



ASTME

Commonwealth Association of Science, Technology and Mathematics Educators

e-Newsletter



Number 17

December 2021

www.castme.online

Delivering a Common Future:

Connecting, Innovating, Transforming

Editorial Comment

It has been an honour to be the Editor of the CASTME Newsletter for its first 17 editions. Alas, I am finding the time difficult to locate these days and it is now necessary for me to pass on this activity to someone else. Rachel Morgan will be taking over as editor of this newsletter from the next edition: number 18. It is my intention to continue to be:

- A member of the Executive Committee
- Treasurer and link with the Charities Commission
- Company Secretary and link with Companies House

I have very much enjoyed initiating and editing the Newsletter and, additionally, helping CASTME's communication system to develop. I shall also continue, with Dr David Moore to develop the communication of activities across the Commonwealth and to ensure that the Dennis Chisman lectures continue to be a success in bringing innovative and interesting ideas and processes in Science, Industry, Engineering and Mathematics to the forefront. – **Jonathan ling**

CASTME, the Earth Sciences on-line project and SATIS

The article on the front page of the CASTME Newsletter number 16 has developed considerable interest. Professor Chris King, Emeritus Professor of Earth Science Education at Keele University and his colleagues continue to talk with Dr David Moore and Jonathan Ling about the Activity Sheets.

David and Jonathan have been in discussion with the ASE Chief Executive, Hannah Russell, along with her colleague, Jane Hanrott in regard to the use of the Science and Technology in Society (SATIS) materials as the basis for a similar "science-wide" resource available through CASTME.

The latest one with over 350 earlier ones can be found at: <https://www.earthlearningidea.com/> with the associated blog at: <https://earthlearningidea.blogspot.com>.

Sreepur Village and the Covid Pandemic



The CASTME Newsletter number 15 in September 2020 reported on Sreepur village during the Covid pandemic. This year, 15 months later, a Sreepur Village, Bangladesh 2021 Impact Report has just been prepared. Within this Impact Report, it is noted that **85% of single mothers, staff members and their spouses have received their second Covid-19 vaccine**. This was not a simple task as vaccination appointments are only available in Bangladesh via a government app and not all the single mothers have smartphones.

In addition, many single mothers cannot read or write. Their team continues to assist each individual and will continue to work hard to ensure the remaining mothers and staff receive their vaccines shortly. It is their intention to assist the surrounding community as well. More is printed about Sreepur later in this Newsletter.

**The Okebukola Science Foundation**

Recently, the Board of the Foundation approved the publication of:

- Children and Science in the Home
- Children and Science in the Playground
- Children, African Folklore and Science

CASTME's Chair, Dr, the Lady, Sue Dale Tunnicliffe mentored members of the Group: this was undertaken through the stimulation by research on the early learning of science. The question is: "What is the point in merely describing the science in what children do at home or on the playground without intervening to achieve the goal of winning African children for science?"

Two strands of intervention were identified by the Board:

- (a) To promote science literacy among parents and caregivers to enable them to explain the basic science in what children do, and:
- (b) To influence policy reform in the early learning of science.

Professor Okebukola states that the Board is not unaware of the Herculean task of promoting science literacy in a context where adult literacy is below 70% and adult science literacy is less than 15%.

Yet, he recognizes that we must soldier on to attain the goal of at least 70% science literacy in Africa as set in the African Union's Agenda 2063.

These books which will be in English and local languages will contribute towards this effort. Okebukola Science Foundation will enter into partnership with TV and radio channels in Nigeria to prosecute its popularization of science agenda.

The *Children and Science in the Home* series gives one a flavour of the thrust. Each of the 12 books in the series is intended to be about 20 pages long and will serve as a resource for training and be part of the experimental phase of the Foundation's studies on children's science.

Note: Peter is a long-standing supporter of CASTME, he was a friend of its founder, the late Dennis Chisman, and is a CASTME adviser who regularly attends our informal meetings online. STEM in everyday play of pre-school children. is becoming a new research area.

**Professor Peter Okebukola**



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Down to the Wyre - Jean Wilson

There are not many days when the media fail to mention global disasters such as flooding, landslides, forest fires and drought, these are the extremes of climate change which make the headlines.

At a local level and as a volunteer for Wyre Rivers Trust and with a particular interest in estuarine and marine environments I have been pro-active for many years in devising and supporting educational and research projects. The issues that challenge the River Wyre are no different to most rivers in the British Isles and many worldwide. Rivers are dammed, channelized, canalised, polluted, abused by industry and exploited for leisure. We build on flood plains and remove trees with the resulting loss of soil which is an invaluable resource.

The project is aimed at highlighting the afore-mentioned issues to primary school children in the Wyre Catchment. Natural Flood Management promotes initiatives such as leaky dams, opening up flood plains and removal of dams and weirs. It is obvious from the experiences and debates that have been had with these children that they have engaged positively with this project and seriously care about the catchment. At the end of their 'River Day', their understanding and new-found knowledge is reflected in their construction of 'shoe-box' dioramas which model good or poor practice or both. Freshwater issues don't stand alone in the hydrosphere!



Highlighted the many issues challenging the marine and estuarine environs such as the removal of mangrove forest leading to coastal erosion and loss of biodiversity, addressed in Mauritius with a large replanting scheme. The flooding issues associated with the River Wyre also extend out along the Wyre Channel where it enters Morecambe Bay and the Irish Sea, flood defences along the coast are substantial and aim to protect thousands of homes from sea level rise and the increasing number of storm events.

These concrete revetments can be sterile and imposing structures even with an increasing amount of design consideration. The rock groynes which extend out across the littoral zone are slowly being colonised even with the relatively limited incline. I am now working with the engineers in helping to increase the degree of colonisation within and between the groynes such as the creation of overhangs and the boring out of rock pools. It is envisaged that these zones supported by the relevant informative material, as well as student and teacher involvement will become sites of educational excellence, promoting care and respect for our Earth.

Jean writes on behalf of the Wyre Waters Catchment Partnership, the Wyre Rivers Trust <http://www.wyriverstrust.org> and the Royal Society of Biology (North West).



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The 2021 FINDEL CASTME Awards

- 1 The Findel CASTME Education Award is presented to the entry that displays an innovative approach to increasing STEM awareness. The awardee receives a £300 voucher to spend on Philip Harris science equipment or resources as well as an international membership of the ASE for one year. This year it is awarded to the Centre for Unfolding Learning Potentials (CULP), NGO Jaipur, Rajasthan, India

Their Entry: Designing and developing a teacher handbook for science experiences at remote small rural primary schools through use of a mini-tools kit: essentiality of contextualisation and teacher empowerment

Their entry was submitted by Dr Lalit Kishore Senior Fellow SDG 4 Quality Education

- 2 The Findel CASTME Protect Our Planet Award is presented to a STEM project which focuses on the Sustainable Development Goals such as Climate Change, Responsible Consumption and Clean Water. The awardee receives a £100 voucher from Findel International. This year it is awarded to: The Society of Biology, Mauritius

Their Entry: The Society of Biology, Mauritius, regularly runs sessions for local communities, schools and teachers bringing about awareness and promoting Biology whether by Webinars, or by public demonstrations of how to do composting from kitchen wastes, donating plants to public to encourage tree planting or organising quiz competitions to bring about more interest in students. Projects like vertical gardening and aquaponics in schools are in the pipeline. Their entry was submitted by: Ellora Dhunoo FRSB, UK President, the Society of Biology, Mauritius SDG 13 Climate Action SDG 12 Responsible Consumption and Production

- 3 The Findel CASTME Community Award Presented to a community project focused on mothers, fathers, carers and children and/or on raising awareness of STEM in the community. The awardee receives a £50 voucher from Findel International.

This year it is awarded to the following *Collaborating Organizations*:

- The Centre for Communicative English, India
- Nangi's ND Smriti Sansthan (NDSS), INDIA

Their entry: submitted by Prabha Awasthi, Dr Rajiv Agrawal and Dr L Kishore
SDG 3 Good Health and Well Being

It was "towards covid-19 literacy for students attending alternative education interventions: preparation and validation of short courses for child-to-child transaction".

"The aim of the scientific literacy intervention was to develop a twelve-hour course through activity-sheets and worksheets to acquire basic information about the disease and feel empowered to meet out the challenge through preventive health measures by acquire basic information and literacy skills."

Send entries for 2022 Findel CASTME Awards. to kathnugent1@gmail.com Closing Date 31/10/2022.



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Reopening SUCCESS: the Children and Girls Night Shelter and increasing Digital Literacy in Sreepur



“When I was in my community, I used to wait in a long queue to pay electricity bill”, Shanta said, a mother of two children who hails from the northern part of Bangladesh. She also added, “We had another big risk of keeping cash at home”.

Shanta and her two daughters came to Sreepur Village in early 2020. She lost her husband after the birth of her second child. After her husband passed away, she and her children became helpless. After arriving at Sreepur Village, along with various livelihood skill development training Shanta has been participating in literacy programme where she is learning basic literacy as well as digital literacy. In digital literacy class, she learns about digital devices, using the internet, mobile banking, online ticket booking for bus-train etc.

“Now I’m capable to use a smartphone, I can browse the internet”. Shanta said. “Now I can manage my finance through mobile banking”, she added. Shanta said, “when I will get back to my community, I don’t need to go to the bank for paying the electricity bill, I can pay any bill through Bkash”. She also added, “along with these facilities, I’ll be able to money transaction by mobile phone”. Afzel



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Delivering a Common Future:
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08:45 - 17:00

Owing to the ongoing Covid-19 situation and more specifically the Omicron variant, ASE has to cancel the face-to-face component of the ASE Annual Conference, which had been due to take place at Sheffield Hallam University from January 5-8.

The Conference will kick off online on **Wednesday January 12 with International Day**, much like it does in normal, non-COVID years. This unmissable line-up includes sessions such as a high-profile panel discussion exploring the use of play in science education, an update on the 2025 Pisa framework, and sessions delving into the topics of sustainability, science literacy for SEND students, and more.

Following International Day, ASE Annual Conference Online 2022 will continue on **Friday 28 & Saturday 29 January** with a mixed offer for all audiences including technicians on Friday 28, **Saturday 19 February** will focus on 11-19 teaching and learning, and **Saturday 26 February** will be the ASE Annual Conference Primary day. The programmes will include a plethora of sessions for everyone involved in teachers' professional learning and will be drawn from ASE Committees' selections

CASTME links Science, Technology, Engineering and Mathematics (STEM) Educators across the Commonwealth
It has a UK-based board of trustees, with regional branches and advisers in the Commonwealth

Editor's Note: For the next edition of this newsletter please send articles to **Jonathan Ling or Rachel Morgan:**

j.g.ling@btinternet.com or rachelmorg@aol.com by 30th April 2022 CASTME website: <http://www.castme.online>

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