

## Science & Innovation Fair Categories

The Science & Innovation Fair encourages learners to explore real-world challenges, local opportunities, and global innovations through age-appropriate scientific inquiry and creative problem-solving.

FET PHASE

### Grades 10 – 12

Focus: Research, innovation, future careers, global thinking

#### 1. Advanced Engineering & Applied Science

- Mechanical, electrical, or civil engineering concepts
  - Mining, construction, or manufacturing innovations
  - Safety, efficiency, and sustainability solutions
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#### 2. Energy, Climate & Green Technologies

- Solar, hydrogen, battery storage, smart grids
- Climate change mitigation and adaptation
- Environmental impact reduction

**Strong alignment:** Mining, energy, and ESG careers

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#### 3. Health, Medical & Life Sciences

- Human health, disease prevention, and wellness
  - Medical technology and diagnostics
  - Public health challenges (local and global)
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#### 4. ICT, AI & Future Technologies

- Artificial Intelligence (conceptual)
  - Data, smart systems, and digital transformation
  - Technology shaping future jobs
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## 5. Social Innovation & Global Challenges

- Science solutions for poverty, education, and inequality
  - Urban vs rural development
  - Innovation inspired by global challenges (UN SDGs, BRICS priorities)
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### Special Cross-Cutting Category (All Grades)

#### Local Solutions, Global Impact

Projects that:

- Address a **local challenge in Kuruman or the Northern Cape**
  - Can be applied or adapted **anywhere in the world**
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#### Judging Will Consider

- Age-appropriate complexity
  - Creativity and originality
  - Understanding of the topic
  - Real-world relevance
  - Presentation and communication
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Learners may work individually or in groups of 3 (as per grade guidelines).  
Full participation rules and judging criteria will be released closer to the event.