



MONDAY
Politics

TUESDAY
Build the Change

WEDNESDAY
Sport

THURSDAY
Science

FRIDAY
Culture

THE DAY
Build a better world



NEWS DETECTIVES

TODAY'S BIG STORY

Schoolgirl, 12, creates clean air backpack

Is being an inventor the best job? Eleanor Woods designed a rucksack to clean the air to help her mother breathe – and won a national competition to find the backpacks of the future.



Fresh: Eleanor Woods' prizewinning backpack has a built in air filter.

Eleanor Woods is only 12. But she has already invented something that could change the world.

The schoolgirl from **Huddersfield** has designed a **solar-powered** backpack that **filters** the air you breathe.

The backpack is the winner of a national competition, "Backpack to the Future", run by the Institution of Engineering and Technology, and the clothing company Hype.

The idea came to her because her mother suffers from **asthma**. They have an air filter in their home. It seemed **logical** to her to have the same protection

THE STORY SO FAR

There is no minimum age to be an inventor. George Nissen was 16 when he invented the trampoline, Peter Chilvers invented windsurfing at 12 and Sahithi Pingali, 16, made an app to clean lakes.

outside.

"My Breathe Better Backpack is all about keeping my friends, family and classmates safe using an air filter."

"It looks cool, will help get kids outside and fights off colds," she said.

The **urgent** need for clean air was made clear to Eleanor by the Covid-19

pandemic.

"We have just had a pandemic and this backpack could help **prevent** another one from happening with the air filters."

But clean air is important for other reasons, too. Air pollution is linked to 30,000 deaths in the UK every year.

"I walk to school next to the road and can taste the petrol when buses come through," she said.

Her prize is a working **prototype** of her backpack. Eleanor hopes that it will not be the only one that gets made.

"If just a few people start using it, it could be really good for the planet."

KEY WORDS

Filters: Removes dirt

Huddersfield: A town in West Yorkshire, England

Solar powered: Fuelled by the sun

Brand: Company

Asthma: A condition that

causes breathing troubles

Logical: Makes sense

Urgent: Needs to be done now

Prevent: Stop

Prototype: A test version of a product



YOU DECIDE

Is being an inventor the best job?

YES. Inventing is a way of making your dreams come true – and making the world a better place. There cannot be any better feeling.

NO. It is hard work to invent something useful – projects rarely make it past the idea stage.



THE DETECTIVE ZONE

SPOT THE FAKE

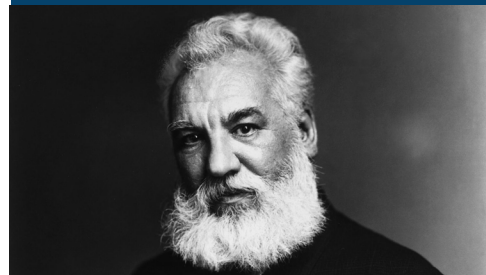
One of these three news stories is fake.
Which one?

Man jailed for monkey theft: "I'd do it again"

Pigeons in tiny backpacks test London air quality

Woman arrested with baby rhino in backpack

What did Alexander Graham Bell invent in 1876?



- A) The lightbulb
- B) Penicillin
- C) The telephone
- D) The camera

Build THE Change



Eleanor was inspired to invent something to help her mother breathe. In this challenge you will design an invention that could be used by people everyday to help clear up or stop pollution.

Step 1: Think about your design! Think about the items you use everyday — like backpacks, furniture or clothes. Could you redesign them like Eleanor redesigned her backpack?

Step 2: Create your design! You could draw a picture of it, or use LEGO bricks or craft materials to make a real-life version of your life-changing gadget.

Share your genius
Show your work to your class!



Upload a photo of your work to the Build the Change gallery by scanning the QR code and have your work displayed to inspire real-world change.

Talking point

What is the best invention ever?
Is it something you use?

Amaze someone

Ötzi, a 5,300-year-old mummified human found in the Alps, was found with the remains of a backpack made of hazel-wood.

During plague outbreaks, it was common for 17th Century Europeans to sniff a sponge dipped in vinegar. They thought it stopped bad air from getting into the body.

THE EXTRA PAGE

Backpack creates a breath of fresh air

A schoolgirl was inspired by her asthmatic mother to design a prizewinning backpack that filters the air.

Eleanor Woods, 12, from Huddersfield, entered the Backpack To The Future competition after her mother put the application form in her room. "I have an air filter at home because my mum has mild asthma," she said.

The backpack is powered by solar electricity and a dynamo has a filter and fans to clean polluted air.

"My Breathe Better Backpack is all about keeping my friends, family and classmates safe using an air filter.

"It looks cool, will help get kids outside and fights off colds," she said while holding her original design.

"The first thing that came to mind when it came to the design is that blue is one of my favourite colours and blue feels clean and the bubbles on the outside have a clean theme for breathing.

"We have just had a pandemic and this backpack could help prevent



Breathing it in: Eleanor Woods says her invention was inspired by her mother.

another one from happening with the air filters.

"My generation is really aware of pollution and we have lessons on it at school along with diseases spreading, and this is another reason I designed this, because it is getting much worse."

Similarly, she is aware of pollution, as she lives on a main road. "I walk to school next to the road and can taste the petrol when buses come through," she said.

She hopes the impact of her backpack will be far-reaching, saying: "If just a few people start using it, it could be really good for the planet."

The Backpack To the Future competition is a partnership between the Institution of Engineering and Technology and the fashion brand

Hype. Its aim is to challenge children to design a backpack that helps them do incredible things.

Eleanor hopes to enter the world of creative design, but she is also eager to become a teacher.

When her family found out she had won, Eleanor's mother, Annabel Hobbs, said she was "squealing", adding: "I can't believe she drew something and now we actually get to see it."

Eleanor was presented with her winning design in London but had to keep her news a secret. "I'm most excited to tell my grandparents," she said. ■

This is an edited version of a story from the © The Times © [30/01/2023]

Now read the book



Leonora Bolt: Secret Inventor by Lucy Brandt

Penguin
£6.99



Inspiring Inventors
Who are Changing our Future by Hiba Noor Khan

Walker
£14.99

Answers to puzzles

Invention question
The telephone

Spot the fake
Woman arrested with baby rhino in backpack



This week's challenge is part of the LEGO® Build the Change programme. It can be done at school or as homework, and parents can help upload photos of pupils' work to the online gallery.



Visit the gallery at <https://bit.ly/btcgallery> and feel free to use it as discussion point in class.