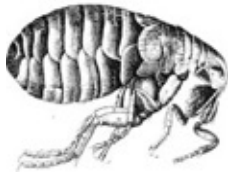


# David's 2020 Quiz Special



1.....



2.....



3.....



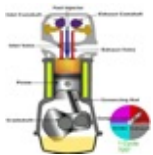
4.....



5.....



6.....



13.....



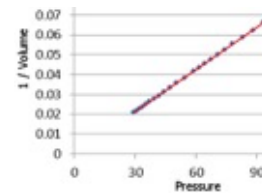
14.....



15.....



16.....



17.....



7.....

$$\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0}$$

$$\nabla \cdot \mathbf{B} = 0$$

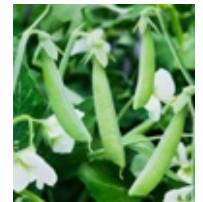
$$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}$$

$$\nabla \times \mathbf{B} = \mu_0 \left( \mathbf{J} + \epsilon_0 \frac{\partial \mathbf{E}}{\partial t} \right)$$

8.....



9.....



10.....



11.....



12.....



18.....



19.....



20.....



21.....



22.....



23.....



24.....

Ignoring spaces and punctuation, the following story has the names of 24 famous scientists and innovators hidden within it. Each name is associated with a picture.

(evolved from an item printed in E&T Journal January 2012)

'It happened on a Boxing Day, the Feast of Stephen, son.' said the old man, his wrinkled face turned towards the fire. His companion, a young engineer, looked up in surprise. He'd had a good year and was spending the day sitting with residents at the Old Inventors Home. The old man stared at him, his face looking suddenly fuller, his eyes sparkling: 'Are you ready, son, for a spooky story?' The young man nodded, hooked by his gaze and now attending expectantly. Some men delivering, and some residents in a nearby bay listened too.

Many years ago' the old man continued, 'I had a friend, a fellow inventor called Max. Well, I say 'friend', rival would be a better word. While I struggled to perfect my home carbon-capture device, he patented invention after invention, all co-authored with a mysterious Nicholas Scratch. I could not suppress feelings of rankling towards him.'

'Max had spent some time on a tropical island, and kept a hideous carved idol by his workbench in the form of a horned goat. He also ate only pickled walnuts. Strange grub, I know, but it seemed to give him inspiration...'

'Indigestion, more like!' laughed the young man. 'My boy, let me continue' said the old man. 'Our paths diverged. I, son, continued to struggle. He grew rich and would swank around the globe. Then one Boxing Day, as if by magic, he suddenly materialised in my tiny house walking right through the wall! The wall, I should say, was solid brick... He was like a ghost, and there in his hand was the idol! He held it out to me and pointed: "You, my friend," he shouted, "You have a dreary job selling your carbon-capture and will die selling it. But I will give you the idol. It generates largesse, but you must sign an agreement with Nicholas Scratch. With him you will invent anew, tons of ideas will come to you, and investors will offer millions - all this in return for your mortal soul!"'

The young man was shocked: 'A pact with the Devil! What did you do?' The old man smiled: 'I saw right through his evil scheme to swap my soul for his. I seized the idol from him and flung it screaming into the open fire.' At this the fire flared up. Perspiration broke out on the young listener's brow. 'And then?'

The old man turned back to look at the fire. 'Neither he nor the idol were ever seen again, while I became rich selling a new form of carbon-sequestration to the Green community.'

The young man's gaze was suddenly drawn to a figure on the mantelpiece. "That's the idol!" he cried, 'You made the whole thing up!' The old man smiled for a final time 'Son, when I tell lies, I lie big'.