

# African Meteorological Society

## Learning Resources for School Children and Teachers

**Language:** AR (Arabic), EN (English), FR (French), PO (Portuguese), RU (Russian) or SP (Spanish)

**Connectivity:** Assessed as H (high), M (medium) or L (low) where H indicates that there a lot of high-resolution videos/ animations whereas L indicates fewer graphics or an offline option

Name/title	Brief description	URL	Notes	Language	Connectivity
<b>Mainly for school children</b>					
Globe Weather	A five-week curriculum unit provided by UCAR Center for Science Education is designed to help middle school students understand weather at local, regional, and global scales.	<a href="https://scied.ucar.edu/globe-weather-curriculum">https://scied.ucar.edu/globe-weather-curriculum</a>	Teaching guides, student activity sheets, assessments, PowerPoints, and extensions for how students can collect their own data using GLOBE protocols are provided.	EN, FR, SP	L–H

<p>Come Rain or Shine: Understanding the Weather</p>	<p>This Future Learn course explores some of the physical processes driving weather systems and includes practical activities and fieldwork. Try your hand at forecasting and have a go at interpreting weather maps. You'll also watch our educators carrying out simple but effective experiments including creating clouds and simulating hot air rising.</p>	<p><a href="https://www.futurelearn.com/courses/come-rain-or-shine">https://www.futurelearn.com/courses/come-rain-or-shine</a></p>	<p>Hosted by Future Learn this course is free with limited access but requires registration. Suggested length is 3 weeks with 4 hours per week. Certification can be provided on completion if you buy the course. Available to start anytime, but educators will be present at certain dates.</p>	<p>EN</p>	<p>L–H</p>
<p>ThoughtCo.</p>	<p>ThoughtCo. looks at how the weather works by exploring the science behind daily forecasts, weather safety and climate change.</p>	<p><a href="https://www.thoughtco.com/weather-and-climate-4133550">https://www.thoughtco.com/weather-and-climate-4133550</a></p>	<p>Click on the topic of interest and then navigate to the required resources.</p> <p>Free to use and no registration required.</p>	<p>EN</p>	<p>L–M</p>

<p>Watching the Weather</p>	<p>This free course, Watching the weather, describes how meteorological observations are made looking upwards from the surface of the Earth, looking downwards from satellites in space and from aircraft and balloons within the atmosphere. This international network of observations is vital for scientists and forecasters and the results impact on everyone's daily activities.</p> <p>Produced by Open Learn for the Open University it is aimed at introductory level.</p>	<p><a href="https://www.open.edu/openlearn/nature-environment/environmental-studies/watching-the-weather">https://www.open.edu/openlearn/nature-environment/environmental-studies/watching-the-weather</a></p>	<p>Free course but requires registration. Downloadable so suitable for offline use. Suggested 10 hours to complete the course.</p>	<p>EN</p>	<p>M</p>
<p>Learn About Weather</p>	<p>This Future Learn course explores the basic processes that result in the weather and how the weather affects people like photographers, gardeners and walkers.</p>	<p><a href="https://www.futurelearn.com/courses/learn-about-weather">https://www.futurelearn.com/courses/learn-about-weather</a></p>	<p>Registration/enrolment required for access to the resources.</p>	<p>EN</p>	<p>L–H</p>
<p>Backyard Meteorology: The Science of Weather</p>	<p>The course, provided by Harvard University, explores the science behind weather systems by teaching the observational skills needed to make a forecast without using instruments or computer models. It covers the physical processes driving weather, the global forces that shape global climate systems, and the limits of prediction in both human observations and computer models.</p>	<p><a href="https://www.classcentral.com/course/edx-backyard-meteorology-the-science-of-weather-12108">https://www.classcentral.com/course/edx-backyard-meteorology-the-science-of-weather-12108</a></p>	<p>Registration/enrolment required for access to the resources.</p>	<p>EN</p>	<p>L–M</p>

<p>Our Climate Our Future</p>	<p>Our Climate Our Future is a free, high-quality series of lessons on the effects of climate change, what causes it, and how to fight it going forward. It is provided by ACE (Action for the Climate Emergency). Videos, animations, activities and other resources explain the reasons for climate change and the realities of its effects on our planet now and provide ideas for what students themselves can do to help.</p>	<p><a href="https://ourclimateourfuture.org/">https://ourclimateourfuture.org/</a></p>	<p>Registration/enrolment required for access to all video content and additional resources.</p>	<p>EN</p>	<p>M–H</p>
<p>Climate Kids</p>	<p>Climate Kids is a comprehensive website from NASA covering a variety of global climate change topics. This website invites students to explore and play while maintaining great depth of content. It provides many ways to participate in learning, including games, hands-on activities, facts, videos and career profiles.</p>	<p><a href="https://climatekids.nasa.gov/">https://climatekids.nasa.gov/</a></p>	<p>Registration/enrolment not required.</p> <p>Topics include Weather &amp; Climate, Atmosphere and Water.</p>	<p>EN</p>	<p>L–M</p>
<p><b>For school children and teachers</b></p>					

MetLink	<p>MetLink is an educational website, hosted by the Royal Meteorological Society (RMets), with weather and climate resources for schools. Although designed for teachers and educators, it includes a wealth of content that will increase understanding of weather and climate science and how it is applied.</p> <p>Resources can be selected by topic or by school level (primary/secondary).</p> <p>There is a search function to help find the most appropriate resources.</p>	<p><a href="https://www.metlink.org/">https://www.metlink.org/</a></p>	<p>Click on the topic of interest and then navigate to the required resources.</p>	EN	L–H
STEM Learning	<p>STEM Learning is an educational website with weather and climate resources for schools. Resources can be selected by topic or by school level (primary / secondary).</p> <p>There is a search function to help find the most appropriate resources.</p>	<p><a href="https://www.stem.org.uk/resources/">https://www.stem.org.uk/resources/</a></p>	<p>Click on the topic of interest and then navigate to the required resources.</p>	EN	L–H
US National Weather Service (NWS) Education	<p>NWS Education offers a wealth of weather resources for educators, adults and children of all ages. You can explore science, safety, and citizen science programmes.</p>	<p><a href="https://www.weather.gov/education/">https://www.weather.gov/education/</a></p>	<p>Click on the topic of interest and then navigate to the required resources.</p>	EN	L–H

Climate Change Education	<p>This course, produced by the Inter-American Development Bank, explores the basic science behind climate change and presents the tools to teach it in a positive, engaging and participatory way. The course also introduces some of the ethical and social issues around climate change.</p> <p>The aim is to assist in the launch of climate change education and actions to mitigate and adapt to climate change in your school community.</p>	<a href="https://www.classcentral.com/course/edx-climate-change-education-8114">https://www.classcentral.com/course/edx-climate-change-education-8114</a>	Registration/enrolment required for access to the resources.	EN	L–M
Satellite Meteorology	<p>CIMSS Satellite Meteorology is an excellent topic to introduce middle and high school students to geoscience, physics, chemistry and applied mathematics. Satellite Meteorology learning modules provide scientists and educators with exciting activities and hands-on tools for investigation, inquiry, analysis and stewardship.</p>	<a href="http://cimss.ssec.wisc.edu/satmet/">http://cimss.ssec.wisc.edu/satmet/</a>	There are 10 different learning models that can be completed in a few hours.	EN	L
We Are Teachers	<p>The website provides ideas, inspiration, and giveaways for teachers. It includes 25 activities for teaching weather at primary level.</p>	<a href="https://www.weareteachers.com/best-weather-activities/">https://www.weareteachers.com/best-weather-activities/</a>	Registration/enrolment not required.	EN	L

Weather For Schools	The site is dedicated to explaining how to collect basic weather data with a view to helping and encouraging young weather enthusiasts between the ages of 7 to 11. It may still be relevant to older pupils, but the main target audience is the younger pupils, their parents and their teachers. Some material has been simplified for the benefit of the target audience. The site also provides useful information for teachers.	<a href="https://www.weatherforschools.me.uk/">https://www.weatherforschools.me.uk/</a>	Registration/enrolment not required.	EN	L
Climate Change	The course provided by the National Center for Science Education provides evidence-based answers to some central questions about climate change — Is the climate changing? Are humans causing that change? What will the consequences be? What can be done about it?	<a href="https://ncse.ngo/climate-change-101">https://ncse.ngo/climate-change-101</a>	Registration/enrolment not required.	EN	L
Climate Change	Wicked Weather Watch aims to provide clarity for children and young people about climate change and global warming.	<a href="https://wickedweatherwatch.org.uk/climate-change/">https://wickedweatherwatch.org.uk/climate-change/</a>	Registration/enrolment required for access to the resources.	EN	L

The Globe Program	The Globe Program is a five-week curriculum unit provided by UCAR Center for Science Education, which provides a comprehensive set of resources to investigate the natural environment.	<a href="https://www.globe.gov/do-globe">https://www.globe.gov/do-globe</a>	Registration/enrolment not required.	AR, EN, FR, PO, SP and many other languages	L–M
YouTube	YouTube has a range of educational material dealing with both weather and climate.	<a href="https://www.youtube.com/">https://www.youtube.com/</a>	Search on "teaching aids for weather and climate"  Registration/enrolment not required.	EN	M–H
Precipitation Education	This website, presented by NASA's Global Precipitation Measurement (GPM) mission, provides students and educators with resources to learn about Earth's water cycle, weather and climate, and the technology and societal applications of studying them.	<a href="https://gpm.nasa.gov/education/weather-climate">https://gpm.nasa.gov/education/weather-climate</a>	Browsing available on type of content, audience and topics.	EN	M–H
<b>Mainly for teachers</b>					
Weather Extremes	The resource provided by the Australian Science Teachers Association helps students develop an understanding of what constitutes extreme conditions before looking more at cyclones in detail.	<a href="http://scienceweb.asta.edu.au/years-5-6/unit3/overview/yr56-unit3-overview.html">http://scienceweb.asta.edu.au/years-5-6/unit3/overview/yr56-unit3-overview.html</a>	Registration/enrolment not required.	EN	L



UCAR Center for Science Education	The UCAR Center for Science Education provides curriculum units, lesson plans, picture books, and other resources to support primary and secondary educators who are teaching about weather, climate, air quality or other Earth system science topics.	<a href="https://scied.ucar.edu/educators">https://scied.ucar.edu/educators</a>	Registration/enrolment not required.	EN	L
School Learning Zone	The School Learning Zone provides on-line learning guides and resources for schools about weather and climate	<a href="https://school-learningzone.co.uk/key_stage_one/ks1_geography/weather_and_climate/weather_and_climate.html">https://school-learningzone.co.uk/key_stage_one/ks1_geography/weather_and_climate/weather_and_climate.html</a>	Registration/enrolment not required.	EN	L
Met Éireann	The Education Portal of Met Éireann provides educational material on weather related themes. Content is aimed at younger and older primary school students.	<a href="https://www.met.ie/education/school-resources/">https://www.met.ie/education/school-resources/</a>	Registration/enrolment not required.	EN	L
Twinkl	Twinkl Provides teacher-created planning and assessment materials and teaching resources.	<a href="https://www.twinkl.com/teaching-wiki/meteorology">https://www.twinkl.com/teaching-wiki/meteorology</a>	Registration/enrolment not required. Can search on topic, age and language.	EN, FR but a few Po and RU	L

Met Office	The Learning Portal of the Met Office provides a free set of curriculum-linked resources aimed at sparking students' curiosity in the world around them and help them understand the effects of weather and climate on their community.	<a href="https://www.metoffice.gov.uk/weather/learn-about/met-office-for-schools">https://www.metoffice.gov.uk/weather/learn-about/met-office-for-schools</a>	Registration/enrolment not required.	EN	L
Climate Change Resources	The World Wildlife Fund (WWF) provides a range of curriculum linked resources for the classroom to help pupils explore the issues of climate change in an engaging and motivating way.	<a href="https://www.wwf.org.uk/get-involved/schools/resources/climate-change-resources">https://www.wwf.org.uk/get-involved/schools/resources/climate-change-resources</a>	Registration/enrolment not required.	EN	L
Weather and Climate Change	The National Improvement Hub of Education Scotland provides access to resources that have been designed to help teachers improve their practice in learning and teaching relating to climate change.	<a href="https://education.gov.scot/improvement/learning-resources/weather-and-climate-change/">https://education.gov.scot/improvement/learning-resources/weather-and-climate-change/</a>	Registration/enrolment not required.	EN	L
Climate Resources for School Teachers	The British Council provides resources that support positive action towards climate change in schools.	<a href="https://www.britishcouncil.org/climate-connection/get-involved/resources-school-teachers">https://www.britishcouncil.org/climate-connection/get-involved/resources-school-teachers</a>	Registration/enrolment not required.	EN	L

Primary School Resources	The University of Reading provides resources aimed at stimulating thinking, discussion and ideas amongst teachers and young people.	<a href="https://www.reading.ac.uk/planet/climate-education/information-for-schools/primary-schools">https://www.reading.ac.uk/planet/climate-education/information-for-schools/primary-schools</a>	Registration/enrolment not required.	EN	L–M
Resources for schools	The Royal Geographical Society (RGS) provides high quality geographical teaching and learning resources including those dealing with weather and climate	<a href="https://www.rgs.org/schools/teaching-resources/">https://www.rgs.org/schools/teaching-resources/</a>	Search on "weather and climate" and choose the educational stage.  Registration/enrolment not required.	EN	M–H
Rangi - Weather and Climate Lessons for Teachers	National Institute of Water and Atmospheric Research provides lesson packages designed to offer intermediate age students an engaging and interactive way to learn about the weather and climate of New Zealand.	<a href="https://niwa.co.nz/education-and-training/schools/teaching-resources/rangi-weather-and-climate-lessons-for-teachers">https://niwa.co.nz/education-and-training/schools/teaching-resources/rangi-weather-and-climate-lessons-for-teachers</a>	Registration/enrolment not required.	EN	L–M
Resource Collection	The NOAA portal provides access to educational resources that help integrate NOAA science into formal and informal education. Materials are organized by themes aligned with common teaching topics.	<a href="https://www.noaa.gov/education/resource-collections">https://www.noaa.gov/education/resource-collections</a>	Registration/enrolment not required.	EN	L–M

SDG Resources for Educators - Climate Action	UNESCO portal resources provides access to a range of resources that support Sustainable Development Goal 13: Take urgent action to combat climate change and its impacts. The resources cover early childhood, primary and secondary education and are aimed at raising awareness about climate change mitigation, adaptation and impact reduction.	<a href="https://en.unesco.org/themes/education/sdgs/material/13">https://en.unesco.org/themes/education/sdgs/material/13</a>	Registration/enrolment required for access to the resources.	EN	L–M
Bring Climate Education to Every School	ClimateScience aims to make learning about climate change engaging, accessible and reliable	<a href="https://climatescience.org/schools">https://climatescience.org/schools</a>	Can select on age and language. Registration/enrolment required for access to some resources.	AR, EN, FR, PO, SP and many other languages	L–M
Basics of Meteorology	Study.com provides a comprehensive collection of lessons that review the basics of meteorology.	<a href="https://study.com/academy/topic/basics-of-meteorology.html">https://study.com/academy/topic/basics-of-meteorology.html</a>	Registration/enrolment required for access to the resources.	EN	M–H
Africa Weather and Climate	The YouTube video is a 1.5 hour lesson for secondary students on Africa's weather and climate and position of Africa's major climate regions.	<a href="https://www.youtube.com/watch?v=b4ySRVm6qwc">https://www.youtube.com/watch?v=b4ySRVm6qwc</a>		EN	M

SA Geography	The site provides resources that support the Curriculum Assessment Policy Statements (CAPS) for Geography for upper secondary students in South Africa. Includes resources covering the atmosphere, and weather and climate.	<a href="https://sageography.co.za/">https://sageography.co.za/</a>	Registration/enrolment not required.	EN	L–M
Climate Change Education	The course provided by the Inter-American Development Bank (IDB) explores the basic science behind climate change and presents the tools to teach it in a positive, engaging and participatory way. The course also introduces some of the ethical and social issues around climate change.	<a href="https://www.edx.org/course/climate-change-education">https://www.edx.org/course/climate-change-education</a>	Registration/enrolment required for access to the resources. Limited free access.	EN	M–H
Weather for Kids	3D Geography provides information and free teaching resources to help make learning fun. There is a section dealing with weather which covers observing and measuring the weather that we see every day.	<a href="https://www.3dgeography.co.uk/weather-for-kids">https://www.3dgeography.co.uk/weather-for-kids</a>	Registration/enrolment not required.	EN	L–M
World's Largest Lesson	World's Largest Lesson promotes use of the Sustainable Development Goals (SDGs) in learning. It provides creative tools for educators and action focussed learning experiences for children and young people that build skills and motivation to take action for the SDGs.	<a href="https://worldslargestlesson.globalgoals.org/">https://worldslargestlesson.globalgoals.org/</a>	Choose Resources and then filter on "Climate".	AR, EN, FR, PO, SP and many other languages	L–M

Education.com	Education.com provides worksheet, activities and lesson plans for primary-aged children.	<a href="https://www.education.com/resources/">https://www.education.com/resources/</a>	Search on "Weather". Registration/enrolment required for access to the resources.	EN	L–M
TeacherVision	TeacherVision creates and vets classroom resources that are accurate, timely, and reflect what teachers need to best support their students.	<a href="https://www.teachervision.com/">https://www.teachervision.com/</a>	Search on "Weather" or "Climate". Registration/enrolment required for access to the resources.	EN	L–M
Teaching Climate and Sustainability in Primary Schools: An Outdoor Learning Approach	The course provided by the University of Reading discusses ways to embed climate awareness and sustainable practices into the life of the school. It explores the importance of being outside for inspiring children and learn how to lead high-quality learning experiences outdoors.	<a href="https://www.futurelearn.com/courses/teaching-climate-and-sustainability-in-primary-schools">https://www.futurelearn.com/courses/teaching-climate-and-sustainability-in-primary-schools</a>	Registration/enrolment required.	EN	M–H

Teach with space	ESA's Teach with Space collection, developed in collaboration with the European Space Education Resources Office (ESERO) network, is a set of innovative curricular classroom resources that use space as the entry point to run STEM lessons during school hours. These resources include teaching guidelines, student activities, and experiment kits.	<a href="https://www.esa.int/Education/Teachers_Corner/Teach_with_space3">https://www.esa.int/Education/Teachers_Corner/Teach_with_space3</a>	Registration/enrolment not required.  Choose either primary or secondary classroom resources.  Go to <a href="https://www.esa.int/Education/Teachers_Corner">https://www.esa.int/Education/Teachers_Corner</a> for other material provided by ESA.	EN, FR, PO, SP and many other languages	M–H
Climate Change	The Young People's Trust for the Environment has prepared a suite of lessons, targeting young people. As well as suggestions for classroom activities, this lesson plan suite includes detailed instructions for an engaging experiment that can be carried out using simple equipment in the classroom. Links to related resources are also provided.	<a href="https://ypte.org.uk/lesson-plans/climate-change">https://ypte.org.uk/lesson-plans/climate-change</a>	Registration/enrolment not required.	EN	L–M