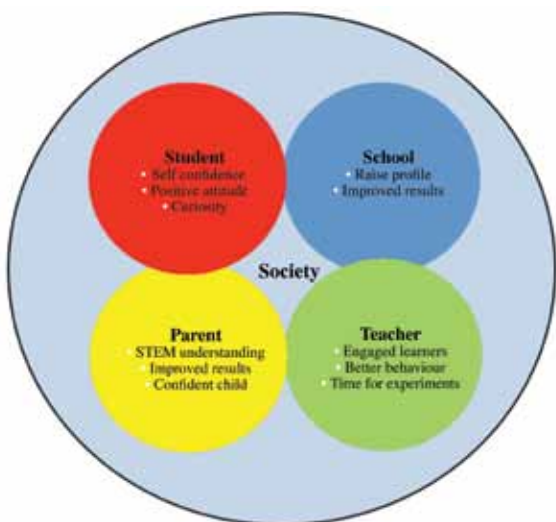


Make science cool at school and change our country's future!

Caradee Wright and Smeetha Singh look at the benefits of having a school science club.



The benefits of a school science club.

Image: Caradee Wright and Smeetha Singh

Many of the amazing products that we use every day – from sticky tape to mobile phones – came about because of good ideas from ordinary people with big dreams, perseverance and confidence! Through trial and error, and maybe a little mathematics on a calculator or messy drawings on a whiteboard, new technologies can come alive and find their place in society.

Science, technology, engineering and mathematics (STEM) concepts can sometimes seem confusing at first, but often all it takes is some practical experience and a light bulb in your head can turn on! School science clubs are an excellent opportunity to make time for fun and creative science experiments. There may not be enough time during class time when theory is taught and demonstrated and there may be only a little 'bench' time to try things for yourself. A school science club provides a dedicated time for doing hands-on activities.



Two enthusiastic students learning about acids and bases. Image: MRC



Using a microscope. Image: MRC

Benefits of a science club

As a formal part of a school extramural programme, a school science club has numerous benefits for learners, teachers, principals and schools, parents and society at large.

At the highest level, a science club can help to raise the profile of science and maths in the school. A science club may sometimes also help to improve on examination and test results, although this is not always the case and depends on, among other factors, the types of experiments run by the club.

For teachers, helping to run a school science club should not be seen as a daunting task. The science club should have a committee and be driven by the students themselves. For teachers, the benefits of the science club include time for asking questions (not telling and teaching), increasing student practical skills, as well as stimulating the spirit of curiosity, enquiry, innovation and creativity. In a test-free situation, students are more likely to think of new ideas and novel solutions to challenges. Stimulating and exciting activities often lead to



Learning about plant cells using a model. Image: MRC

‘take away’ or ‘take home’ pieces (e.g. green slime, purple leaves etc.) to show and encourage friends and family what great science can be done at school while having fun at the same time. Students can share responsibility to be ‘free assistants’ and ‘lab hands’ at science club meetings – this helps grow self-confidence and a positive attitude to STEM activities.

Activities

Science club activities can be structured using available resource guides and readily available ‘household’ items and products. Some of the popular science club topics may be energy, environment, flight, rockets, cars, robotics and electronics. Finding the balance in time spent on the interests of different science club members is important. Group or individual work can be recognised with small prizes or awards – increasing student confidence. Older students can mentor younger students. A science celebration event can be held annually to highlight the science club’s activities to the school and even the wider community.

Local support

In South Africa, science and maths literacy is receiving support through several initiatives, such as National Science Week, and many organisations who offer support to school science clubs (see Resources/websites).

In 2014, the South African Young Academy of Science (SAYAS) and Jive Media teamed up with support from SANEDI to produce a school science club manual.

As part of a package of materials and resources in a programme called ‘Science Spaza’, schools across South

Africa can register their science club online and, at the start of a school term, receive resources to support science club activities during that term. Resources usually focus on a specific theme, such as wind energy, and call for the club to bring some household products and items to a club meeting when the activity will be carried out.

South Africa is focused on improving science and maths literacy among our future generations. School science clubs are an excellent opportunity to bring practical science to the doorsteps of students. Science club activities can help shape positive attitudes towards STEM topics. They can also inspire young minds to challenge themselves and dream big! Last but not least, school science clubs can assist in improving student understanding of STEM concepts and nurture the development of bright, confident members of society for the strengthening of South Africa’s future. **Q**

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Misra KD, Bhushan KB and Upadhyay RK. 2013. Science club: an effective tool for promoting awareness and temper for science and technology among school-going students. International Journal of Social Science & Interdisciplinary Research, 2(3): 139-143.



The Science Spaza Manual. Image: Jive Media



Learning chemistry using games. Image: MRC

Resources/websites

- **Science Spaza** – sign up your club for free club resources and a manual to kick-start your science club!
<http://www.sciencespaza.org/>
- **Sci-Enza** – Hands-on Science
<http://www.up.ac.za/sci-enza-hands-on-science-wetenskap-in-aksie>
- **Xperiland**
<http://xperiland.co.za/>