

# Key Concepts in Science

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## Programme lead:

Mrs Marieke Pretorius

## Area served:

Cape Town Metro schools

## Academic staff:

Mrs Marieke Pretorius

## Project contact details:

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## Can students get involved?

Yes, assisting during  
practical delivery.

## Programme Information

The Key Concepts in Science programme is an initiative by SANRAL, in collaboration with the University of the Free State and SUNCEP. The programme aims to strengthen Natural Science performance in Grade 8 and 9, to ensure success in Physical Sciences in grades 11 and 12. It thus covers the Grade 8 and 9 Natural Sciences CAPS curriculum, only the Live and Living strand excluded, with hands-on, minds-on activities as well as activity material to go with the worksheets.

The programme is underpinned by a social constructivist philosophy of teaching and learning, meaning that the training sessions are characterised by hands-on, minds-on activity sessions in a social context that enable participants to construct their own understanding of science concepts. It also promotes the understanding of key concepts, rather than focusing on isolated facts and “textbook knowledge”.

During the training the focus is on **subject content knowledge, process skills and teaching skills, advocating a hands-on approach**. One of the key elements of the success of the project is the fact that the Science-for-the-Future also manufactures and issues the participating teachers **with sufficient activity material and apparatus to be utilised in the classroom**. During each session, teachers are tested prior of receiving training as well as tested after each session.

### First Year:

25 Natural Sciences teachers are recruited. Grade 8 content covered during 4 face-to-face sessions.

### Second Year:

Grade 9 content covered during 4 face-to-face sessions; Grade 8 teachers are mentored and received a top-up on their consumable resources.

### Third Year:

Grade 9 teachers are mentored and received a top-up on their consumable resources.