



Science For All:

Expanding the reach to people
with disabilities

Science Centre World Summit 2017

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Sci-Bono Discovery Centre



GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA





A Global Perspective

A large, detailed image of the Earth as seen from space, showing the continents of Africa and Europe. The text "WORLD POPULATION = 7.4 Billion" is overlaid on the image.

**WORLD
POPULATION** = 7.4 Billion

1 Billion people live with a disability



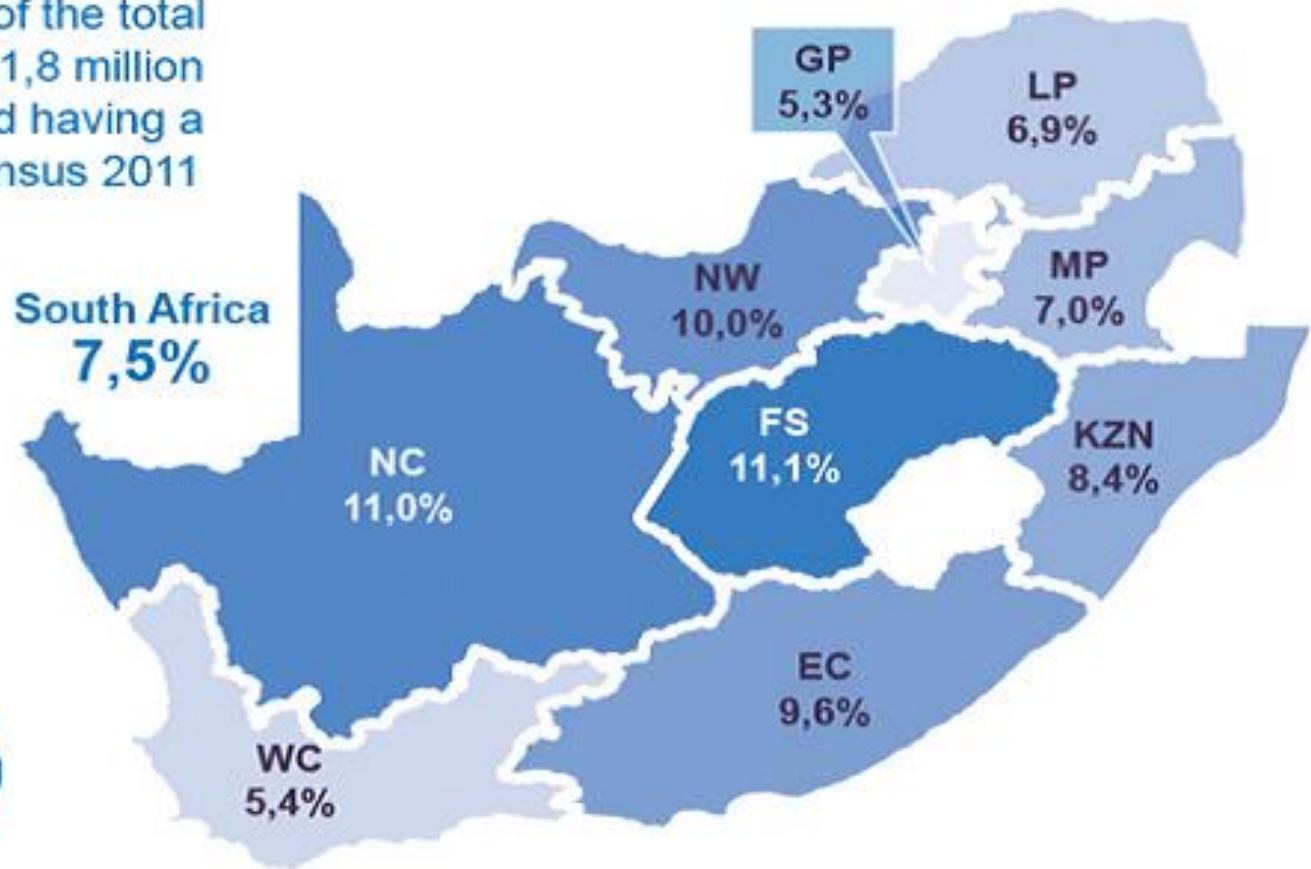
Plight in Africa





In South Africa

2,9 million of the total population of 51,8 million people reported having a disability in Census 2011

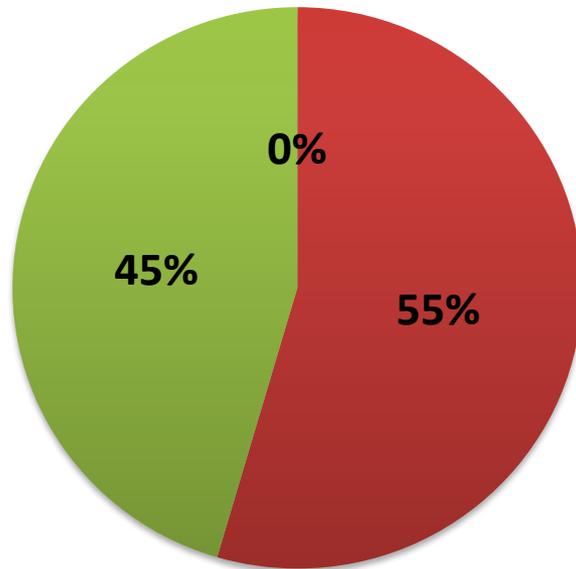




Science Centres in Context

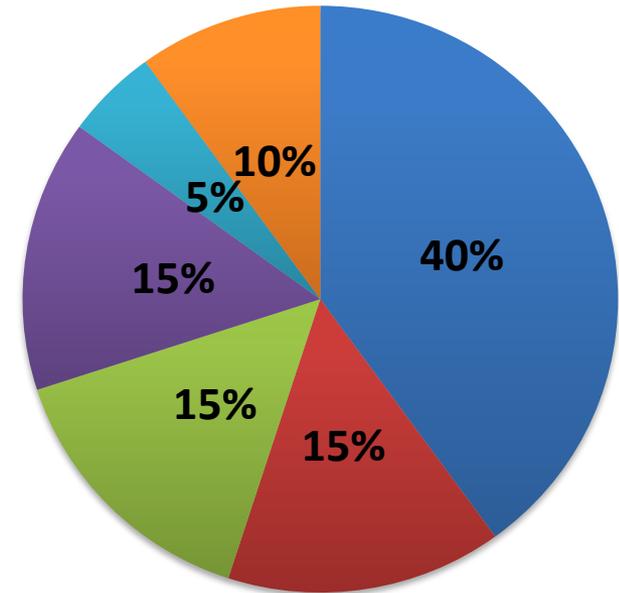


Accessibility of Science Centres to people with Disabilities



- Not Accessible
- Moderately Accessible
- Very Accessible

Infrastructure / Assistive Tools available for people with disabilities

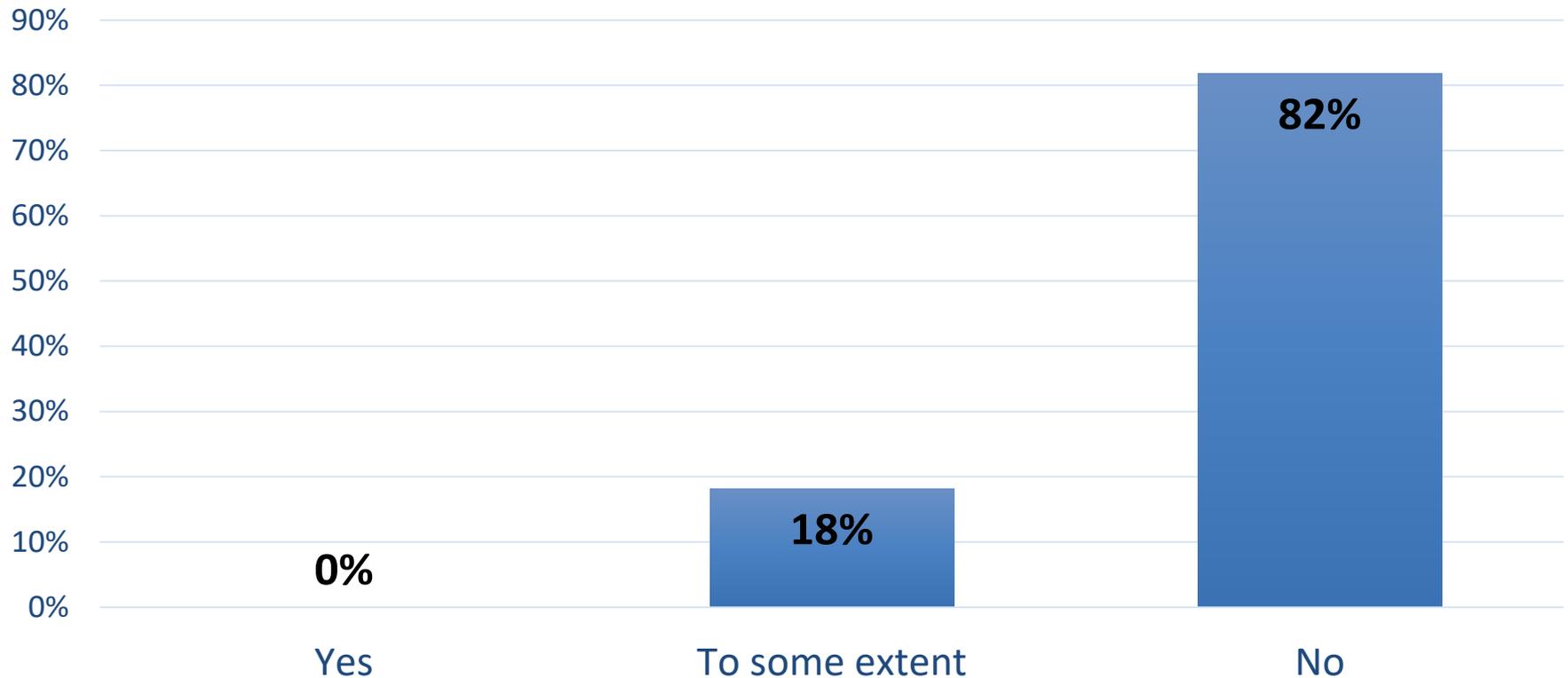


- Ramps
- Disabled Toilets
- Elevators
- On flat ground
- Tactile signage
- Wide Spaces



Staff Training: Handling People with Disabilities

Staff Attending Sensitization Training towards people with Disabilities





Staff Training is Essential!

P.A.D.I
People for Awareness
on Disability Issues

“My cousin has autism and
the educator was very
patient and helpful. Such a
pleasure”

UNISA
Department of
Science & Technology
Education

SCI-BONO
Discover Science

ASTONISHING ANATOMY HOLIDAY PROGRAMME QUESTIONNAIRE

Name: Bianca Date: 15.07.16
Organization (if applicable): N/A Activity: BIANKS

Please tick the relevant box:
 Parent Educator Learner

1. Did you find the activities educational & fun? YES / NO (If Yes, please state which)
All of them, even the displays. The children love it

2. Rate your overall experience of the Holiday Programme (Tick below):
 Excellent Good Satisfactory Bad

3. What did you NOT enjoy about your visit to the Holiday Programme?
A slight inconvenience was not knowing exactly where each show was happening.

4. What did you enjoy most about the programme?
For a parent, the information given. The children loved the art & paste FTGripper Project

5. Would you be interested in participating in future holiday programmes? YES / NO
Absolutely!

Comments / Remarks
My cousin has autism and the educator was very patient and helpful. Such a pleasure

THANK YOU FOR YOUR PARTICIPATION ©



Categories of Disabilities Visiting Science Centres



**Blind or
Visually
impaired**



**Deaf or
Hard of
Hearing**



Intellectual



**Physical
(Wheel
Chair
Bound)**



Autism

Spectrum of Disabilities visiting Science Centres

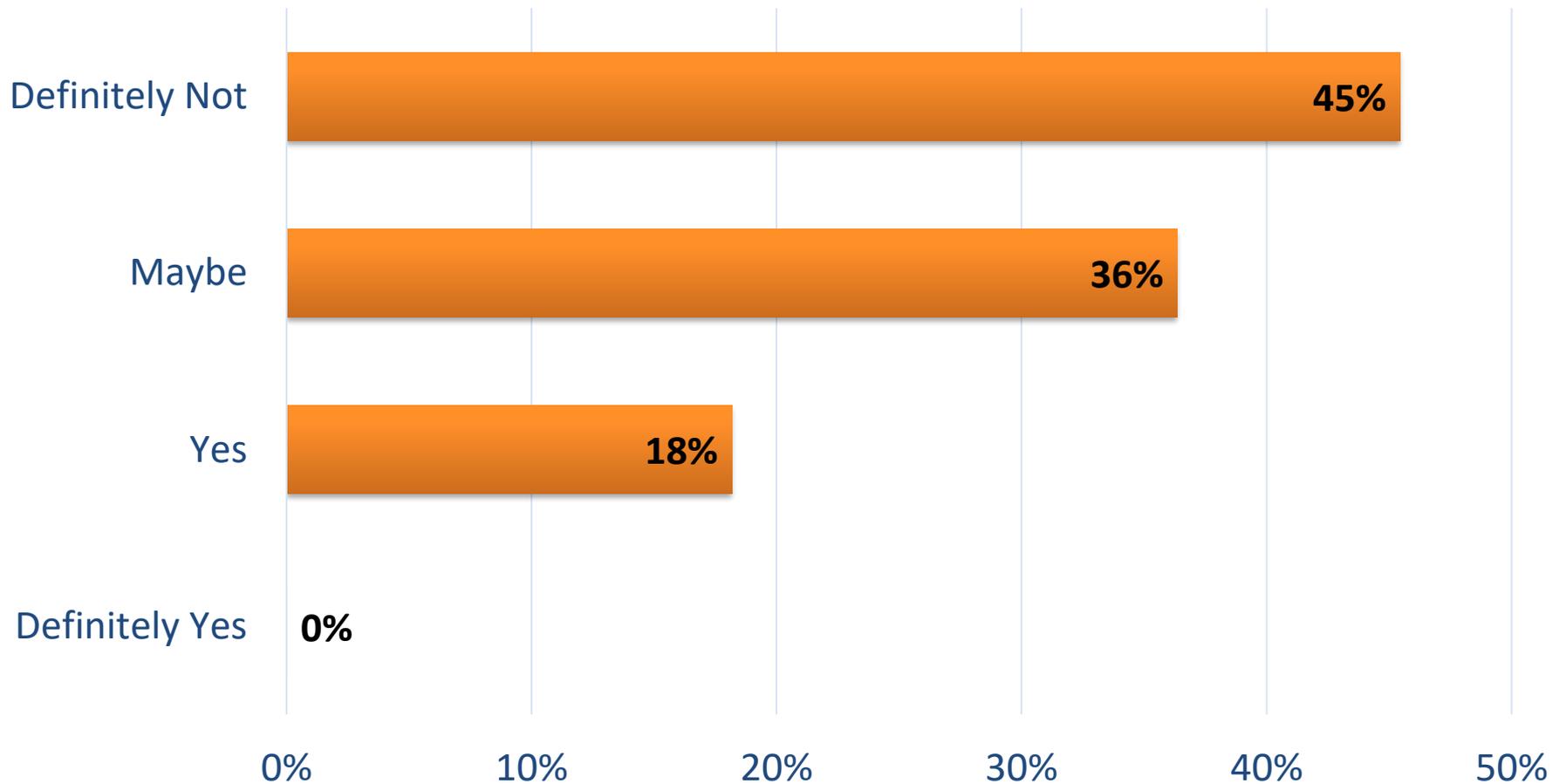


Challenges Experienced with Welcoming Groups with Disabilities

- Lack of learning materials** for groups with disabilities
- Untrained staff** to handle disable groups
- Lack of suitable exhibits** able to accommodate groups
- Difficulty in communicating with groups** e.g. Sign Language
- Lack of funding** to customize programmes, equipment & exhibits
- Finding organizations specializing in disabilities** to partner with
- Catering for groups with a variety of disabilities** at a time
- Insufficient staff available** to provide the close facilitation required



Are Science Centres Doing Enough to Serve the Disabled?





Tour of STEM Exhibition





Hands-on STEM Workshop: Water Bottle Rocket





Videos...Tricks

Amazing Science Experiments That You Can Do At Home Cool Science Experiments (Top 10)

the next step is to take a straw and blow some of the bubble

Subtitles/closed captions

DISCOVER ALL THAT'S POSSIBLE

5:05 PM 11/2/2016

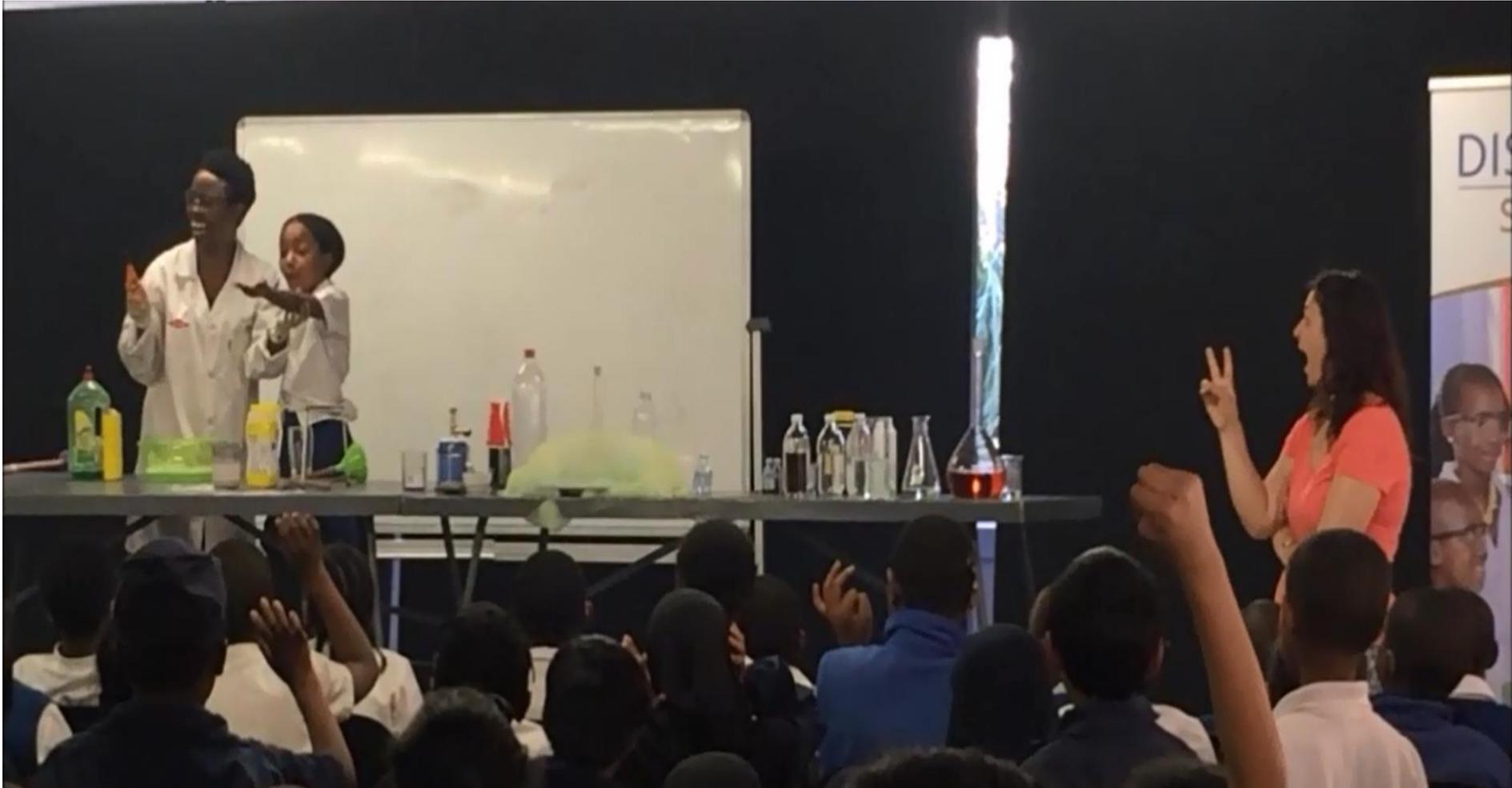


Water Bottle Rockets: The Launch





Science Show: Chemistry



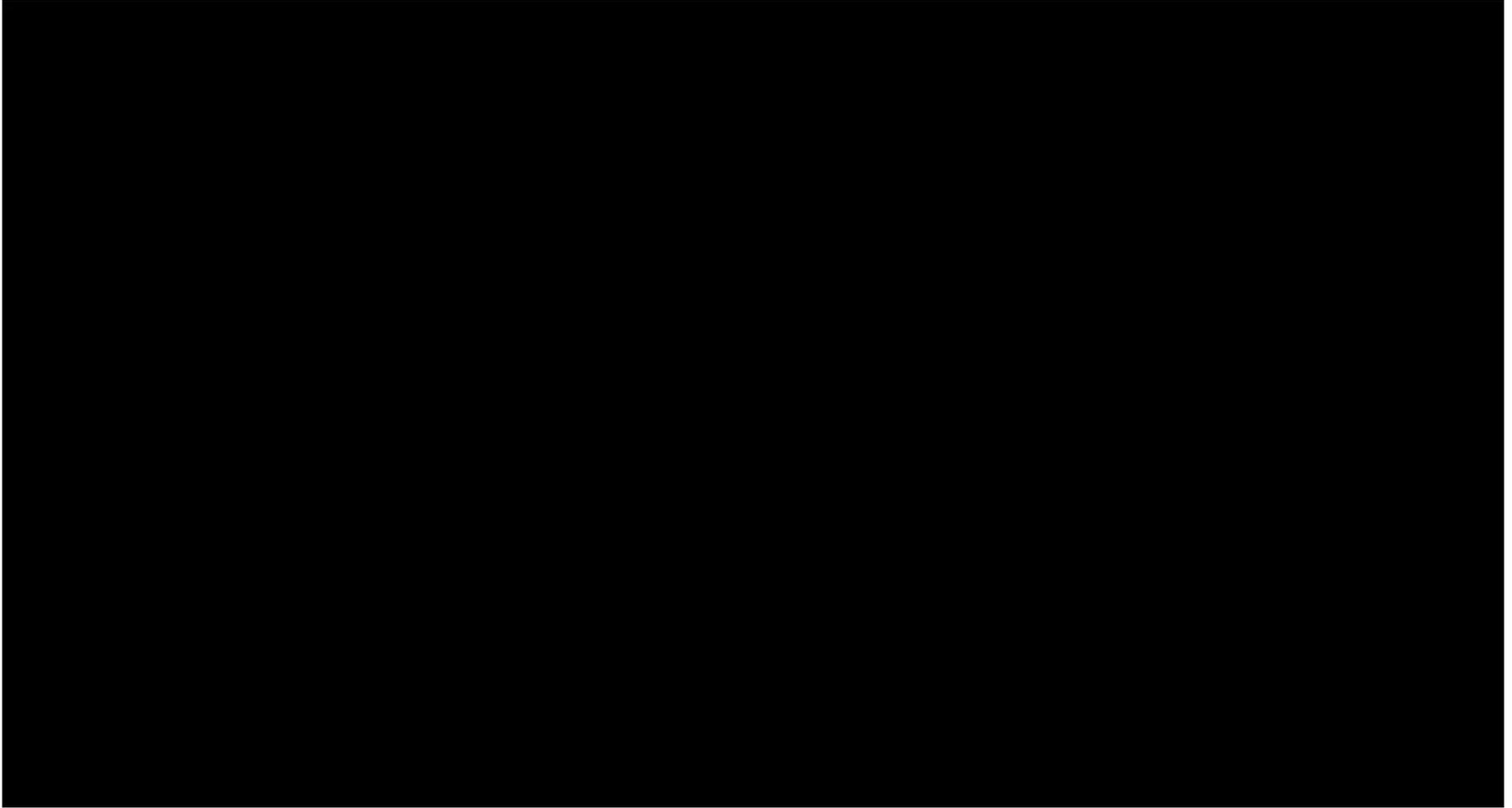


Multiple Sensory Stimulating Activities



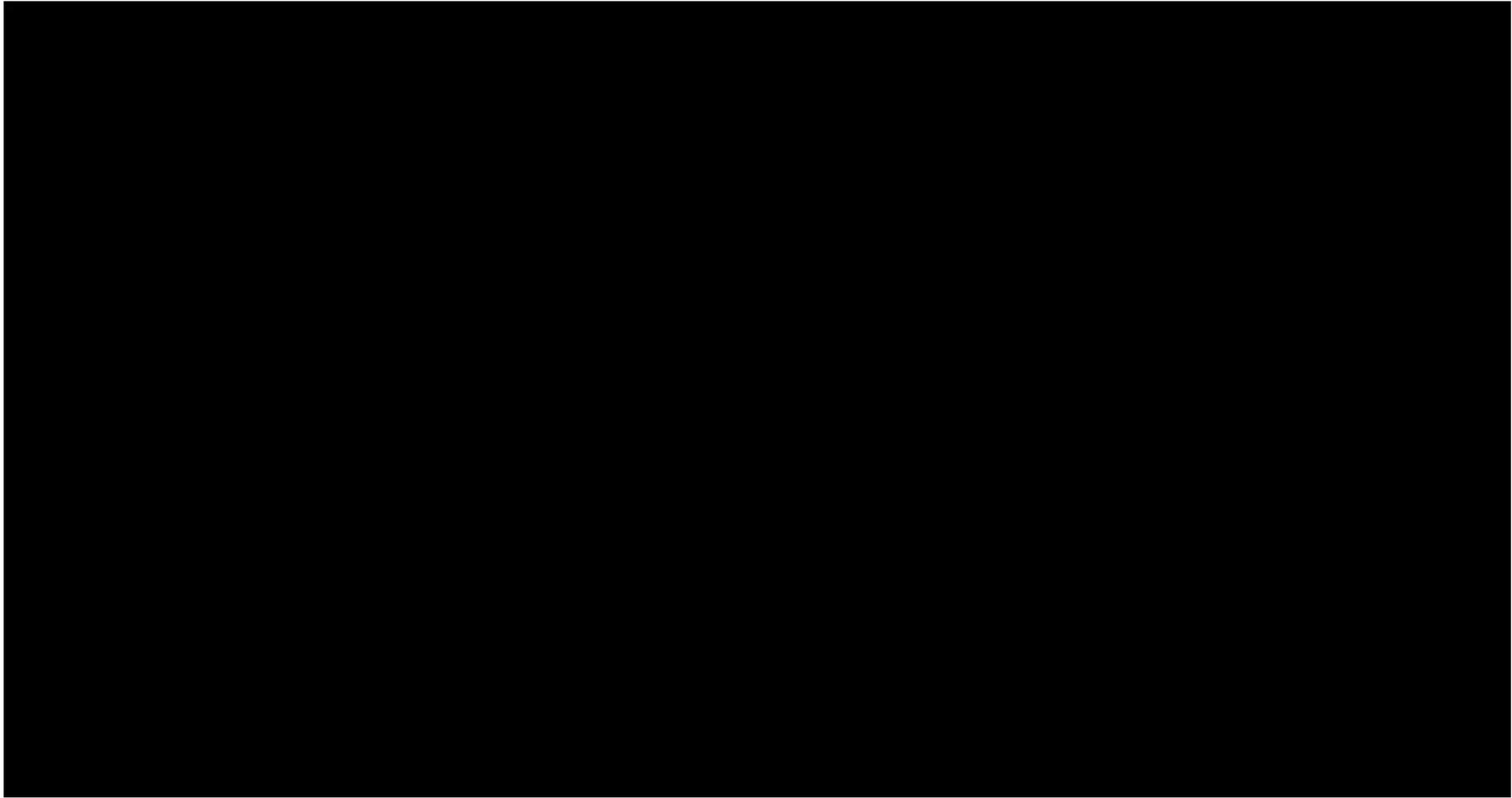


Educator Feedback





Learner Feedback

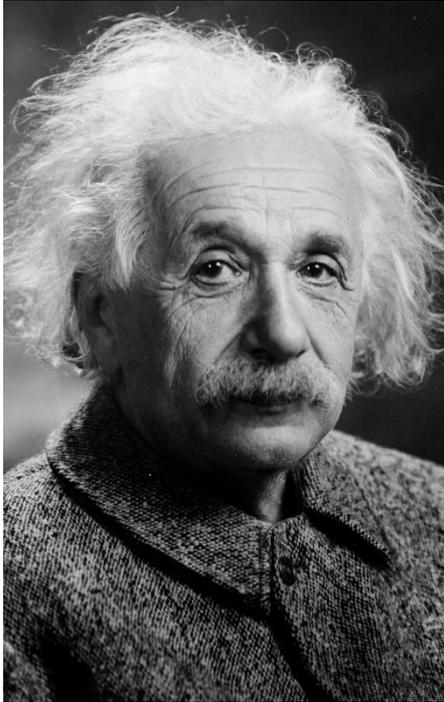




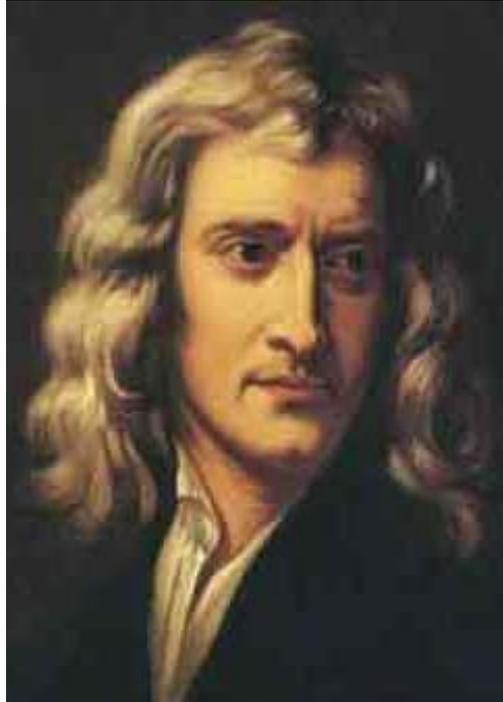
Recommendations

- 1. Partner with disability organizations for:**
 - Staff Training
 - Review of programmes / activities
- 2. Host more regular activities for people with disabilities**
- 3. Include disability schools in outreach programmes**
- 4. Celebrate 03 December- INTERNATIONAL DAY OF PERSONS WITH DISABILITIES by the UN**
- 5. Advertise the flexibility of your centres offerings to accommodate people with disabilities**
- 6. Where possible try not to segregate learners- aim to create inclusive learning environments- social inclusion is as important as physical accommodation**

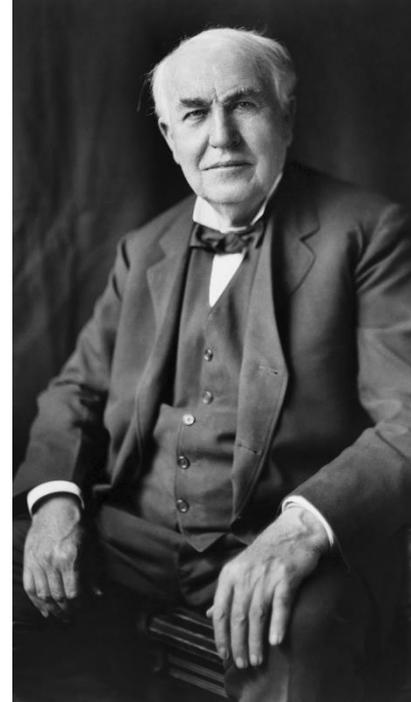
In Conclusion...



**Asperger's
Syndrome
& Dyslexic**



Epilepsy



**Learning
Disability**



**Amyotrophic
Lateral
Sclerosis**

**Great Research & Science knows no
boundaries...**

Come visit us in Johannesburg



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