

# What's happening in the news this week?



Let's have a look at this week's poster!

2nd - 8th January 2023

# WALL OF FAME 19



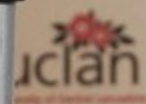
**Should all the energy we use  
be renewable?**



## EXTENDING SINK 6000

Savernagh  
Abacus Belsize Primary School

Savernagh from Abacus Belsize Primary School in Belsize Park in London designed the Extending Sink 6000. This self-adjusting sink was designed to automatically rise or lower dependent on the users height.



PA Images / Alamy Stock Photo

## WHEEL

Belle  
Marfleet

Belle from  
in East Hill  
Wheeler Park  
to use a 3D

Cove  
Univer

# Let's look at this week's story



A flatpack wind turbine, invented by Douglas Macartney from Scotland, is to help provide power to communities in Kenya, Africa. Douglas designed the turbine for a competition four years ago, when he was only 15. It has now been developed into a working prototype with two additional solar panels by teams of student engineers from Glasgow Caledonian University. It is hoped the device, which can be assembled without any specialist training, will be used to help areas recovering from natural disasters and in rural settlements.



Learn more about this week's story [here](#).  
Watch this week's useful video [here](#).  
This week's Virtual Picture News [here](#).



# How does it make me feel?



<b>sad</b>	<b>angry</b>	<b>happy</b>	<b>confused</b>	<b>excited</b>	<b>worried</b>	<b>shocked</b>	<b>afraid</b>
despondent disconsolate dismal doleful downhearted forlorn gloomy melancholic miserable woeful wretched	aggrieved annoyed discontented disgruntled distressed exasperated frustrated indignant offended outraged resentful vexed	beaming buoyant cheery contented delighted enraptured gleeful glowing joyful	addled baffled bemused bewildered disorientated indistinct muddled mystified perplexed puzzled	animated elevated enlivened enthusiastic exhilarated exuberant thrilled	agitated anxious apprehensive concerned disquieted distraught distressed disturbed fretful perturbed troubled uneasy	astonished astounded disconcerted distressed dumbfounded horrified staggered startled stunned surprised	alarmed apprehensive daunted fearful frantic horrified petrified terrified

# This week's story looks at events related to ...





Read through the resource below, which provides more information about Douglas Macartney's wind turbine design.

### How does the flatpack wind turbine work?

When he was 15, Douglas Macartney designed a flatpack wind turbine, which has been developed to help others around the world.

The technology's flatpack system will make it easier to transport to places that are hard to reach. It was created to generate enough electricity to power a light and two charging sockets in a disaster relief zone or refugee camp.

It is hoped the turbine will help create new opportunities for work and education that could transform lives.

The team's goal is to train local communities to assemble and use the device.



Ikea built a flatpack refugee shelter and I quite liked the simplicity of it. I thought of doing the same thing but with something that would have an energy use in a refugee camp. It has been amazing to see how my idea on paper has been turned into a working prototype.

Wind turbine inventor, Douglas Macartney



**Pictured above:** The student engineers from Glasgow Caledonian University with the wind turbine  
**Source:** Press Association

**Share your thoughts on the design and talk about the difference it will make in the communities where it will be used.**



Look at the resource below, which shares some examples of different renewable energy sources.

Renewable energy sources come from Earth's natural resources that do not run out such as sun, wind and water.



 **Sun**

Solar energy is created from the Sun. Solar cells are devices that convert light energy directly into electrical energy.



Wind turbines are huge towers with three blades. The wind drives the blades, which turn and drive a generator, creating electricity.



 **Wind**



 **Water**

A large reservoir can be used to create a flow of water that drives a turbine and generates power with a dam or barrier. This is called hydropower.

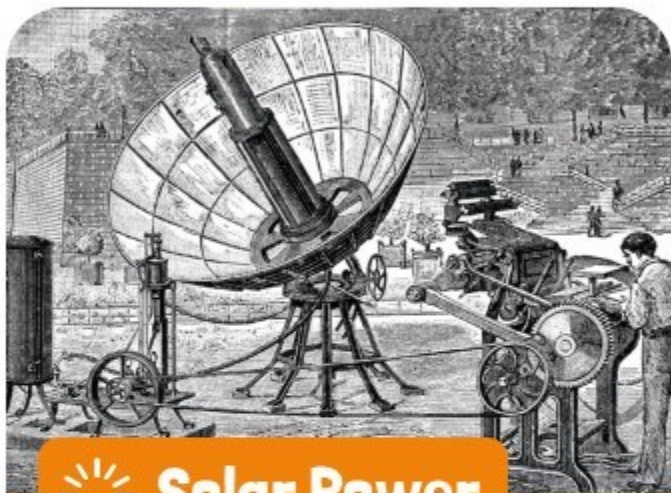
Tidal energy is also a type of hydropower. The sea's tides power turbines to create energy.



**Do you have any items at home or in school that are powered using only renewable energy?**



Look at the resource below, which shares information about some of the first renewable energy technologies.



## Solar Power

Augustin Mouchot of France invented the first solar energy system in 1860. It was called a 'sun meter'.

In London 1876, William Grylls Adams demonstrated solar cells can be used to generate electricity.

**Image source:** Scientific American, May 1882

## Windmills

In around 635 AD, windmills could be found in parts of the Middle East and Asia in a horizontal form.

The 1590s in the Netherlands saw windmills become vertical, tower-like structures. Wind pushed the blades which, then powered the pumping of water or milling of grain.



## Waterwheels

In Europe 200 BC, waterwheels used the energy in moving water like rivers to drive the machinery it was attached to.

**Does any of the information surprise you?  
Is there anything else you would like to find out?**



# WALL OF FAME 19



**Should all the energy we use be renewable?**

## EXTENDING SINK 6000

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Kingslton  
University  
London



Jucian  
University of London

PA Images / Alamy Stock Photo

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# Reflection



There are many different types of energy available to help keep the world moving. As our understanding of science and technology continues to grow, we can adapt to find ways that are best for us and the wider world.





# British Values



## Democracy

Energy is required to power many of the useful and convenient items we use daily. This energy can be produced in many different ways. We can use our voices to share our thoughts on this and impact the future.

# Protected Characteristics

Young people can be overlooked for their ideas because they may not be as experienced as adults but when given the opportunity, they can often make a valuable contribution.



Sex



Sexual Orientation



Age



Disability



Gender Reassignment



Marriage and Civil Partnership



Pregnancy and Maternity



Race



Religion or belief



# UN Rights of a Child



Having electricity and heating in our homes and schools can help ensure we survive and develop in the best possible way. Governments must make sure all children survive and develop in the best way possible.



# Useful vocabulary



## Adapt

To change, or to change something, to suit different conditions or uses.

As our understanding of science and technology continues to grow, we can **adapt** to find ways that are best for us and the wider world.

## Assembled

Made something by joining separate parts.

It is hoped the device, which can be **assembled** without any specialist training...

## Flatpack

Something that is in pieces inside a flat box, ready to be put together.

A **flatpack** wind turbine, invented by Douglas Macartney from Scotland, is to help provide power to communities in Kenya, Africa.

## Invented

Designed and/or created something that has never been made before.

A flatpack wind turbine, **invented** by Douglas Macartney from Scotland, is to help provide power to communities in Kenya, Africa.

## Prototype

The first example of something, such as a machine or other industrial product, from which all later forms are developed.

Douglas designed the turbine for a competition four years ago, when he was only 15. It has now been developed into a working **prototype**...

## Renewable energy

Energy that is generated from natural processes that are continuously replenished.

How important do you think **renewable** energy is for the world?

**Can you use them in your writing this week?**

# Picture News



## Should all the energy we use be renewable?

A flatpack wind turbine, invented by Douglas Macartney from Scotland, is to help provide power to communities in Kenya, Africa. Douglas designed the turbine for a competition four years ago, when he was only 15. It has now been developed into a working prototype with two additional solar panels by teams of student engineers from Glasgow Caledonian University. It is hoped the device, which can be assembled without any specialist training, will be used to help areas recovering from natural disasters and in rural settlements.



- Look at this week's poster image. Explain that on the poster this week is university student Douglas Macartney and his invention of a flatpack wind turbine.
- Talk about what you think a flatpack wind turbine could be and the benefits it could bring.
- Read through the information found on the assembly resource, which provides further details about Douglas Macartney's wind turbine design. Share your thoughts on the design and talk about the difference it will make in the communities where it will be used.
- Share what you already know about renewable energy. At the moment, a lot of the world's energy is produced by burning fossil fuels such as oil, coal and gas. Burning fossil fuels creates carbon dioxide gas, which adds to climate change, making the Earth warmer. Renewable energy is a natural source of energy that will never run out. How important do you think renewable energy is for the world?
- Watch this week's useful video, which provides an overview of renewable energies. Share anything new that you learnt from the video.

### Reflection

There are many different types of energy available to help keep the world moving. As our understanding of science and technology continues to grow, we can adapt to find ways that are best for us and the wider world.

# Picture News



## KS1 focus

### What are some different types of renewable energy?



- Write 'energy' on the board. Do you know what energy is? Can you use the word in a sentence? Does it have more than one meaning?
- For this session, we are thinking of energy as a power that comes from sources such as electricity, coal, and batteries that makes machines work or provides light and heat.
- Thinking about your home or school, make a list of items that need energy to work e.g., whiteboard, heating, lights, TV, cooker, car. What energy source do they use? Electricity, gas, oil, petrol?
- There are so many items we use that need energy. We need to make the energy using resources. Some of these resources are renewable; others are not. What do you think this means?
- Look at resource 1, which shares some examples of different renewable energy sources. Can you think of any other examples? Do you have any items at home or in school that are powered using only renewable energy e.g., solar fairy lights, wind up torch, a calculator?
- Discuss some of the advantages of renewable energy. Can you think of any disadvantages? What might happen on a cloudy, still day?

### Reflection

Many of the items we use every day require energy. Renewable energy sources, that won't run out, can be used to power these items.

# Picture News



## KS2 focus

### What is the history of renewable energy?



- Think about the energy we use to power everyday items. Some of the power we use comes from renewable energy sources; others are non-renewable. Can you list some energy sources we use? Which are renewable and which are non-renewable?
- Renewable energy comes from Earth's natural resources so they do not run out but generating electricity from natural resources requires the use of technology. What technology do you think converts wind, sun, water into electricity?
- The technology associated with renewable energy seems to be a more modern concept. Do you agree with this statement?
- Look at resource 2, which shares information about some of the first renewable energy technologies. Does any of the information surprise you? Is there anything else you would like to find out?
- Think about your local area. Have you ever seen a waterwheel or a windmill? Is it still in use or does it now have a different purpose e.g., is someone's home?
- We can now find places such as solar farms or wind farms, which are areas of land with the technology (e.g., solar panels, wind turbines) to generate electricity. Discuss the advantages of generating electricity this way. Are there any disadvantages?

### Reflection

For thousands of years people have used technology to harness Earth's natural resources. It is likely this technology will continue to develop in the future.



## KS2 follow-up ideas

### Option 1

Wind farms or parks have a group of wind turbines in the same place that are used to produce electricity. Wind turbines often have three blades.

- How many blades are there at a wind farm with 2, 7, 10, 100, 1000, 150 wind turbines?
- A wind farm has 24, 180, 30,000 blades. How many wind turbines are there?

Challenge – imagine the wind turbines all had 4 blades and answer the questions above.

### Option 2

Look at some pictures of wind turbines. Focus on the blades and discuss the following:

- How many blades are there?
- What shape are they?
- Can you describe how the wind moves the blades?

Aerodynamics is the way air moves around things. The blades on wind turbines are designed so that when the wind blows perpendicular to them, a lift force is generated that causes the movement.

- Can you design and make a paper windmill?
- What resources will you need?
- How will you ensure its blades turn?

Spend some time exploring. You can also watch a paper windmill being created here:

<https://www.youtube.com/watch?v=AZrP2vSqhQ4&t=229s>



## KS1 follow-up ideas

### Option 1

Think about the wind:

- What does it sound like?
- What does it feel like on your face?
- What does the wind do to the leaves in the trees?
- What does it do to your clothes?

Make a list of words and/or phrases to describe the wind e.g., blustery, breezy, rustling leaves, flapping coat, gust, gentle, tickle. Use these words to write a sentence to describe a windy day.

### Option 2

Discuss some of the everyday items that you use at school and home that use energy.

- What is it?
- Does it use electricity or something else?
- What do you use it for?
- Can you imagine not being able to use it?

Many of these items make our lives much easier and more comfortable. We can cook meals, keep warm, watch films, wash clothes etc.

- Can you think of any toys or games that are powered using electricity?
- Do you need to charge them or plug them in?
- Do you have any toys or games that use renewable energy sources only?



## This week's useful websites

### This week's news story

<https://bit.ly/3iuuo7K>

### This week's useful video

Renewable Energy  
<https://ypte.org.uk/videos/renewable-energy>

### This week's Virtual Picture News

[www.picture-news.co.uk/discuss](http://www.picture-news.co.uk/discuss)

### This week's vocabulary

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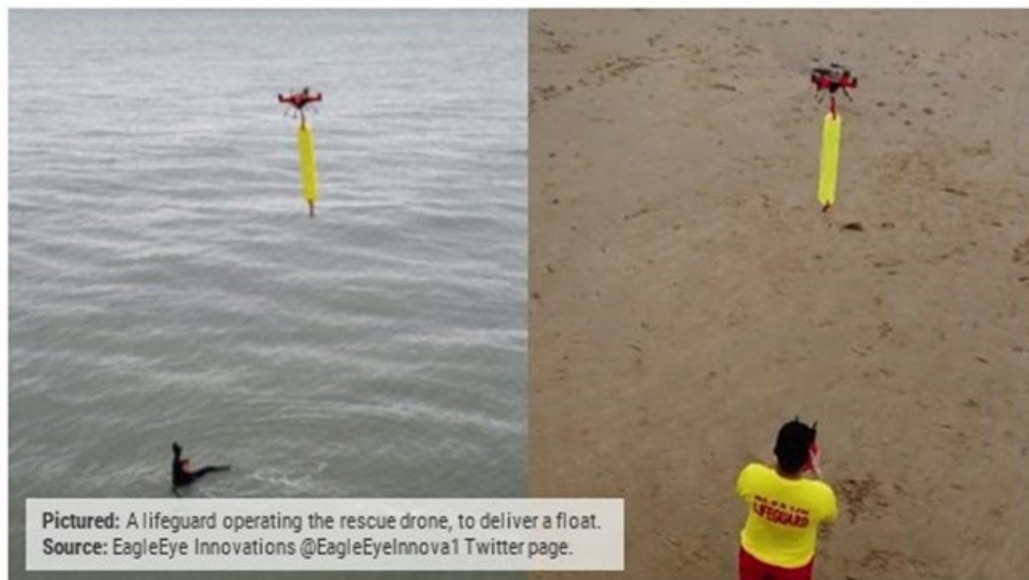
How important do you think **renewable** energy is for the world?

## Hidden history

A recent storm has uncovered what is believed to be a shipwreck from the 1800s on a Florida beach. The mystery items found along the Daytona Beach shore are likely shipwreck remains from the mid to late 1800s state archaeologists said, during a visit to the site. St. Augustine Lighthouse Archaeologist, Chuck Meide, said, 'The shipwreck is most likely a cargo-carrying sailing vessel from the 1800s. It would have likely sailed within sight of the coast and used lighthouses for navigation.' The museum's Lighthouse Archaeological Maritime Program measured and studied parts of the ship that are above the sand and estimated the merchant ship would have been over 80 feet long (25 metres). The amazing relic was revealed by beach erosion after Hurricane Ian and Hurricane Nicole struck Volusia County. 'Here in Florida, we often have storms that reveal cultural material either offshore or right on the beach. In these cases, our collective human story is brought to the forefront,' said Secretary of State, Cord Byrd.



**Pictured:** The beach where the shipwreck was uncovered as a result of recent storms. **Source:** Florida Department of State @FLSecofState Twitter page.



**Pictured:** A lifeguard operating the rescue drone, to deliver a float.  
**Source:** EagleEye Innovations @EagleEyeInnova1 Twitter page.

## Rescue drones

The Royal National Lifeboat Institution (RNLI) has been conducting a trial using drones, that will hopefully help sea swimmers in trouble. RNLI lifeguards, who rescued more than 3,000 swimmers off the UK coast in 2021, are conducting studies in southern Wales to see if this will be a way to help people more quickly. The special drone used for the trial, IP65, is a waterproof drone that can fly in rainy conditions and higher winds than a typical drone; it can also land and float on water before taking off again. Its fully waterproof camera can be used to locate a person needing assistance, and the special hook and release mechanism can then deploy the buoyancy aid, which can be carried

under the drone. The technology isn't intended to replace lifeguards, who will still be very much needed to rescue people from the water and provide any first aid required. However, it is hoped that with lifeguard operated drones locating people and providing them with a floatation device, more people will be saved. Tony Weston, who attended the trial course run by drone specialists Eagle Eye Innovations, The Emergency Response DronePilot Award, said: 'Wow - what a week, learning a new life skill - flying a drone that could aid the saving of lives! The experience was memorable, and the training team were excellent.'

Share your thoughts and read the opinions of others

[www.picture-news.co.uk/discuss](http://www.picture-news.co.uk/discuss)





# Macro masterpiece

David Gilliver has won the Macro category at the British Photography Awards. The winning piece, called Summer Vacation 2021, was created using a blue facemask and model railway figurines. The artist said that the image is dedicated to anyone who suffered disruption to their holiday plans over the last couple of years due to the pandemic. The facemask was illuminated using a lightbox, miniature people were arranged to show a joyful, relaxed holiday scene and then photographed using a 100mm Macro Lens. David said on his website, 'I am shaking like a leaf – my artwork 'Summer Vacation 2021' has just scooped top prize in the Macro Photography category at this year's British Photography Awards!!!! I am in utter shock.' The British Photography Awards, which aim to celebrate photographic talent from all British and British-based photographers, work with a range of UK charities and say, 'Together we can use the massive power of photography to do real good in the world.' The Macro category at the awards celebrates a branch of photography that takes extreme close-up pictures of small objects, most often insects or flowers. Over the past 20 years the Scottish artist has created thousands



**Pictured:** David Gilliver - Summer Vacation 2021 and Pac-Man scale & polish **Source:** David Gilliver Facebook page.

of photos of his 'little people', to highlight serious messages, about topics such as the pandemic and plastic pollution, using humour and playfulness to get his message across.

Last week's topic:

## Are television channels as important as they once were?

TV can teach us things on educational programs but nowadays people watch it all the time and it doesn't occur to them that it was much more limited in olden days

**Caroline**




They are important but not as important as they used to be as there are so many other things to watch.

**Johnny**

Nowadays, TV Channels are not seen as much, because we've now got social media, I think TV channels are still entertaining and essential because you can get instant and truthful information from around the world.

**Affan**

## Let us know what you think about this week's news?

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# TAKEHOME

2-8  
January



**Should all the energy we use be renewable?**

## In the news this week

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### Things to talk about at home ...

- > Do you have any sources of renewable energy either in your home or at school? What are they used for?
- > Share your thoughts on Douglas' invention. How do you think it may benefit the rural communities in Kenya?

**Please note any interesting thoughts or comments**

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