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**ARHOLIAD AELODAETH TESTUN – CYFLAWN**

**1 Hydref 2022**

**PAPUR 1**

**Cyfieithu o’r Saesneg i’r Gymraeg**

**Hyd yr arholiad: 2 awr a 5 munud\***

***Ydych chi wedi cael y papur cywir?***

**\* Cewch 5 munud ar ddechrau’r arholiad i ddarllen y papur. Ni chewch ddechrau teipio’ch cyfieithiad yn ystod y cyfnod hwn.**

**Ffynonellau’r darnau:**

Darn 1 – addasiad o erthygl ar wefan *Space.com*

Darn 2 – addasiad o erthygl ar wefan *The Guardian*

**Rhaid dilyn unrhyw gyfarwyddiadau sydd ar y papur.**

**Mae 5 tudalen i’r papur hwn gan gynnwys y dudalen hon.**

**PAPUR 1 CYFLAWN – CYFIEITHU O’R SAESNEG I’R GYMRAEG**

## Darn 1

The northern lights are beautiful dancing waves of light that have captivated people for millennia. But for all its beauty, this spectacular light show is a rather violent event. Energized particles from the sun slam into Earth's upper atmosphere at speeds of up to 45 million mph, and as Earth's magnetic field redirects the particles toward the poles the dramatic process transforms into a cinematic atmospheric phenomenon that dazzles and fascinates scientists and skywatchers alike.

Though it was Italian astronomer Galileo Galilei who coined the name "aurora borealis" in 1619 — after the Roman goddess of dawn, Aurora, and the Greek god of the north wind, Boreas — the earliest suspected record of the northern lights is in a 30,000-year-old cave painting in France.

Since that time, civilizations around the world have marvelled at the celestial phenomenon, ascribing all sorts of origin myths to the dancing lights. One North American Inuit legend suggests that the northern lights are spirits playing ball with a walrus head, while the Vikings thought the phenomenon was light reflecting off the armour of the Valkyrie, the supernatural maidens who brought warriors into the afterlife.

At any given moment, the sun is ejecting charged particles from its corona, or upper atmosphere, creating what's called the solar wind. When that wind slams into Earth's upper atmosphere, it deposits energy, causing it to fluoresce, and the aurora is born.

The bright colours of the northern lights are dictated by the chemical composition of Earth's atmosphere. Every type of atom or molecule absorbs and radiates its own unique set of colours, just like every human being has a unique set of fingerprints. Some of the dominant colours seen in aurorae are red, a hue produced by the nitrogen molecules, and green, which is produced by oxygen molecules.

**PAPUR 1 CYFLAWN – CYFIEITHU O’R SAESNEG I’R GYMRAEG**

**Darn 2**

Today, Pakistan, the world’s fifth-most-populous country, is fighting for its survival. This summer, erratic monsoon rains battered the country from north to south – Sindh, the southernmost province, received 464% more rain over the last few weeks than the 30-year average for the period.

At the same time, Pakistan’s glaciers are melting at a rate never seen before. These two consequences of the climate crisis have combined to create a monstrous super-flood that has ravaged the country.

Ninety per cent of crops in Sindh have been damaged; Pakistan’s largest social welfare organisation, the Edhi Foundation, has warned that those who don’t die from the floods risk death by starvation.

A famine is coming; the only question is how soon? Economic losses are estimated to be in excess of $30 billion, 50 million people have been internally displaced, there is the threat of a malaria epidemic as floodwater lies stagnant – satellite images have shown the shocking formation of a 100km-wide inland lake due to overflowing from the Indus River – and there is no doubt that a generation will be cast backwards as already meagre education and health services are violently disrupted. More than 400 children have died and with winter coming and millions left without shelter, many more will.

This is a tragedy of nightmarish proportions and yet if you live outside Pakistan, you probably haven’t heard much about it. Given its near total lack of interest in the fate of Pakistan, it would seem that the rest of the world hasn’t considered that this epic humanitarian crisis is a peek into the apocalyptic future that awaits us all. The horrors faced by the country today are a clear warning of the consequences of universal and rapacious climate breakdown. Human beings have destroyed our one and only planet; what is happening in Pakistan today is proof of that.