held by private companies be stolen, or de-anonymised? Concerns about the potential
discriminatory use of personal genomics by insurance companies are well founded. There’s
no clear pattern of how insurers will or can use information from genetic tests in assessing
45 life cover, but at least in the US, they are entitled to demand medical records, including
details of inherited predispositions to particular diseases.

Can information in these databases be subpoenaed? Earlier this year, an open-access
genealogy database was used to solve a series of decades-old crimes. The prolific American
murderer and rapist known as the Golden State Killer was identified after a genetic profile
50 from a 1980 crime scene was uploaded to a website called GEDmatch. Amateur sleuths
constructed a family tree that within a few days identified 72-year-old former police officer
Joseph James DeAngelo, whose identity was confirmed by secret collection of DNA samples
from his rubbish and the door handle of his car. The outcome may represent justice long
overdue, but the methods represent an ethical minefield.

55 In short: if you really want to spend your cash to discover that you are descended from
Vikings (spoiler: if you have European ancestry, you are) or you have blue eyes (try a mirror),
go ahead. But be aware of what you are really giving up, and consider the potential risks if
things go wrong.

Twenty-five years ago, the fictional potential of DNA was revealed to the world in
60 Jurassic Park. Resurrected dinosaurs are never going to happen – DNA is robust, but only
over hundreds, thousands, or hundreds of thousands of years at the very most, not the 66m
required for a sample of dinosaur genome. In reality, the wonders of modern genetics
continue to transform science and society in unpredictable ways. But the moral core of those

³ Fast Company

American business magazine focusing on innovation in technology, business and
design

65 films – Dr Ian Malcolm, played by Jeff Goldblum – can still teach us something. He is cynical and refuses to be bewitched by the spectacle.

“Don’t you see the danger inherent in what you’re doing here,” he warns. “Genetic power is the most awesome force the planet’s ever seen, but you wield it like a kid that’s found his dad’s gun.”

923 words

Rutherford, A. (2018). DNA ancestry tests may look cheap. But your data is the price. *The Guardian*, August 10, 2018.

Thema A: DNA ancestry tests may look cheap. But your data is the price

Assignments

1. Outline Rutherford's observations on private DNA tests and the concerns he expresses.
2. Analyse how the author raises the readers' awareness of the implications of DNA testing.
3. Choose **one** of the following tasks:
 - 3.1 "In reality, the wonders of modern genetics continue to transform science and society in unpredictable ways." (ll. 62–63)

The author of the article, Adam Rutherford, runs the blog *Science Matters* and asks his readers to contribute.

Referring to the statement above, write a blog entry, discussing opportunities and challenges in the field of genetic engineering.

or
 - 3.2 Using the message of the cartoon as a starting point, assess to what extent people's private lives will be affected by technological developments in the future.



Chris Slane: DNA Test

(available at: <https://www.slanecartoon.com/media/b3be49d8-1ea4-4a90-92fd-4cf12a3d903c-dna-test>; accessed: 15 March 2021)

Thema B: The Secret History

by Donna Tartt

The novel is set at an American elite college in the 1980s. In the excerpt, the protagonist reflects upon his childhood before studying at Hampden College.

My name is Richard Papen. I am twenty-eight years old and I had never seen New England or Hampden College until I was nineteen. I am a Californian by birth and also, I have recently discovered, by nature. [...]

I grew up in Plano, a small silicon village in the north. No sisters, no brothers. My father
5 ran a gas station and my mother stayed at home until I got older and times got tighter and she went to work, answering phones in the office of one of the big chip factories outside San Jose.

Plano. The word conjures up drive-ins, tract homes¹, waves of heat rising from the
blacktop. My years there created for me an expendable past, disposable as a plastic cup.
10 Which I suppose was a very great gift, in a way. On leaving home I was able to fabricate a new and far more satisfying history, full of striking, simplistic environmental influences; a colorful past, easily accessible to strangers.

The dazzle of this fictive childhood – full of swimming pools and orange groves and
dissolute, charming show-biz parents – has all but eclipsed the drab original. In fact, when I
15 think about my real childhood I am unable to recall much about it at all except a sad jumble of objects: the sneakers I wore year-round; coloring books and comics from the supermarket; little of interest, less of beauty. I was quiet, tall for my age, prone to freckles. I didn't have many friends but whether this was due to choice or circumstance I do not now know. I did well in school, it seems, but not exceptionally well; I liked to read – *Tom Swift*², the Tolkien³
20 books – but also to watch television, which I did plenty of, lying on the carpet of our empty living room in the long dull afternoons after school.

I honestly can't remember much else about those years except a certain mood that permeated most of them, a melancholy feeling that I associate with watching 'The Wonderful
World of Disney' on Sunday nights. Sunday was a sad day – early to bed, school the next
25 morning, I was constantly worried my homework was wrong – but as I watched the fireworks go off in the night sky, over the floodlit castles of Disneyland, I was consumed by a more general sense of dread, of imprisonment within the dreary round of school and home: circumstances which, to me at least, presented sound empirical argument for gloom. My father was mean, and our house ugly, and my mother didn't pay much attention to me; my
30 clothes were cheap and my haircut too short and no one at school seemed to like me that much; and since all this had been true for as long as I could remember, I felt things would

¹ tract home one of many similarly designed houses

² Tom Swift protagonist of a series of American science fiction and adventure stories for juvenile readers

³ Tolkien J.R.R. Tolkien (1892–1973); British novelist and literary scholar

Thema B: The Secret History

Assignments

1. Sum up the information about Richard's parents.
2. Analyse the way the protagonist is characterised.
3. Choose **one** of the following tasks:
 - 3.1 "[...] I was expected to help my father run his business, one of the many reasons I was in such an agony to escape [...]." (ll. 35–36)
Taking the protagonist's statement as a starting point, assess to what extent expectations shape young people's aims and ambitions.
or
 - 3.2 *The Guardian* is running an online project called "How family shapes your identity" asking its readers to contribute their view on the matter.
Write an article for the newspaper's website, commenting on the role of family background as a factor in shaping one's identity.

20 Probleme: Dies ist ein wunderbares Land, auf das wir stolz sein können und in dem wir mit allen unseren Unterschieden ohne Hass zusammenleben möchten – das leben die Werte-Botschafter vor. Wir können Deutschland zusammen weiterentwickeln!

Manch ein Schüler könnte denken: Die wollen mir eine Moralpredigt halten.

Im Gegenteil! Es geht nicht darum, perfekte Geschichten zu erzählen oder zu missionieren. 25 Viel interessanter für die Schüler ist es doch, von den Schwierigkeiten zu hören, die diese Menschen überwunden haben – zum Beispiel als die erste Person, die in der Familie studiert hat, oder als schwarze Deutsche, die trotz Erfahrungen mit Rassismus nicht in der Opferhaltung verharret, sondern konstruktiv die Gesellschaft mitgestaltet. Ich glaube daran, dass man durch persönliche Begegnungen am meisten lernt.

30 ***Müssen es denn „Werte“ sein, die vermittelt werden? Reicht es nicht, wenn sich alle an die Regeln und Normen halten, die sich aus dem Grundgesetz ergeben?***

Nein. Das ist mir zu wenig, zu kalt. Ich glaube, es fehlt oft an Wärme bei der Vermittlung der Werte, und genau das ist die Lücke, in die die Populisten stoßen. Wir wollen auch die Gefühlsebene ansprechen: Jeder Mensch braucht Vorbilder, braucht andere Menschen, die 35 an ihn glauben. Zugehörigkeit, Dabeisein heißt mehr, als sich an Normen zu halten.

Wie wollen Sie verhindern, dass einige Werte-Botschafter sich vor allem selbst darstellen, die Schüler langweilen oder ihnen problematische Ansichten vermitteln?

Wir wählen die Werte-Botschafter sehr sorgfältig aus, es gibt ein Vorstellungsgespräch, einen „Code of Conduct“, wir arbeiten eng mit den Schulleitungen und Lehrkräften 40 zusammen und begleiten unsere Botschafter bei ihren Schulbesuchen. So ist sichergestellt, dass sie gute Arbeit leisten. Das sind wir auch unseren Geldgebern – bisher handelt es sich um private Spender – schuldig.

Schicken Sie Botschafter mit Migrationshintergrund speziell in Brennpunktschulen, um Vorbilder abzugeben?

45 Das wäre falsch. Warum wollen wir Kinder mit Migrationshintergrund auf Vorbilder mit Migrationshintergrund festlegen? Müssen türkische Jungen immer Özil⁶ als Vorbild haben – warum nicht Marco Reus⁷? Im Übrigen geht es mir nicht nur um Kinder mit Migrationshintergrund: Ronny aus Pasewalk ist mir ebenso wichtig wie Fatma aus Neukölln. Es war für mich ein Schlüsselerlebnis, bei einem meiner Schulbesuche in Erfurt zu sehen: Auch deutsch- 50 deutsche Kinder [...] haben Probleme mit ihrer Identität. Auch ihnen müssen wir deutlich machen, wie wir hier in Deutschland zusammenleben können.

⁶ Mesut Özil Fußballer

⁷ Marco Reus Fußballer

Sie stammen selbst aus einer bildungsfernen Familie ...

Es stimmt, meine Mutter ist Analphabetin und mein Vater hat die Schule nur bis zur vierten Klasse besucht. Aber meine Eltern haben uns Kindern immer vermittelt: Gerade weil wir selbst keine Bildung erwerben konnten, ist es umso wichtiger, dass ihr es tut.

616 Wörter

Nolte, D. (2019, 4. Juni). Wertevermittlung in der Schule. Für Ronny aus Pasewalk und Fatma aus Neukölln. *Tagesspiegel*.