AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Samantha Rutendo Kaseke

Queen Elizabeth High School

Zimbabwe

Research and Innovation

Samantha(18) synthesised a biodegradeable ,plant based plastics from polyethlene glycol ,2,5 furandicarboxyllic acid(made from oxidation of dehydrated fructose using manganese II oxide as a catalyst) corn starch and also polylactic acid to enhance the decomposure of these biobased plastics .

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sara Pouran

Kherad

Iran

Research and Innovation

Scientific developments have caused some changes in learning approaches. The new findings of neurology have provided considerable information about the human brain and understanding of the learning process. The product of these researches has been resulted in a new learning method known as brain-based learning which is a learning-centered approach. Sara(14) looked at brain-based learning.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sarah Pavthiwala

Inventure Academy

India

Research and Innovation

Reactive Oxidative Species (ROS) are known bi-products that create harmful cellular pathways and modulate several critical cellular processes. ROS production serves an important role for critical function in the cellular environment by disrupting unwanted cellular material. Sarah(17) discusses the role of mutant p53 in ROS production and how it can affect cancer properties such as migration and proliferation and its close relation to breast cancer.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Shabberk Marongedza

ZRP High School

Zimbabwe

Science Communication

Shabberk(13) made a Hover car which employs the concept of magnetic levitation. Magnetic levitation (maglev) or magnetic suspension is a method by which an object is suspended with no support other than magnetic fields.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Shadreck Tiripano

ZRP High School

Zimbabwe

Research and Innovation

Shadreck(16) formulated a liquid Biofertilizer for enhance of soil nutrients. Biofertilizers are well known for their cost effectiveness, environment-friendly nature, and composition.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Shammah R Tayengwa

Queen Elizabeth High School

Zimbabwe

Research and Innovation

Shammah(17) improved the battery life of a pacemaker using waste and the battery life was ×2.5 as that of lithium.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Shannon Gumbo

Dominican Convent

Zimbabwe

Research and Innovation

Shannon(12) tested whether adding a weight as effort would reduce the effort needed. Shannon did this by constructing a miniature model of a pulley and testing different loads.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sharmaine Mutopa

ZRP High school

Zimbabwe

Research and Innovation

Sharmaine produced an anti-inflammatory drug from tomato plant leaves.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Shelcia Gilberto Chico

Beira International School

Mozambique

Research and Innovation

Shelcia(10) developed a model of a solar panel charging port.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sheniqua Chilufya & Chioma Obi

Ndola Trust School

Zambia

Science Communication

Immune Booster

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sibanda Fezile Melissa

Dominican Convent High School

Zimbabwe

Research and Innovation

Melissa(17) looks at the potential of microbial factories.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Simbarashe Mahwinya

Christ Ministries High School

Zimbabwe

Science Communication

Simbarashe(14) devised a microporous, reusable adsorbing polymer consisting of starch from potato and activated carbon. It can be used to clean water bodies quite easily and efficiently.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Sphesihle Nxumalo

Summerhill Prep School

South Africa

Research and Innovation

Sphesihle(13) researched about the insecticides and fertilizers used around the school which is built amongst farms. The investigation reveals how these chemicals can cause health problems in children and other people in the community.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Taidaishe Mbizvo

Queen Elizabeth High School

Zimbabwe

Research and Innovation

Taidaishe(17) developed a new way to fight potato cyst nematodes with RootPatch, a community of bacteria that coats the roots and protects them from the nematodes.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Takudzwanashe Chiremba

Zengeza 1 High School

Zimbabwe

Science Communication

Takudzwanashe(14) designed an automated irrigation system that can switch on and off a pump depending on the soil moisture content in the soil.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Takudzwanashe Moyo

Staplewood Primary School

Zimbabwe

Science Communication

Takudzwanashe(10) demonstrates on pressure and surface area.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Talent Koronya

USAP Community school

Zimbabwe

Research and Innovation

Talent(20) created an online ID and birth certificate application system to allow citizens to apply online and collect their ID's and birth certificates after the process is done online.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanatswa Chigubhu & Sandile Mpofu

ZRP High school

Zimbabwe

Research and Innovation

Tanatswa(14) and Sandile(14) made a solid biofuel stove using Zimbabwe indigenous sour plum Mutsvanzva seed or Abelmoschus esculentu.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanatswa Chiimba

Forward In Faith Christian School

Zimbabwe

Research and Innovation

Tanatswa(15) makes life easy for children who want to study using smart phones but do not have electricity to charge phones and money to buy solar panels by creating a salt water battery.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanatswa Makota

Queen Elizabeth High School

Zimbabwe

Research and Innovation

Tanatswa(17) worked on the production of ethanol from sewage sludge.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanatswa Matonda & Tadiswa Mafara

Peterhouse Group of Schools

Zimbabwe

Research and Innovation

Using drones and aeronautic concepts, Tanatswa(17) and Tadiswa(18) tested the hypothesis that flying/ creating drones can change thinking processes to allow the stimulation of curiosity and motivation in female students to engage in STEM investigations.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanatswa Mbizvo

Queen Elizabeth High School

Zimbabwe

Research and Innovation

Tanatswa(14) solved the problem of nitrogen fixation by injecting a bacteria, azotobacter which contains the enzyme, Nitrogenase to allow plants to be self-fertilizing. Azotobacter species have a full range of enzymes needed to perform the nitrogen fixation: ferredoxin, hydrogenise and Nitrogenase. The process takes place in a bioreactor through photoferrmantation.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tannur Calaca

Summerhill Prep School

South Africa

Research and Innovation

Tannur(13) solves the problem of potholes in Africa.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tanyaradzwa Museza

Girls High School Harare

Zimbabwe

Research and Innovation

Tanyaradzwa(17) designed a portable battery powered refrigerator(the size of a bottle) that can be used anywhere.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Taonanyasha Botso

Waterford Kamhlaba UWCSA

Zimbabwe

Research and Innovation

Taonanyasha(18) evaluated the worldwide innovation development trend of research for the past ten years and provides insights into the characteristics of innovation research activities to identify an innovation development map, tendencies, or regularities that may exist in papers Data are based on the online version of SSCI, Web of Science from 1991 to 2008. Articles referring to innovation were assessed according to many aspects including exponentially fitting publication outputs during 2001-2008, distribution of source title, author keywords and keyword plus analysis

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tapiwa Muvungani

Gateway High School

Zimbabwe

Science Communication

Tapiwa(18) restructures the relationship humans traditionally had with energy and redefine the narrative of the socio-economic lifestyle of human civilisation through the perpetual motion and perpetual energy project.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tapiwanashe Elroy Mudzonga

St Francis Xavier's Kutama College

Zimbabwe

Research and Innovation

Tapiwanashe(15) developed Square One, an online/offline application that gathers various types of data through batch processing systems and provide the exact steps to develop a skill.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tariro Chidewu & Rudaviro Murenzvi

Christ Ministries High school

Zimbabwe

Science Communication

Tariro(17) and Rudaviro(18) looked at the production of Superabsorbent polymers and how they affect soil moisture and minimises drought in Zimbabwe.

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tatenda Makaye

Gutu High School

Zimbabwe

Coding With Commitment Category

Tatenda(18) presents on a study that aimed at understanding the present status and trends of E-Commerce.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tatenda S. Mazambani & Osirumiji Ihude

Princeton Institute & Seke 2 High

Zimbabwe

Research and Innovation

Tatenda(17) and Osirumiji(16) came up with a solution to hypertension that cuts down on costs (no pills required) and is wearable on the go. Using code, they programed a device, Cardio-Go, to counter the problem of hypertension and effectively reduce the risks of strokes and cardiovascular disease.

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tauro Jordan

ZRP High School

Zimbabwe

Science Communication

Tauro(16) aimed at coming up with a natural antioxidant from Aloe Vera.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tawananyasha Elvis Chipiro

St George's College

Zimbabwe

Science Communication

Tawananyasha(18) explains the properties of qubits, the quantum particles used in quantum computations.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tawananyasha Samupfawa

Nyatsime College

Zimbabwe

Research and Innovation

Tawananyasha designed an IOT based Air pollution Detector.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Thamsanqa Chitaunhike

ZRP High School

Zimbabwe

Research and Innovation

Thamsanqa made a solar battery using cheap materials.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Thando Mhlanga & Charity Chirara

Nyameni Primary School & Godfrey

Zimbabwe

Coding With Commitment Category

Thando(10) and Charity(11) created a veld fire warning system. To come up with the veld fire warning system an Arduino nano board was programmed using the Arduino IDE application.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Theresa Kadungure

ZRP High School

Zimbabwe

Science Communication

Theresa(14) produced a machine which consumes industrial gases (halocarbons) in order to break them down into unharmful gases.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tinemufaro Kaseke

Westridge Primary School

Zimbabwe

Research and Innovation

Tinemufaro(8) attached a dynamo to children's skateboards to convert kinetic energy to electric energy.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tinevimbo Musingadi

Mabvuku High School

Zimbabwe

Research and Innovation

Tinevimbo(17) tested a low-cost, artificial intelligence-based system to increase flood prediction accuracy and a simple communication protocol to give an advanced warning to the people potentially at risk.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tinotenda Chinyemba

Forward In Faith Christian College

Zimbabwe

Research and Innovation

Tinotenda(18) looks on the impact of accidental spills of cyanide solutions on aquatic biota and wildlife.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tinotenda Mawera

Millennial Academy

Zimbabwe

Research and Innovation

Tinotenda(13) built a simple, low cost, radio frequency (RF) detector with a liquid crystal display (LCD).

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Trymore Mangwarara

Mabvuku High School

Zimbabwe

Science Communication

Trymore(17) explains the fundamentals of AI and how it can be a powerful tool for students to come up with better innovations and even cutting-edge inventions as well as how AI can change not only the sciences but also the social sciences (commercials) which will be my field of interest.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tumelo Mawoyo

Forward in Faith Christian College

Zimbabwe

Research and Innovation

Tumelo(17) developed the Biorem App (a medication reminder). The application was designed using an HTML, a CSS file, Javascript and JAVA. It was developed by gathering requirements for the application, Data Modelling, Process Design and finally Development.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Tyra Mutongwizo

ZRP High School

Zimbabwe

Science Communication

Tyra(16) used a reflecting surface to direct sunlight into a glass covered container where light energy is concentrated. The light energy then accumulates and is used to power a Stirling engine that works on the concept of air expansion when heated and contracts when cooled.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Uyathandwa Sithole

Summerhill Prep School

South Africa

Research and Innovation

Uyathandwa(12) made a battery operated fan using old Lego pieces and a fan. This will help people living in cramped spaces to use less power and meanwhile having some air circulation.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Valentine Sherekete

Hellenic Academy

Zimbabwe

Research and Innovation

Valentine(17) looks at the potential human health risks due to environmental exposure to nano- and microplastics.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Walton Gwatidzo & Linda Saina

Cherutombo High School ,

Zimbabwe

Research and Innovation

Walton(15) and Linda(16) designed a tick control system which can assist wild animals living in game parks without disturbing their natural ecosystems.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Wellington Takudzwa Mararironba

Forward in Faith Christian College

Zimbabwe

Research and Innovation

Wellington(18) tackled sewage problems in communal areas. The main goal was to make a toilet which does not promote the effects caused by sewage at the same time using the wastes to produce renewable biogas.

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Yvette Nyamhere & Moreblessing Banda

USAP Community School

Zimbabwe

Research and Innovation

Yvette(17) and Moreblessing(17) proposed an effective smart water purification system. The system was designed to detect, show the pH of water while neutralising it.

AFRICA SCIENCE BUSKERS FESTIVAL

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Zachary Elliott Madzivadondo

Westridge Primary School

Zimbabwe

Science Communication

Zachary(9) tackled the question: Can fossil fuels be used in a clean way without polluting the environment?

AFRICA Science Buskers Festival

BROADCOM CODING WITH COMMITMENT

BROADCOM FOUNDATION

2022 AFRICA SCIENCE BUSKERS FESTIVAL FINALIST

Zoe Choguya & Danielle Masiwa

Westridge Primary School

Zimbabwe

Research and Innovation

Zoe(11) and Danielle(11) created a solar tracker to automatically adjust the solar cooker to focus the solar rays without human manual input.