



ASTME

Commonwealth Association of Science, Technology and Mathematics Educators

e-Newsletter

Number 9

www.castme.org.uk

December 2014

'A Young Commonwealth'

This has been chosen as the theme for Commonwealth Day 2015, which takes place on 9 March. Announcing the theme, Secretary-General Kamalesh Sharma said: "People aged 29 or under account for the majority of the Commonwealth's population, and play a vital role at the heart of sustainable development and democracy. 'A Young Commonwealth' recognises the capacity, contribution and potential of young people, particularly in 2015 when the world will define a new global development framework". See more at: <http://thecommonwealth.org/media/news/>

CASTME Lecture

The 2015 Dennis Chisman Memorial lecture, will be held:

On: 13th May 2015

At: 6.00 for 6.30 pm

Venue: International Students House,

229, Great Portland Street, London W1W 5PN

It will be provided by Mike Watts, Professor of Education at Brunel University, London. He will talk on:

'Making a scientist: is it character or culture?'



Science and everyday life, two cultures worlds apart. People tend to live in one or the other and 'trespassers' over the borders are not common: real scientists are 'unworldly' and people in general are unscientific. So, are scientists born like that, or 'made' by prevailing cultures? Are arts and humanities specialists just the same? Are people generally unscientific for good reason? The research in this area is mixed and conflicting: some say that scientists are made through family, friends, schools and society. Others say scientists are simply born like that. The answers are important for the ways in which we educate people, not just in schools but in everyday life, not just in the UK but world-wide. Do we want single-minded specialists or 'cross-border raiders'? Is there not room in science to fit everyone in? Even for those who might detest it?

Dennis Chisman

CASTME regularly commemorates the late Dennis Chisman, who died in 2008, with a prestigious Memorial Lecture. He was an inspirational founding member of both CASTME and ICASE (International Association of Associations for Science Education) and also its President.



CASTME and the University of Westminster

Colin Matheson

The University of Westminster has the largest scholarship scheme of any UK university. It is currently worth over £3 million per annum. It has had a long and successful relationship with CASTME and a number of students from the university have been involved in CASTME and its activities.



In 2010 The University gave two full scholarships to CASTME Mauritius to celebrate the establishment of the CASTME Mauritius branch. As Chair of CASTME at that time, I visited Mauritius with Sue Dale Tunnicliffe and we awarded the scholarships to [Rubeena Domun](#) and [Rajkumaree Oogur](#), both graduates in Engineering from the University of Mauritius.

Initially CASTME and the University of Westminster had decided to give one scholarship only; however, they were so impressed with the quality of the candidates that they agreed to award two.

The two successful candidates studied for and were awarded:

- 1 MSc Computer Science with Merit
- 2 MSc Mobile Personal and Satellite Communications with Distinction

One of the conditions for the award of the scholarships was that the successful candidates return to Mauritius where their new skills and knowledge would benefit their country. Both candidates did so and are now pursuing useful and successful careers.

Whilst the two CASTME Mauritius scholarships were a one off, the University of Westminster scholarship scheme continues and welcomes applications, particularly from students from developing and middle income countries.

An important factor in a successful application is the intention of the candidate to return home to use the skills and knowledge they have gained to the benefit of their nation.

Full details of the University of Westminster's scholarships' scheme can be found at:

<http://www.westminster.ac.uk/study/prospective-students/fees-and-funding/scholarships>.

Colin Matheson has been Chair and is currently Secretary, of CASTME.



ASTME

Commonwealth Association of Science, Technology and Mathematics Educators

e-Newsletter

Magna Carta and the Commonwealth

Margaret Lenton

In 1215, King John sealed the Magna Carta at Runnymede in Wraysbury on 15th June on an island in the Thames. The island



contained an ancient yew tree and a priory. The Charter had been agreed between King John and his barons who were concerned about his autocratic rule, his raising of taxes and the loss of territories in France, particularly Normandy.

Two clauses of Magna Carta, the **Golden Clauses**, are still part of the Law of the land of the UK:

- The right to trial by one's peers
- To no one will justice be denied, delayed or sold.

These basic principles are held to be equally important by the countries of the Commonwealth.

Two other surviving clauses, are that the City of London will enjoy all its ancient privileges and that the Church in England will be free. King John had roused the barons against him by losing lands in France, ruthless taxation policies, cruelty, probably killing his nephew and quarrelling with the Church.

The use of modern technology and archaeology have found the remains of a Tudor mansion and established the outlines of the original Magna Carta Island and the Priory to the North of the Victorian-folly ruins. The Charter was probably read out to monks who wrote down its clauses and then the finished charters (about 40) were sent around England to sheriffs in the counties, who would tell people what had been decided.

The barons met first at St Alban's in 1213 and then they moved on to Bury St Edmunds where they swore an oath not to separate until the King had accepted their demands. Magna Carta was subsequently taken as the basis of freedom **for all**.

King John died in 1216 and the Regent, William the Marshall, re-issued Magna Carta to secure the succession of John's son, Henry III. Magna Carta continued to be re-issued during the thirteenth century. Fifty years after 1215, Simon de Montfort called the



Magna Carta's principles were revived in the reign of James I (1603-1625) who wanted to claim the 'Divine Right of Kings', namely that the King was above the Law. Parliamentarians in the English Civil War looked to Magna Carta. Those drafting the Constitution of the United States of America, after the War of Independence, acknowledged Magna Carta as important and it is regularly quoted in cases before the USA Supreme Court. The Commonwealth countries, (except Mozambique), took the principles of Magna Carta as the foundation for their Constitutions on independence. The 800th anniversary will be celebrated across the Commonwealth on 15th June 2015.

The CASTME Magna Carta Project

To add to the celebration and create a legacy project involving Science and Technology it is proposed that the project will involve at least one of the following topics:

- Looking at the importance of rivers/water in the past and currently to communities particularly:
- Transport - the river Thames was an important highway for hundreds of years, perhaps the kings and other people came by river? Is river transport important in your country in the past and now? What sort of boats and power?
- Fertilisation the land
- Sources of food, what food, how is it captured
- Sources of power for mills for example.
- How rivers are now managed in the different countries?
- Are rivers dredged?
- If rivers flood, what steps are being taken to prevent flood water damaging property and mitigating the effects of flooding on communities?

The yew tree at Runnymede is now 2,500 years old and has had many uses over the years, including providing wood for bows and arrows in the Middle Ages. Today, yews provide materials from which cancer drugs have been developed.

- Why are trees so important to communities?
- What trees exist in your country and what uses have been developed from plant/tree materials to benefit mankind?
- Planting trees can also be a strategy used to mitigate flooding. Do you have any such examples?
- How can you tell how old is a tree?

Write and illustrate or devise a drama, which tells a story of a river, The Thames or of your country by March 31st 2015.

Certificates of participation will be awarded and special awards made for the most innovative submissions.

An Application form is available from the Chair, Sue Dale Tunnicliffe: lady.tunnicliffe@castme.org.uk

e-Newsletter

first parliament.

The Alexander Prize for Women

Entries are invited for the Alexander Award. This was established in the memory of Professor and Mrs. Alexander who worked in science education in many commonwealth countries for over 50 years and is fully supported by the UK's Association for Science Education (ASE)

What are the award criteria?

- 1 A woman or a female community that has made a significant contribution to encouraging the scientific, technological or mathematical education of girls or women in a situation of particular difficulty or scarce resources.
- 2 Each nomination should:
 - Explain the reasons for the nomination
 - Detail the achievements of the nominee/s over a period of time
 - Be made by a third party, or by the nominees themselves.

Nominations should be received by **30th September 2015**.
ALL ENTRIES to be marked **Alexander Award**

Proposals will be acknowledged and originators will receive notification and details of successful projects once CASTME has assessed them and agreed the awards to be made.

CASTME will be proud to display proposals to a wide audience through publications, conferences and meetings, but will not return proposals to their originators.

Entries for either of the above may be sent **Either** electronically to:

The CASTME secretary Colin Matheson at:
Colinmatheson@me.com and to awards@castme.org.uk

The CASTME Award Scheme

Awards are offered for educational projects, which address the social or human context of science, technology and mathematics at: Gold, Silver, Bronze and Commended levels. Anyone involved in any form of education in the widest senses, formal or informal, within societies can enter, Secondary or tertiary education project a year as an individual or as a group.

Submitted reports should be based on personal experience and should include a substantial account of teaching or other educational work. Judging is based on evidence of originality and creativity, use in practice, the social relevance of the project and the standards of presentation, organisation and structure of the project.

CASTME proudly displays projects at conferences and events around the world and cannot return any of the submissions and reserves the right to publish entries in part or full in their journals or associated publications.

Submitted reports on Projects may be hand-written or typeset, in English and up to 10,000 words in length. They should be received **before 31 March 2015**. A panel will judge them based on relevant criteria such as:

- Contributions to society
- Clarity of project report
- CASTME category relevance such as:
 - Gender
 - Improving literacy
 - Increasing awareness of STEM (Science, Technology, Engineering and Mathematics)
- Providing references to all sources of information and illustrations.

Or by hard copy to:

The CASTME awards coordinator,
c/o The Commonwealth Association for
Infrastructure Development
120 Pall Mall, London SW1Y 5EA,



ASE Annual Conference 2015 @ University of Reading

Wednesday 7th - Saturday 10th January 2015

Venue: University of Reading, Whiteknights, Reading, RG6 6AH

Explore the ASE Annual Conference 2015 and Exhibition at <http://www.ase.org.uk/conferences/annual-conference>



ASTME

Commonwealth Association of Science, Technology and Mathematics Educators

e-Newsletter

Sreepur, Bangladesh – Mothers Project: Talking science corner

Sue Dale Tunnicliffe and Angshuman Sarker



Angshuman asks “What is gravity?”

He says: gravity is the force of attraction between all masses in the universe; especially the attraction of the earth's mass for bodies near its surface. Here, a mother found how this slipper mechanism acts in relation to gravity.



Shape: They are showing Angshuman that this shape is square: because it has four equal straight sides and four right angles.



Nurjahan begum (above) takes this picture by camera. She says that this figure is a circle because its boundary (the circumference) consists of points equidistant from a fixed point (the centre).



Body temperature & Thermometer use

Here they learn how to use thermometer and normal body temperature



Practising camera use (above)

Editor's Note: For the next edition of this newsletter please send articles to Jonathan Ling at: j.g.ling@btinternet.com by 31st March 2015. CASTME website: <http://www.castme.org.uk>

Registered Charity 1111749

Limited Company Registration 05001658