

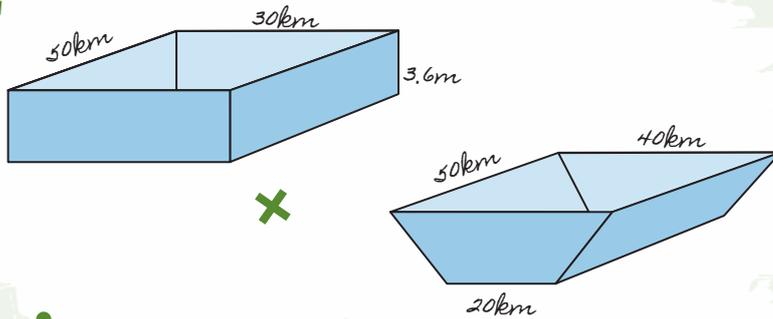
Reading Schools Eco Newsletter

Edition 1: February 2021

TEACH CLIMATE CHANGE IN MATHS!

In both primary and secondary schools, it is surprisingly easy to teach climate change and sustainability in more subjects than just Science and Geography. Mathematical knowhow is necessary in producing knowledge about climate change, understanding it as a phenomenon and contributing to the climate debate. Therefore, learning mathematics plays an important role in building a climate-friendly world by raising critical thinkers, active citizens and young scientists. Have a look at these amazing resources that are free and easy to use.

Work out the volume of each shape to estimate how much water is in Lake Chad.



Resources to support maths and climate change

Leeds Development Education Centre

Why don't you deepen and stretch your pupils' understanding of percentages, volume and interpreting graphs with this amazing range of planning and resources from Leeds Development Education Centre. They have developed frameworks and lessons for schools to help teachers integrate climate education within the Maths curriculum. These resources relate young people's Maths skills to real life climate issues, such as construction, flooding, drought and deforestation using these free activities which cover essential Maths skills as well as reasoning and problem solving. Leeds DEC resources include lesson plans, slides and worksheets suitable for Key stages 3 to 5, saving you time and energy.

<https://leedsdec.co.uk/climate-action-vm/>

Space Math from NASA

Here you will find hundreds of math problems related to all of the major changes to planet earth, such as rising sea levels, changing temperatures, the carbon cycle and world power consumption. The resources are differentiated for a range of ages 8 – 16.

<https://spacemath.gsfc.nasa.gov/earth.html>

Climate Change statistics for Year 6 from Energy Sparks

This four day resource covers line graphs and pie charts with a sustainability focus. It uses real world examples and data about school energy consumption, food waste and transportation to teach this topic in an engaging way that is guaranteed to get pupils thinking about sustainability issues in their own schools and lives.

<https://www.tes.com/teaching-resource/climate-change-statistics-activity-12420329>

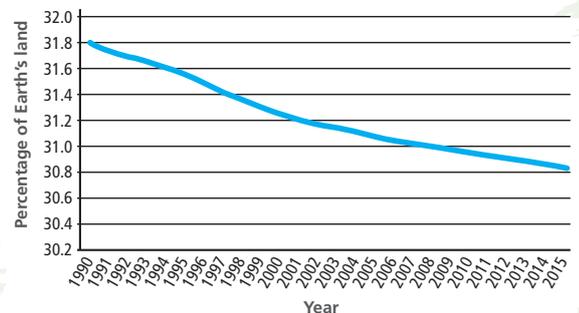
HELLO! This is a termly newsletter produced jointly by Reading Climate Change Partnership and Brighter Futures For Children to support your work on environmental education and climate change in your school.

If there is anything of interest to you in this newsletter, then please contact educateclimate@brighterfuturesforchildren.org

We are here to support all Reading schools to establish themselves as sustainable hubs within the community. We look forward to hearing from you!



Percentage of land covered by forest



What percentage of land was covered in forest in 1990? **31.8%**

What percentage of land was covered in forest in 2015? **30.8%**

What percentage of land was deforested between 1990 and 2015? **Approx. 1%**

GCSE and A Level style Maths questions about climate change

The University of Oxford and Environmental Change Institute's aim is to integrate climate change into the school curriculum, beyond the usual suspects of geography and environmental science. The world needs brainy mathematicians to help tackle climate change! All of these questions closely follow example problems from GCSE and A-level past exams.

<https://mathsforplanetearth.ouce.ox.ac.uk/>



LATEST ANNOUNCEMENT



FREE Renewable Energy Kits for schools

Teach your class about the wonder of renewable energy, using solar and wind power, with these amazing kits. They are a fantastic for child-led activities to introduce the children to renewable energy and STEM technology from Early Years and Primary school, as well as Secondary school. All of the kits are child-friendly and easy to use.

All of the kits come with instructions, training, lesson plans and risk assessments available here:

https://drive.google.com/drive/u/1/folders/1-wEJf1P6tqCdVnh_4fcThHkIERAnU-wm

Brighter Futures for Children have bought a range of renewable energy kits which we would like to loan to all Reading schools for FREE. These kits are available on loan to schools for up to half a term at a time. Please contact us to book.



Solar Water Heater Kit

- Demonstrates how the sun's energy is used to heat water
- Effective and rapid performance
- Measure heat rise with the digital thermometer (0-70°) or connect the kit to a data logger
- Experiment with different sun conditions to see how this affects the water heating capacity
- Aluminium solar clip fin with copper heating tube
- Full-colour activities/instructions included

Solar Photovoltaic Kit

- Demonstrates how the sun's energy is used to produce electricity
- Power motor, buzzer and LED modules
- Measure the voltage on the voltmeter or connect the kit to a data logger
- Experiment with different light conditions to see how this affects the power generated
- Storage case provided
- Full-colour activities/instructions included



NEWS

Training and Webinars

Training and webinars from Reading Climate Festival are available to watch online, such as these two CPD opportunities:

Webinar from Reading Borough Council:

'Supporting Safe and Sustainable Travel'

www.readingculturelive.co.uk/events/supporting-schools-to-achieve-climate-friendly-travel/

An overview of what the Council can offer schools to help support active and sustainable travel, the benefits of these various initiatives, and how schools can get involved to help achieve their health, travel plan and air quality and climate objectives. This includes: Modeshift STARS, Bikeability cycle training, School Streets, WOW (Walk Once a Week), interactive travel map and other online resources.

Webinar from Eco Schools and Brighter Futures for Children:

'How to become a Green Flag Eco School and Develop a Climate Friendly Curriculum'

www.readingculturelive.co.uk/events/eco-schools/

Eco Schools explain how they can support you to become a Green Flag school with suggestions and clear explanations of the road to success. Harriet Neville, Reading Borough's Climate Change Lead Practitioner, also shares free resources and quick-win tips on how to make your school more sustainable and embed climate change across the National Curriculum.



Wind Turbine Kit

- Demonstrates how wind energy is used to produce electricity
- Use outdoors in the wind or indoors with a fan
- Power motor, buzzer and LED modules
- Measure the voltage on the voltmeter or connect the kit to a data logger
- Experiment with combinations of 2, 3 or 6 blades to discover the most efficient configuration
- Vary the blade angle to find out how this affects the energy output
- Change the gear ratios to simulate the gearbox on a real wind turbine
- Storage case provided
- Full-colour activities/instructions included



Eco work at school can be approached in various ways. You might like to start via one of the six themes below:

Energy



Individual: Turn off the lights when you leave an empty room (even the staff room!)

School: Put your Energy Performance Certificate (EPC) rating on display for all pupils, staff and parents to see.

Community: Arrange a visit to Green Park wind turbine and learn about how it powers the local community.
www.greenpark.co.uk/wildlife-environment/wind-turbine-visitor-center/

Nature and Green Spaces



Individual: The Woodland Trust's free printable tree ID guides are a fantastic way to help children learn about trees.

They cover all four seasons so youngsters can discover how trees change throughout the year.

School: The Woodland Trust is offering free trees to school communities – get in touch to build your own green space!
www.woodlandtrust.org.uk/plant-trees/schools-and-communities/

Community: Write to the council asking for local verges to be left for "No Mow May" to allow wild flowers and pollinators to flourish.

Transport



Individual: Encourage pupils, parents and staff to use public transport, walk, cycle or "park and stride".

School: Make sure all of your pupils have the opportunity to participate in Bikeability training from Avanti cycling.
www.bikeability.org.uk

Community: Set up a School Streets programme; a road outside a school with a temporary restriction on motorised traffic at school drop-off and pick-up times. The restriction applies to school traffic and through traffic. The result is a safer, healthier and pleasant environment for everyone.
www.reading.gov.uk/schoolstreets

Purchasing, recycling and waste



Individual: Set up recycling bins in every classroom, reuse all that you can, and make sure fruit waste from Key Stage 1 snacks is put in a compost bin.

School: Donate unwanted school furniture to Zoot, where it can be repurposed in educational settings around the world.
www.zooteducationalfurniture.co.uk/

Community: Establish your school as a Terracycle collection point, to collect difficult to recycle waste from the community and earn points and money for your school.
www.terracycle.com/en-GB/about-terracycle/drop_off_locations

Health & Wellbeing



Individual/Community: Climate-anxiety is proving to be a key challenge in today's in school environment, adding to the stress levels of teenagers and teachers who feel ill-equipped to help their students. Learn how to turn this anxiety into action here
www.transform-our-world.org/

School: Could your school host "Meat Free Mondays" to raise an awareness of agriculture and carbon footprints?
www.meatfreemondays.com/schools/

Water



Individual: Turn off the taps when not in use; report a leak to your school caretaker.

School: Publish your water usage for pupils, parents and staff to see.

Community: Thames Water has a comprehensive education programme includes educational school trips to our sewage treatment works, talks in schools, and free online resources.
www.thameswater.co.uk/about-us/responsibility/education



Eco Schools

www.eco-schools.org.uk

We encourage all Reading schools to sign up to Eco Schools. Here's why:

- It gives your school a focus and awards to work towards
- It is an international award scheme that empowers pupils, raises environmental awareness, improves the school environment
- It creates financial savings for schools.
- It engages the wider local community, links to the curriculum
- It can help deliver Ofsted requirements
- It is a supportive and well-run network

Already an Eco School?

Have you signed up as an Eco School and not sure where to go next?

Are you considering signing up to Eco Schools but aren't sure about the workload? Get in touch and we can link you to local teachers who have achieved Green Flag status and are very happy to support you through the journey in the simplest, easiest way, with minimal effort!

THIS MONTH'S TOP TIPS FOR SUSTAINABLE SCHOOLS



Switch to Ecosia

Switch all of your internet browsers to Ecosia, and plant trees while you browse the internet! We are encouraging all schools in Reading to switch their default search engine to Ecosia. Follow the simple steps on how to do this here:

https://drive.google.com/file/d/1hF_bUM3gn6yIV_YoJ_EqggL4Ubf700YO/view

Why switch to Ecosia?

It is a 'carbon negative' search engine that aims to be a greener alternative to search engines like Google or Bing.

Ecosia use 80% of their profits to fund the planting of trees around the world.

Since its inception in 2009, more than 113 million trees have been planted by Ecosia.

The CO₂ footprint of an internet search has been estimated at 0.2g. Ecosia tries to reduce this building their own solar plants to power all searches using the engine, as well as planting trees and offsetting energy use with renewables.

Who else has done it?

Royal Holloway is the tenth university in the world to formally set Ecosia as their default. More than 1,200 computers on campus now suggest Ecosia as standard.

The Hill Primary School in Caversham has switched all of its digital devices to Ecosia, and lots of parents are using it on their digital devices too!

<https://intranet.royalholloway.ac.uk/students/news-events/news-articles/2020/november-20/our-switch-to-ecasia.aspx>



Establish Your School as a Terracycle Collection Point

Terracycle is able to turn difficult to recycle waste into pellets that can be used for buildings and furniture. Sign up to collect different items of your choice, and receive money in return for what you collect! Collection is easy, and all you have to do is print your postage label for collection by DPD.

There are 14 sites across Reading. Would you like to join them? Check out which other schools in Reading are Terracycle points here:

https://docs.google.com/document/d/1WRmR_s_licEzce3hE6ma32kVBrnUUwc/edit?rtfpof=true

Let's Go Zero

It only takes a few moments to join Let's Go Zero 2030, the national campaign demanding government backing for zero carbon schools. Every school that signs up is pledging to work towards a more sustainable future, while also urging the government to support this vital mission, linking perfectly to any sustainable targets your school may be working towards.



We encourage all schools in Reading to make the pledge!

NEWS

Reading Climate Festival

In November 2020, Schools across the borough participated in the Reading Climate Festival, by taking part in the webinars and activities led by the Youth Climate Summit (coordinated by charity Global Action Plan and a team of dedicated teachers). The Youth Climate Summit is a free, week-long virtual festival where teachers, climate activists and school pupils led a range of amazing activities to inform and inspire young people around the world. All of the webinars and activities are available to watch and participate in on the Transform Our World website www.transform-our-world.org/youth-climate-summit-2020

Creative Earth Competition

Creative Earth is an art competition for people aged 16 and under from across the UK, run by the COP26 Climate Change Conference in collaboration with World Wildlife Fund (WWF). <https://together-for-our-planet.ukcop26.org/creative-earth/>.

The UK is hosting COP26 in Glasgow in November 2021, bringing together world leaders to tackle climate change and ensure a better future for us all. Enter the competition to be in with a chance of having your children's artwork displayed at COP26 and show the rest of the world their vision for the future.

NEW Reading Climate Action for Schools website

www.readingcan.org.uk/schools

Find out more about what you can do in Reading to promote sustainable choices at your school. Access our suite of planning and resources and be inspired by our tips to lead a carbon neutral lifestyle.



Reading Schools Climate Action Network Join us!

We have set up the Reading Schools Climate Action Network (RSCAN) to support and link up primary and secondary school staff who are working with the challenges of environmental education. This gives all school staff concerned about climate change and sustainability the opportunity to meet others interested in similar issues and share ideas. We would like to offer shared practice, areas for collaboration, access to training and shared resources.

Get in touch if you are interested in joining us!
educateclimate@brighterfuturesforchildren.org



Contact us:

educateclimate@brighterfuturesforchildren.org
www.readingcan.org.uk/schools