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AN INITIATIVE OF THE DEPARTMENT OF SCIENCE & INNOVATION AND THE PROVINCIAL DEPARTMENTS **OF EDUCATION**

In this edition

- What is a science club?
- What do they do?
- Who is involved?
- Who can offer help with the club activities?
- How to start a science club?

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STEMI Clubs

Science, Technology, Engineering, Mathematics and Innovation (STEMI) clubs are formed in schools where learners organise themselves into a group with the intention to explore and learn more about science in informal ways.

Clubs can be initiated by anyone interested and keen to advance science in a school environment, such as a teacher, a few learners, a scientist or engineer working close to a school.

Learners engage with science mostly in a formal way, namely the school subjects. However, there are many learners with questions or with inquiring minds about science and the real world. These questions are often not answered in the classroom.

The science club is the perfect space for INFORMAL learning of science to happen without the pressure of the school subject requirements and restrictions.

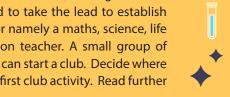
There are thousands of science clubs in schools around the globe and several of them in South Africa. However, there are still many schools without clubs in rural areas, towns, townships and other areas.

The Department of Science and Innovation (DSI) in collaboration with the provincial departments of education are spearheading a campaign to encourage learners to seriously consider starting their own clubs.

We can achieve great things when we work together

Starting a science club

Both primary schools and high schools are encouraged to start science clubs. Learners from Grade 4 to 7 are encouraged to take the lead and start a club, with the assistance of a club champion (a keen teacher). At high schools learners from Grade 8 to 11 are all encouraged to take the lead to establish a club. The club champion can be any educator namely a maths, science, life science, geography, language, or life orientation teacher. A small group of learners with the support of at least one teacher can start a club. Decide where and when you meet and go ahead to plan your first club activity. Read further for more ideas for club activities.





















Simple Science Club activities

EXPERIMENTS

Do simple scientific activities using household goodies e.g. using batteries, lemons, copper wire, vinegar, balloons, tennis balls etc.

LIVE EVENTS

Organise a science QUIZ among members using questions from the internet. Organise a DEBATE after doing research on a topic such as nuclear power vs coal power.

WRITING MATERIALS

Individuals or teams compile science articles which can be shared on school noticeboards. These could be on interesting new and exciting scientific discoveries, facts and figures. Submit these articles and stories to a local newspaper or radio station.

OLYMPIADS & COMPETITIONS

There is a variety of STEMI events that club members and even other learners can participate in. These happen annually and the invitations and registration forms are distributed to schools. There are science, maths,



Basic experiments that are safe and illustrate scientific concepts

robotics, computer, quiz and debating competitions.

MEET A SCIENTIST

Invite a scientist or an engineer to speak to your club members. There are people who want to share what they do for a living with young people.

More Ideas of Club activities

EXCURSIONS

Organise an educational trip to a local facility such as a factory, farm, science centre, university, weather station, airport, medical or agricultural facility.

SCIENCE FESTIVALS

Organise a visit to a science festival or a career exhibition in your town, region of district.

START A PROJECT

Initiate a recycling programme at your school. Start a food garden using smart ways of saving water. Collect rainwater from the roof and keep it in a JOJO tank for use by the school.

INVITE ANOTHER CLUB

Organise a debate or a quiz competition against another science club in your area.

COLLECT DATA

Start collecting basic scientific data on soil, rain, temperature, cloud cover etc. as part of the Global Learning



Observations to Benefit the Environment (GLOBE) project which is done by schools worldwide.

The club champion is a teacher who supports the club members



Where and when do clubs meet?

Science clubs can meet any day of the week, after the formal academic programme has finished. This can also be on a Friday afternoon or even on a Saturday.

However, a teacher/adult must always be aware of the club activities and be present to ensure that things are going smoothly.

Clubs can have gatherings as short as 30 minutes up to 2 hours. However, 45-60 minutes are the ideal length.

Clubs can meet once a week or even once a month. Twice a month is a good frequency.

Clubs must identify a venue where they can have their regular gatherings. Ensure that the school leadership is aware of the space / room which is used for the club activities.

















Organising the club

Most clubs and societies have officebearers. A science club is not any different, however, the following roles are suggested:

Club leader (Chair):

Takes responsibility to liaise with the club champion (the teacher in charge) or the school principal or others on important matters pertaining the club.

Deputy club leader:

Substitute for the club leader when s(he) is not available.

Communications officer:

Responsible for communicating with people outside the club and the school via letter, e-mail, fax, WhatsApp or SMS.

Secretariat:

Keep records of meetings, decisions, when, where and what must be done and by whom. This person works closely with a club leader.

Treasurer/Fund Raiser:

Takes responsibility of any money collected or received. Can also lead the raising of funds from sponsors.

Club champion:

This is not a member of the club, but is the responsible teacher who takes care of the well-being of all the club members when they are busy at the club.





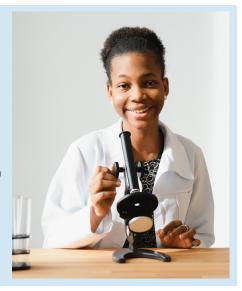
Information on Olympiads and competitions

To get involved with the interesting STEMI Olympiads and competitions hosted in South Africa, clubs are advised to visit the following website: www.astemi.org.za

A total of 16 organisations are affiliated to the Association for Science Technology Engineering, Mathematics and Innovation

Olympiads and competitions (ASTEMI). These organization host various Olympiads and competition activities for learners from about Grade 3 to Grade 12.

Contact details of the various organisers are on the website. Clubs that are not able to access this information can visit the South African Agency for Science and Technology Advancement (SAASTA) at www.saasta.ac.za/competitions or www.saasta.ac.za/about-us/ organisational-structure/structurescience-education/



Support and information for science clubs

The Provincial Department of Education, the Department and Science and Innovation (DSI) with the support of the South African Agency for Science and technology Advancement (SAASTA) are working together to provide different levels of support to schools with existing science clubs and to those planning to start science clubs.

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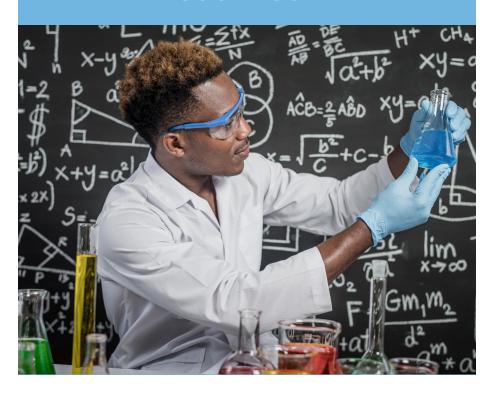




MORE TIPS / IDEAS / GUIDELINES

- Take pictures of your activities and build a portfolio of what
- Design a poster with the pictures and short stories and put on the school's notice board.
- Submit your club stories to the local newspaper or radio station for possible inclusion in future editions or programmmes.
- Keep your club records in a flip file with some pictures and stories to show parents, teachers, visitors to the school or even
- At the beginning of each year, do a planning session, where the team decide what they will do for the rest of the year. This can also be done at the beginning of the term.
- Contact a parent or a person you know who is working at a company that have scientists. Request the company to give relevant staff members at least ONCE A YEAR a chance to come and support your club.
- Visit your library or speak to teachers and others to get ideas for club activities.

GOOD LUCK



science & innovation













