

Hawking Teacher's Notes B1

In this article, students will learn about Stephen Hawking, one of Britain's most famous scientists who survived 55 years with a terrible neurological disease. The film *The Theory of Everything*, directed by James March and released in 2014, pays tribute to this exceptional man, played by Eddie Redmayne, who won a Golden Globe for best actor, as well as an Academy Award and a BAFTA Award for his outstanding performance. This sequence would fit well in an *EPI Sciences, technologie et société* with physics.

Vocabulary and Structures

- The *most* + adjective / *most* + noun
- Expressing purpose
- Simple present perfect//simple past.
- *Brilliant, famous, respected, rare, incredible, major, unique... // anonymous, ordinary*
- Experiment //experience
- The quest *for* knowledge
- Be diagnosed *with* a disease
- *Derivation: Science, scientist, scientific / mathematics, mathematician, mathematical / physics, physicist...*

Pronunciation

- Stephen /'sti: vən/
- 'Science, 'scientist, ,scien'tific /aɪə/
- di'scovery /skʌ/
- know /oʊ/ 'knowledge /ɒ /
- 'muscles /s/
- **Word stress:** pro'fessor, in'credible, ex'periment, res'pected, co'mmunicate, di'sease.

Skills and Strategies

- Understanding significant points in straightforward newspaper articles (B1).

- Writing brief reports and descriptions (B1).
- Sustained monologue: briefly giving reasons and explanations for opinions (B1)

Speaking, reading, writing activities.

- Before working on the article we suggest brainstorming scientists to introduce the topic. Have students do **Activity A** to expand their vocabulary and practise their pronunciation. Stress that the point of the activity is to build knowledge, not necessarily know everything straight off.
- Then show the photos and ask students to say what they can about them to anticipate the information provided by the article. Use this opportunity to recycle or teach words like *disabled, disability, disease, suffer from, look + adj, seems to be, distorted*. Students will most certainly recognise Einstein, some may be able to say a few words about Eddie Redmayne. Even if they have never heard about Stephen Hawking, they should see the links with science and the cinema on the photos, as well as identify his type of health problem.

Activities B, C and D have students pick out information from the text. The class could

be divided into 3 groups, each with one mission. A student from each group will then report to the class what has been found. In **Activities E** and **F** personal opinions are expected. **Activity G** can be carried out in pairs or individually.

EPI Theme

■ This article could fit into an *EPI Sciences, technologie et société* with Physics, around the theme from the 3ème curriculum « *Décrire l'organisation de la matière dans l'Univers* ». Pupils could work on Hawking's theories with the science teacher while exploring his life in English.

Solutions

A.

1. Isaac Newton worked on gravity. He was a mathematician.
2. Daniel Fahrenheit worked on temperatures. He was a physicist.
3. Marie Curie worked on radioactivity. She was a physicist.
4. Charles Darwin worked on evolution. He was a naturalist.
5. Albert Einstein worked on relativity and gravity. He was a physicist.
6. Alan Turing worked on cracking the German Enigma code during World War II. He was a mathematician and computer scientist.
7. Louis Pasteur worked on vaccines. He was a biologist.
8. Ada Lovelace worked on computers and algorithms. She was a mathematician and computer scientist.

B.1. 8 January 1942

2. Oxford
3. Oxford: physics. Cambridge: cosmology
4. married + 3 children.
5. 14 March 2018.

C.1. Motor Neurone Disease/ 22 /serious / die/survived (for 55 years).

2. Couldn't walk, talk or eat. Disabled, in a wheelchair. Communicated with one face muscle and a computerised, synthetic voice.

D.1. Professor of Mathematics

2. cosmology
3. black holes
4. the stars and space
5. Cambridge University
6. 35

G.

Scientist / **T**heory/ **E**xceptional / **P**rofessor / **H**eroic / **E**xperiment / **N**ice / **H**onoured / **A**dmired/ **W**heelchair / **K**nowledge / **I**ntelligent / **N**eurological disease / **G**uide