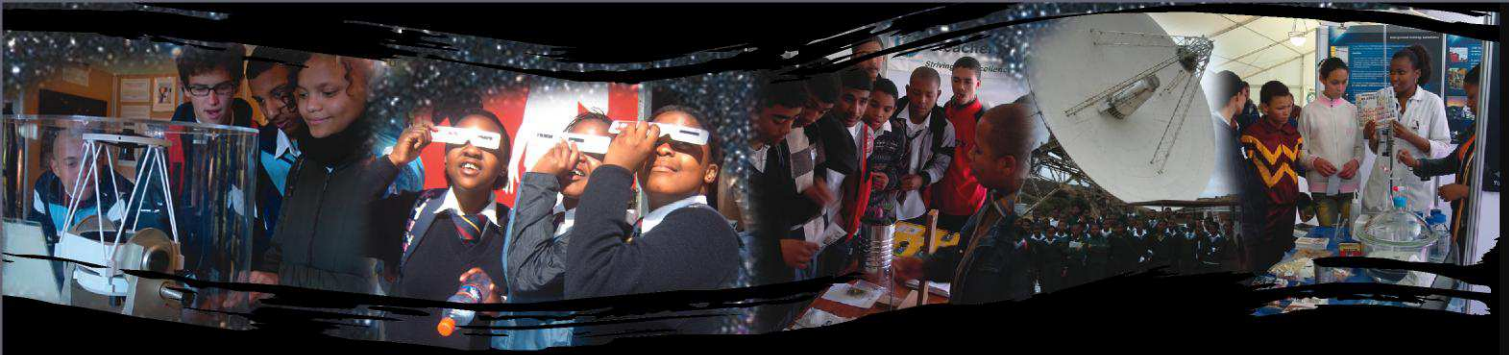

- **Competitions:** Science and Maths competitions can be held to create an interactive and competitive spirit among members.
- **Reading Groups:** Members can be encouraged to read books on science and they can then share the information with the rest of the club. Some members can even discuss interesting articles on science published in local newspapers and magazines.
- **Poster Making:** Science posters can be created by using material from old newspapers and magazines. Members can then present their posters to the group.
- **Experiments and demonstrations:** Demonstrations and experiments can be set up and talks held on the significance of these and its relevance to everyday life.
- **Science Shows:** Invite science centre education/ communication officers to train a group of club members to run science shows at the school. Initially these can be run by science centre staff however members should be encouraged to participate and showcase their own demonstrations.
- **Video shows /slide shows:** Shows could be organised based on selected topics. These can be followed by a discussion and exchange of related information.
- **Resource Development:** Members can build up the club's resources by gathering all materials from print media that are relevant for science and maths learning.
- **Inter-school project exhibition/science fairs:** One of the most exciting things about being a member of a science club is being able to meet members of other clubs. This can be organised in the form of an inter-school project or even fairs.
- **Problem solving challenges:** This activity can be arranged around a set of maths or science problems or puzzles.

FUTURE DEVELOPMENTS

- Keep track of developments by visiting the national science club website: www.scienceclub.org.za
- In the future schools will be able to register their school clubs with the South African School Science Club network. This body will be the foundation for the South African School Science Club Association (**SASSCA**) which will be launched when all 9 provinces are well represented.
- A regular e-magazine will be distributed in the future to highlight news and initiatives from science clubs across the country.
- If you are a student, learner, educator, communicator or scientist interested in establishing a science club or getting involved in any capacity, contact the SAAO for more information.

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SCIENCE CLUB

WHAT ARE SCIENCE CLUBS?

Science clubs based at schools are organizations intended to provide opportunities for learners to explore science. These clubs are usually initiated by educators, learners, science communicators, parents, scientists or engineers. No two clubs are the same, as they are run by different people in different environments for different learners. Some clubs focus on science broadly, while others focus on a particular field, e.g. astronomy, physics or biotechnology. Certainly all science clubs fuel the wonder and the joy of learning science in interactive, fun, informative and challenging ways.

WHY DO WE NEED THESE CLUBS?

Science clubs are a fantastic opportunity for learners to explore aspects of science that are not always possible within the constraints of a normal school timetable. They challenge gifted learners as well as spark the interests of struggling learners. Science clubs will motivate and encourage learners of all ages and abilities by changing their attitude toward science, technology and engineering.

These clubs enhance the positive experiences that learners have with science by allowing them to explore their own ideas and interests. By exposing them to role models in science and engineering, learners may even be encouraged to become scientists themselves.

Science clubs also build the confidence of its members as they develop problem-solving and social skills, such as communication and leadership, through cooperative learning.

Club members always have readily available projects and studies for their formative assessment. The clubs can serve as a support base for learners participating in science expos, science Olympiads and science fairs.

Science clubs further encourage links between schools and industry, science centres, museums or research institutes. Clubs can also serve as links to local schools as well as international communities and scientists.

HOW DO YOU START AND RUN A SCIENCE CLUB?

Starting a science club can seem daunting; however the most important tool is communication. Communicating with an educator or a group of learners at a school is vital. The golden rule is to start with a very small group or alternatively link with an already existing club.

What has proved successful is holding an initial kick-off event, such as inviting a popular speaker or demonstrator or a number of exhibitors. After the event, members can be recruited by placing posters around the school and by advertising at assemblies. This can be done through short talks or even regular short demonstrations during assemblies.

The following practical matters need to be considered:

Timing and duration of activities: The school day/week is crowded with many activities so the timing of activities should be chosen judiciously to avoid members choosing between science activities and other extra mural activities. Club activities could be arranged during lunch times or over weekends.

Name and club identity: The name can be decided by members of the club, however many clubs tend to use the name of their school. The use of badges acceptable to school governing bodies has proven popular with many clubs.

Extra help: Assistance can be sought from local existing clubs, universities, science centres, and research institutes.

Preparation: It helps to develop a schedule of activities or a programme for the term. Be prepared and know exactly what you are going to do for each session.

Refer to the science club website, www.scienceclub.org.za, or contact the SAAO for a science club manual and more ideas on how to get started.

SCIENCE CLUB ACTIVITIES

Activities that have proved successful with existing science clubs:

- **Guest Speakers**: Speakers can be invited to talk on their areas of expertise. They can be from industry, science lecturers, researchers from science councils and institutes, as well as senior students.
- **Educational excursions**: Visits to science centres or research institutes can be arranged, such as Zoos, Planetaria, Observatories, Aquaria and industries.
- **Science Expo:** The club can serve as a support base for members participating in the Expo. Clubs can even organise their own exhibitions, where projects can be evaluated and advice can be given for further improvement. Support for these exhibitions can be organised from nearby scientific institutions.
- **Debates:** Debates among members can be organised based on scientific topics, such as environmental issues, nuclear waste, energy, genetics, or colonisation of other planets. Researchers involved in these issues can be invited to give more information. The debates should however be opportunities for members to develop their communication and cooperative working skills. It also creates opportunities for members to engage in some research and knowledge gathering activities.
- **Newsletter and Media:** Members can introduce science pages in their school bulletin. If the school bulletin does not exist, a small newsletter can be developed to publicise the activities of the club and information on science, engineering and technology.
- **Peer Tutoring**: Club members can help in tutoring members or non-members after schools. Senior students could help in tutoring junior members of the club; also members in the same grouping could assist each other. Maths "hot seats" could be created.