Updated 03.05.20	**Resources to help with home schooling and inspire young people about Science, Technology, Enginee**							
	This set of activities and resources has been gathered by our UKHO STEM Ambassadors to help support our colleagues during the Co							

Resource Reference Number	STEM Resource Name	STEM Resource Overview	STEM Resource Content Description	Age Range				Provided by
				4 to 11	7 to 11	11 to 16	16 to 19	
1	Families: activities to do at home	A range of fun, hands-on activities for families to use at home, suitable for all ages from 4 to 16	Wide range of activities including: Train like an Astronaut, European Space Agency challenge to design a Moon Camp and Making models to understand extreme weather conditions	Y	Y	Y	N	STEM Learning UK
2	Activities to support continuing in-school delivery	A selection of cross-curricular activities that can be used in school to engage young people of all ages. All of these resources are completely free for everyone to access and can be adapted for use with individual students, small groups or mixed-age classes. Can be used for parents who are home schooling too	Activities have been created in projects planned for 2 or 5 hours with Resource Packs and Lessons Plans which can be downloaded including: Exploring the science of sound and music; Animal adaptions; Practical action STEM challenges	Y	Y	Y	Y	STEM Learning UK
3	Buoys Beacons and Bananas	Our 'Buoys, beacons and bananas' education resources will help pupils learn about shipping, seafaring and safety. KS1 KS2 and KS3 have age appropriate learning resources	Activities and information (including separate teachers pack with links to curriculum), teaching about maritime trade (how stuff gets here) and about lighthouse and buoys. Well put together resource, recommend that you use with the Teacher pdf and make this supported learning for best use	Y	Y	Y	N	Trinity House UK
4	Cyber School	Free to attend, live & online cyber security school for school pupils around the world.	"Cyber School is an online education institution for school students around the world. It is completely free to attend. We teach cyber security and computer science using a blended learning approach. We provide live, instructor-led lessons twice per day. Each age group will have their own individual curriculum and live lessons. We also set individual 'Cyber Projects' for students to work on outside of class. (Cyber Projects are also known as homework, but shhh!)"	Y	Y	Y	N	Academy of Cyber Security
5	Bebras Computing Challenge	A series of computational thinking challenges for all key stages.	There are annual competitions the school can sign up for but individuals can attempt previous challenges at any time without signing up. The actual age range is 6 to 18.	Y	Y	Y	Y	Bebras UK
6	Barefoot Computing Lessons	A set of cross-curricular resources focussing on teaching computational thinking.	These resources are provided by Barefoot Computing who are part of South West Grid for Learning. They are normally delivered in school but can easily be picked up in a home setting.	Y	Y	N	N	Barefoot Computing

7	Discovery of Sound in the Sea (DOSITS)	A set of resources around sound in the sea	Hosted by University of Rhode Island there are a variety of presentations, webpages, audio files, webinars all focussed on underwater sound	Y	Y	Y	Y? Webinars are technical	University of Rhode Island and Partners
8	Scouts - the Great Indoors	A set of indoor activities put together by the Scouts to keep kids learning new skills and having fun.	Includes some basic science experiments and engineering challenges as well as craft and writing ideas.	Y	Y	Y	N	Scouts
9	Blockly Games	Learn computer programming skills by playing games on Blockly	Choice of 7 games to play, which need to be solved by using block code.	Y	Y	N	N	Blockly
10	Origami	Arts and Crafts of the ocean world	Create a Whale with your origami skills in this activity pack created by our UKHO STEM Ambassadors We have included x1 file containing the instructions and x1 file with a chart image for you to use - you can also use an A5 sized coloured or plain piece of paper, or whatever you can lay your hands on at home!	Y	Y	Y	Y	UKHO STEM Ambassadors
11	Colour me in and Word Search	Arts and Crafts of the ocean world	Create a picture and decorate a Whale and complete the Word Search puzzle in this activity pack created by our UKHO STEM Ambassadors We have included x1 file containing the Whale picture for you to colour in with the Word Search to complete	Y	Y	Y	Y	UKHO STEM Ambassadors
12	BBC Teach	Video Lessons for Primary Schools	A series of video lessons from BBC Teach, covering science and maths topics as well as literacy and english, art and music.	Y	Y	N	N	BBC Teach
13	BBC Bitesize	Bitesize is the BBC's free online study support resource for school-age pupils in the United Kingdom. It is designed to aid pupils in both schoolwork and, for older pupils, exams	Use BBC Bitesize to help with your children with their homework, revision and learning. Find free videos, step-by-step guides, activities and quizzes by level and subject are available grouped into collections for: * Primary (age 3 -11) * Secondary (11 - 16) * Post-16 (16+) New daily lessons are being added each weekday, and there are also excellent resources for parents to use to help with home schooling and activities to help you and your family during lockdown There is also a set of resources, activites and support for students with Special Educational Needs and Disabilities (SEND)	Y	Y	Y	Y	BBC Bitesize

14	BBC Bitesize - for pre-school children	Early years resources for learning at home	We've selected this BBC Bitesize for mention as it provides a range of resources to help keep pre-school children entertained at home with fun eductional and learning activities. Activities are grouped around the following themes: * Maths * Literacy, Language and Communication * Understanding the world * Expressive Arts and Design * Wellbeing and development * Physical Education and Development There is a wide range of games, stories, challenges, audio and video resources for you to chose from	N	N	N	N	BBC
15	Tide game	Tide-O-Matic make at home activity	Resource to learn about how Tides work	Y	Y	Y	Y	Exploratorium
16	Science activities to do at home	A range of Scientific learning resources	A wide range of both activities and digital resources on Science subjects from Biology, Earth Science, Environmental Science to the history of Science and more.	Y	Y	Y	Y	Exploratorium
17	Science, Geography and History digital resources	A range of learning resources including Science but also History and Geography	Wide range of digital resources, quizes and fun games	Y	Y	N	N	Ducksters
18	Mapzone	Interactive Geography and Map resource	Learn about Maps including Map skills, general Geography and GIS. Plenty of Quizes and games!	Y	Y	N	N	Ordnance Survey
19	CS Unplugged	Computer science lessons and activities which do not require compiuters.	Fully resourced lesson plans to learn about many CS topics without using a computer. The activities are linked to other curriculum areas (e.g. literacy, numeracy, art...). There are two sites: classic and new.	Y	Y	Y	N	CS Unplugged
20	Code Academy	Learn to code for free.	Sign up for free, choose a language to learn and follow the interactive lessons.	N	N	Y	Y	Code Academy
21	BIO Challenges	Programming challenges	The British Informatics Olympiad (BIO) is an annual competition in computer programming for secondary schools and sixth form colleges. It has been running since 1995. The website makes all previous challenges available for free so you can practice at any time.	N	N	Y	Y	British Informatics Olympiad
22	Amazon Future Engineer	Free virtual coding programme - 20 hours of content available from 3rd April to 3rd June 2020.	Available for two months from 3 April to 3 June 2020, these resources cater for students aged 12 to 17 to help build computer science skills for students learning at home. Access 20 hours of free content, these resources use a Python Programming Platform, exploring 'Fourth Industrial Revolution' themes, plus a moderated forum and handy FAQs. Covering computer programming aspects in line with Key Stage 3 and 4 of the National Curriculum.	N	N	Y	N	Amazon/Fire Tech

23	Expedition Home	Free range of space-based activities and resources for children and parents to do together while learning from home	The resources have been designed to help you build, experiment, move, watch, draw, colour, programme and explore space together. There are also special home editions of the European Space Agency's projects running from 12 May to 4 September, including building a 3D model lunar base, being a climate detective, and planning a scientific mission and designing a mini satellite	Y	Y	Y	Y	European Space Agency
24	Home schooling resources	Free range of resources to keep children learning about our geographic world	The resources have been gathered to provide curriculum-based content for primary, seconary and college students in Key Stage groups, as well as quizzes and acitivities. The online resources included ways to learn about maps, GIS, explore the natural world, geology and fossils, with activity packs, tools, puzzles, support packs as well as activities to do together as a family	Y	Y	Y	Y	The Association for Geographic Information (AGI)
25	Earth School	Quests for students around the world to celebrate, explore and connect with nature from 22 April to 5 June	Earth School! Embarking on a month of daily adventures – or Quests – that will help you understand and celebrate our natural world, while learning about how dependent we are on our planet. Now more than ever, we need to protect, nurture and care for Earth – so join us to learn something amazing every weekday between Earth Day (April 22nd) and World Environment Day (June 5th). Within each lesson, you'll find fascinating resources compiled by Earth experts and ideas for getting involved in ways that count. Join us to learn more, create, act and share your journey (#EarthSchool) towards a cleaner and greener life.	Y	Y	Y	Y	TedEd in collaboration with a range of environment community partners
26	STEM Ambassadors Live	On the 7 May STEM Ambassadors from across the UK will be presenting a day of live streamed activities for schools and students at home.	The day will include a series of half hour sessions from STEM Ambassadors covering a range of subjects across science, engineering, mathematicians and more. A Question and Answer forum will also run alongside each session, allowing students to engage their curiosity and dig further into the subject. Each presenter will bring a wealth of expertise from their work as a STEM professional, using activities already tried and tested in the classroom. The event starts at 10am and will be live-streamed on the STEM Learning YouTube channel. The sessions will cover a range of ages, but will mostly be focused on older primary school and younger secondary school students.	Y	Y	Y	Y	STEM Learning UK

27	Outline printable maps for colour and fun activities	A 24-page PDF with a variety of printable maps that can be used to color and label, as well as promote further exploration of our world.	This vector web map features outline maps of the World. The maps can be used for coloring and other fun activities by budding cartographers. These outline maps are great for teaching children about our World. Have them color and label countries, regions and bodies of water. Limited labels appear on the map at large scales. After coloring the city maps, children can do further research to learn more about these places.	Y	Y	Y	Y	Esri and ArcGIS
28	Geography and STEM resources for home schooling	Free resources available online to help children learn about geography and geospatial data	Resources have been collated into collections suitable for: * parents * primary school age children (5-11) * secondary school age children (11-16) * Post 16 and includes videos, quizzes and online comics as well as links to resources held on the STEM Learning UK website with age and curriculum specific activities	Y	Y	Y	Y	Geospatial Commission, Government Geography Profession
29	Weekly virtual lessons with experts from the maritime industry	Join a free weekly virtual lesson with experts working in Britain's maritime sector and ask live questions and answers	From w/c 27.04.20 Maritime UK will be delivering a weekly lesson to give young people an understanding of the maritime sector, the careers available and how our island nation keeps goods moving. You can either watch it live, or play as a recording at a time that suits you. The virtual lessons have been designed for 11-18 year olds by James Bullar of the London Nautical School	N	N	Y	Y	Maritime UK
30	Cyber Security Challenge UK	A selection of online games and puzzles to introduce you to different aspects of Cyber Security	This collection of resources provides individual challenges and games to help students learn to solve mysteries, puzzles, crack codes, and provide practical guides to learn about cyber security and test their knowledge	Y	Y	Y	Y	Natonal Crime Agency
31	Oxford Owl for Home	Oxford Owl is an award-winning primary platform developed by Oxford University Press. It is home to fantastic free online teaching, learning and assessment resources, expert support as well as a range of paid-for subscriptions for primary schools.	Oxford Owl is packed with expert advice, tips and activities to help parents support their child's education. The resources are grouped into the relevant ages of children for the following themes: * Reading * English * Maths * Phonics There are kids' activities, fun learning ideas and practical resources which can be downloaded as well as free e-books	Y	Y	N	N	Oxford University Press

32	Hegarty Maths	Free video lessons and tutorials for students preparing to take GCSE and A Level Maths	This is a fantastic set of resources grouped into collections and subject areas relevant to the GCSE and A Level Maths curriculum. Daily lessons are now being streamed live to help students preparing to take A-Level maths in 2021, which also allows you to ask questions to Mr Hegarty in realtime. All of these are available to watch later if you can't make it to tune in for the live stream	N	N	Y	Y	Hegarty Maths
33	Eden at Home	Free online resources on gardening, green living, play, wildlife and nature	The team at Cornwall's Eden Project have created a range of fun activities to help students of all ages learn about our natural world. From creating a wildflower meadow, gardening tips for beginners, fun facts about plants, recycling a milk carton into a bird, making a marble run, outdoor learning with trees, and tips for how to build a den there is plenty available to help you have fun, and learn, with your children	Y	Y	Y	N	Eden Project
34	Khan Academy	Daily schedules for students aged 2 - 18 and remote learning resources	The Khan Academy is a United States-based nonprofit organisation with a mission to provide a free, world-class education for anyone, anywhere. The resources available cover: * Maths * Science * Engineering * Arts and Humanities * Computing * Economics and finance The content provides students with a structured learning journey and content, with a skills and knowledge test at the end of each session, so they can gain points and 'level up'. There are also daily schedules and weekly learning plans available as well as tooklits for Parents.	Y	Y	Y	Y	Khan Academy

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Source	
https://www.stem.org.uk/home-learning/family-activities	
https://www.stem.org.uk/in-school-activities	
https://www.trinityhouse.co.uk/education	
https://cyberschool.ac/	
https://challenge.bebras.uk/index.php?action=user_competitions	
https://www.barefootcomputing.org/primary-computing-resources	

https://dosits.org/resources/	
https://www.scouts.org.uk/the-great-indoors	
https://blockly.games	
https://ukho.sharepoint.com/:b:/s/UKHOSTEMAmbassadors/EZSxj5CZKshIqGRhJY815jwBGgKrPsN60YoCSLt40kHSrw?e=XzQpD5	
https://ukho.sharepoint.com/:i:/s/UKHOSTEMAmbassadors/ERVgguGTTntOhJ3seYFuTSEB-zY3rosSyZRdyRDLNFR3Fw?e=y4q8Y3	
https://ukho.sharepoint.com/:b:/s/UKHOSTEMAmbassadors/ER41MhePVzlFmUjD68AQisUBBt3RSpFurRNRyi1-v3FdDQ?e=mm46C8	
https://www.bbc.co.uk/teach	
https://www.bbc.co.uk/bitesize	

https://www.bbc.co.uk/bitesize/articles/zks4kmn	
https://www.exploratorium.edu/snacks/tide-o-matic	
https://www.exploratorium.edu/education/teaching-resources	
https://www.ducksters.com/	
https://www.ordnancesurvey.co.uk/mapzone/	
https://csunplugged.org/en/ https://classic.csunplugged.org/activities/	
https://www.codecademy.com/login	
https://www.olympiad.org.uk/	
https://amazon.firetechcamp.com/python/	

http://www.esa.int/Education/Expedition_Home	
https://www.agi.org.uk/news/agi/1501-home-schooling-resources	
https://ed.ted.com/earth-school	
https://www.stem.org.uk/news-and-views/news/stem-ambassadors-live	

https://www.arcgis.com/home/item.html?id=7da16f48c81f448fa972d4a52fdc1e4e	
https://storymaps.arcgis.com/stories/4837287ecc714a859df6ff9e09c51794	
https://www.maritimeuk.org/careers/resources/virtual-lessons/	
https://cybergamesuk.com/cybergames	
https://home.oxfordowl.co.uk/	

https://www.youtube.com/user/HEGARTYMATHS	
https://www.edenproject.com/learn/for-everyone	
https://www.khanacademy.org/	