



Inombolo yefayili: 21/2/5/2  
Isalathiso: 20250310-1388

## INgcaciso eMfutshane yeCandelo leKarityhulam ye-GET neye-FET: 0004/2025

Iya: KumaSekela Balawuli-Jikelele, kuBalawuli abaziiNtloko, kuBalawuli, kwiiNtloko zoKunika iNkxaso kwiKarityhulam, kwiiNtloko zoLawulo noKuphathwa kwamaZiko, kuBaphathi beeSekethe, kumaSekela eeNgcali zeMfundu eziziiNtloko, kuBaququzeleli be-GET ne-FET, kuBacebisi ngeZifundo be-Natural Sciences kwiSigaba esiPhakathi nesiPhakamileyo, kuBacebisi ngeZifundo kwi-Life and Physical Sciences kwiSigaba se-FET nakwiiNqununu zazo zonke izikolo zikarhulumente eziqhelekileyo nezezikolo ezizimeleyo

**ISihloko:** **Kucelwa abafundi bamaBakala 4 ukuya ku-9 babhalisele uKhuphiswano Iwango-2025, Iwe-Natural Sciences, olwe-Life and Physical Sciences Olympiads kumaBakala 10 ukuya ku-11 nolwe-Astroquiz Competition Iwabafundi beBakala 7**

1. li-Natural, Life and Physical Sciences Olympiads nokhuphiswano i-AstroQuiz Competition ziiprojekthi ezixhaswa ngemali yi-South African Agency for Science and Technology Advancement (SAASTA), neiyiuniti eyi-business unit ye-National Research Foundation (NRF). La makhuphiswano yimisebenzi ekhuthazayo nefuna abathathi-nxaxheba babonise ukucinga ngokuphangaleleyo, izakhono zokusombulula iingxaki nobuchule bokuvvelisa izinto ezintsha. Injongo kukuphuhlisa iitalente nokukhuthaza abafundi bacinge ngamakhondo esayensi, ubunjineli nethekhnoloji. Ngaphezu koko, la makhuphiswano anika inkxaso kwisicwangciso seSebe i-WCED i-Western Cape Education Department's (WCED) strategy for Mathematics, Life and Physical Science, Engineering, Agricultural Sciences, and Marine Science. Kukho amabhaso ancumisayo aya kuwinwa ngabaphume emagqabini.
2. Kulo nyaka, i-Natural Sciences Olympiad ikunyaka we-14 yaye le projekthi inika abafundi bamaBakala 4 ukuya ku-9 ithuba lokukhetha i-Life and Physical Sciences, i-Mathematics ne-Accounting kwiSigaba seMfundu noQeqesho oluQhubelekayo (FET).
3. I-National Sciences Olympiad ikunyaka we-60 yaye le projekthi inika abafundi bamaBakala 10 ukuya ku-11 ithuba elivuyisayo lokukhuphisana kwisayensi nabanye abafundi abasuka kuwo olithoba amaphondo kwakunye namazwe e-Southern African Development Community, anjenge-Lesotho, iZimbabwe neNamibia. Olu khuphiswano lubandakanya uviwo lwaminyaka le kwiisayensi (Life and Physical Sciences).

4. Ukhuphiswano i-AstroQuiz Competition lolwabafundi beBakala 7 kuphela, yaye lususelwa kwimixholo enxulumene ne-astronomi nenxulumene necandelo le-“Planet Earth and Beyond” section yekharityhulam ye-Natural Sciences.
5. Iinjongo ze-AstroQuiz Competition zezi zilandelayo:
  - ukudala umdla kwiisayensi phakathi kwabafundi nokubakhuthaza ukuba bafunde iisayensi kwiSigaba se-FET;
  - ukunika inkxaso ootitshala be-Natural, Life and Physical Sciences nokuphucula isakhono sabo sokufundisa eklasini,
  - ukukhuthaza ukuba nolwazi nokuqiqha nge-astronomi esisiseko; kanye
  - nokubethelala umdla wabafundi kumathuba amakhondo omsebenzi kwicandelo le-astronomi nakwezinye iisayensi;

## 6. Ingcaciso nge-2025 Natural Sciences Olympiad

AmaBakala 4 ukuya ku-6	AmaBakala 7 ukuya ku-9
<ul style="list-style-type: none"> <li>• <b>Ukubhaliswa kwabafundi:</b> Izikolo kufuneka zibhalise abafundi bazo kule kule platform yobhaliso ngekhompyutha ilandelayo: <a href="https://olympiad.co.za/eduregister">https://olympiad.co.za/eduregister</a></li> <li>• <b>Umhla wokuvala:</b> UMvulo, we-07 Apreli 2025</li> <li>• <b>Umhla wokuvala ukuhlawula intlawulo yokubhalisa:</b> ULwesihlanu we-30 Meyi 2025</li> <li>• <b>Umhla wovavanyo:</b> ULwesibini, we-29 Julai 2025</li> <li>• <b>Indawo:</b> Iphepha liya kubhalwa esikolweni.</li> <li>• <b>Amaphepha emibuzo kunye neencwadi zeempendulo:</b> <ul style="list-style-type: none"> <li>◦ I-NRF-SAASTA iya kuthumela ngekhuriya amaphepha emibuzo e-Olimpiyadi ezikolweni.</li> <li>◦ Izikolo kufuneka zithumele ngekhuriya iincwadi zeempendulo kwi-NRF-SAASTA. Kuya kubonelelwa ngemvulophu ukulungiselela oku.</li> </ul> </li> <li>• <b>Ifomathi:</b> Imibuzo ekhethisayo (<b>imibuzo eyi-40</b>)</li> <li>• <b>Ulwimi:</b> IsiNgesi nesi-Afrikansi</li> <li>• <b>Ixesha:</b> Kuvumeleke <b>iiyure eziyi-1½ (11:30–13:00)</b></li> <li>• <b>Ukfaneleka:</b> I-Olimpiyadi ivulelekile kubo bonke abafundi bamaBakala 4 – 6.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ukubhaliswa kwabafundi:</b> Ilzikolo kufuneka zibhalise abafundi bazo kule kule kule platform yobhaliso ngekhompyutha ilandelayo: <a href="https://olympiad.co.za/eduregister">https://olympiad.co.za/eduregister</a></li> <li>• <b>Umhla wokuvala:</b> UMvulo, we-07 Apreli 2025</li> <li>• <b>Umhla wokuvala ukuhlawula intlawulo yokubhalisa ulwesihlanu we-30 Meyi 2025</b></li> <li>• <b>Umhla wovavanyo:</b> ULwesithathu, we-30 Julai 2025</li> <li>• <b>Indawo:</b> Makukhethwe phakathi kovavanyo olwenziwa kwikhompyutha okanye oluyifomathi ebalwa ngepeni ephepheni. (Olu didi luvumeleke kwi-olimpiyadi yamaBakala 7-9 kuphela).</li> <li>• <b>Amaphepha emibuzo kunye neencwadi zeempendulo:</b></li> <li>• I-NRF-SAASTA iya kuwathumela ngekhuriya amaphepha emibuzo e-Olimpiyadi ezikolweni.</li> <li>• Izikolo kufuneka zithumele ngekhuriya iincwadi zeempendulo kwi-NRF-SAASTA. Kuya kubonelelwa ngemvulophu ukulungiselela oku.</li> <li>• <b>Ifomathi:</b> imibuzo ekhethisayo (imibuzo eyi-60)</li> <li>• <b>Ulwimi :</b> IsiNgesi nesi-Afrikansi</li> </ul>

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| <ul style="list-style-type: none"> <li><b>Okuqulethwe liphepha lemibuzo:</b> <ul style="list-style-type: none"> <li>Ukukhumbula – 20%</li> <li>Ukuqonda – 30%</li> <li>Usetyenziso – 30%</li> <li>Uhlalutyo 20%</li> </ul> </li> <li><b>Amalungiselelo:</b> Ootitshala bamkelekile bakhuphele (download) amaphepha emibuzo oonyaka abangaphambili ukulungiselela ukuwasebenzisa kwiiklasi zabo. Kufuneka balikhe kule linki ingezantsi baze baskrole ukuhla ukuya ku-“Download Past Papers”:<br/> <a href="https://www.saasta.ac.za/competitions/natural-science-olympiad/">https://www.saasta.ac.za/competitions/natural-science-olympiad/</a></li> <li><b>liseshoni zoqequesho:</b> Bakuba bebhaisile ootitshala, bay a kumenya kwiKota 2 ukuba beze kwiseshoni yoqequesho olungokunceda abafundi babo bazalise iinkcukacha zabo kwiincwadi zeempendulo.</li> <li><b>Indleko:</b> Yi-R35 ngomfundu ngamnye nge-Olimpiyadi nganye.</li> <li><b>Kwenzeka ntoni ukuba umfundi akakwazi ukuhlawula intlalo yokungenela?</b> <ul style="list-style-type: none"> <li>Amalungiselelo akhethekileyo angenziwa ukulungiselela izikolo/abafundi abangenako ukuhlawula iintlawulo zokungenela. Kufuneka iinqununu zenze isicelo sokuxolelw aekuhlawuleni imali yokungenela nge-imeyili apha nsops@saasta.nrf.ac.za ungadlulanga owe-<b>16 Meyi 2025</b>.</li> </ul> </li> <li><b>Ngayo nayiphi na imibuzo:</b> Qhagamshelana ne-NRF/SAASTA kule nombolo yefowuni: 012 392 9300 okanye uthumele i-imeyili ku nsops@saasta.nrf.ac.za:</li> </ul> | <ul style="list-style-type: none"> <li><b>Ixesha:</b> Kuvumeleke <b>iyyure ezimbini (12:00-14:00)</b></li> <li><b>Ukfaneleka:</b> I-Olimpiyadi ivulelekile kubo bonke abafundi bamaBakala 7 ukuya -9.</li> <li><b>Okuqulethwe liphepha lemibuzo:</b> <ul style="list-style-type: none"> <li>Ukukhumbula – 20%</li> <li>Ukuqonda – 30%</li> <li>Usetyenziso – 30%</li> <li>Uhlalutyo -20%</li> </ul> </li> <li><b>Amalungiselelo:</b> Ootitshala bamkelekile bakhuphele (download) amaphepha emibuzo angaphambili ukulungiselela ukuwasebenzisa kwiiklasi zabo. Kufuneka balikhe kule linki ingezantsi baze baskrole ukuhla ukuya ku-“Download Past Papers”:<br/> <a href="https://www.saasta.ac.za/competitions/natural-science-olympiad/">https://www.saasta.ac.za/competitions/natural-science-olympiad/</a></li> <li><b>liseshoni zoqequesho:</b> Bakuba bebhaisile ootitshala, bay a kumenya kwiKota 2 ukuba beze kwiseshoni yoqequesho olungokunceda abafundi babo bazalise iinkcukacha zabo kwiincwadi zeempendulo.</li> <li><b>Indleko:</b> Yi-R35 ngomfundu ngamnye nge-Olimpiyadi nganye.</li> <li><b>Kwenzeka ntoni ukuba umfundi akakwazi ukuhlawula intlalo yokungenela?</b> <ul style="list-style-type: none"> <li>Amalungiselelo akhethekileyo angenziwa ukulungiselela izikolo/abafundi abangenako ukuhlawula iintlawulo zokungenela. Kufuneka iinqununu zenze isicelo sokuxolelw aekuhlawuleni imali yokungenela nge-imeyili apha nsops@saasta.nrf.ac.za ungadlulanga owe-<b>16 Meyi 2025</b>.</li> </ul> </li> <li><b>Ngayo nayiphi na imibuzo:</b> Qhagamshelana ne-NRF/SAASTA kule nombolo yefowuni: 012 392 9300 okanye uthumele i-imeyili ku nsops@saasta.nrf.ac.za</li> </ul> |
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## 7. Ingcaciso nge-Life Sciences and Physical Sciences Olympiads ngo-2025

### AmaBakala 10 ukuya ku-11

- **Ukubhaliswa kwabafundi:** Izikolo kufuneka zibhalise abafundi bazo kule platform yobhaliso ngekhompyutha ilandelayo:  
<https://olympiad.co.za/eduregister>
- Abafundi banokubhalisela zombini i-Physical nee-Life Sciences.
- **Umhla wokuvala: UMvulo, we-07 Apreli 2025**
- **Umhla wokuvala ukuhlawula intlawulo yokubhalisa uLwesihlanu, we-30 Meyi 2025**
- **Umhla wovavanyo:**
  - I-Life Sciences – **ULwesibini, we-29 Julayi 2025**
  - I-Physical Sciences – **ULwesine, we-31 Julayi 2025**
- **Indawo:** Iphepha liya kubhalwa esikolweni.
- **Ifomathi:** Imibuzo ekhethisayo (imibuzo eyi-100)
- **Ulwimi :** IsiNgesi nesi-Afrikansi
- **Ixesha:** Kuvumeleke **iiyure eziyi-3 (12:00– 15:00)**
- **Ukufaneleka:** ii-Olimpiyadi zivulelekile **kubafundi bamaBakala 10 ukuya ku-11 kuphela.**
- **Okuqlethwe liphepha lembuzo:**
  - Ukukhumbula – 20%
  - Ukuqonda – 30%
  - Usetyenziso – 30%
  - Uhlalutyo 20%
- **Amalungiselelo:** Ootitshala bamkelekile bakhuphele (download) amaphepha emibuzo angaphambili ukulungiselela ukuwasebenzisa kwiiklasi zabo kwiziko lewebhu le-SAASTA elingu-[www.saasta.ac.za](http://www.saasta.ac.za). Mabaklikhe ku-“competitions” baze bakhethe ukhuphiswano abanomdla kulo. Mabaskrole ukuhla ukuya ku-“Download Past Papers”.
- **lindleko:** Yi-R35 ngomfundu ngamnye nge-Olimpiyadi nganye.
- **Kwenze ka ntoni ukuba umfundu akakwazi ukuhlawula intlawulo yokungenela?**
  - Amalungiselelo akhethekileyo angenziwa ukulungiselela izikolo/abafundi abangenako ukuhlawula iintlawulo zokungenela. Kufuneka iinqununu zenze isicelo sokuxolelwu ekuhlawuleni imali yokungenela nge-imeyili apha nsops@saasta.nrf.ac.za ungdululanga owe-16 Meyi 2025.
- **Amaphepha emibuzo kune neencwadi zeempendulo:** I-NRF-SAASTA iya kuthumela ngekhuriya amaphepha emibuzo e-Olimpiyadi ezikolweni.
- **Makuqatshelwe:** Izikolo kufuneka zithumele ngekhuriya iincwadi zeempendulo kwi-NRF-SAASTA. Kuya kubonelelwu ngemvulophu ukulungiselela oku.
- **Imibuzo** (idilesi ye-imeyili entsha): scienceolympiad@saasta.nrf.ac.za okanye kule nombolo yefowuni .: 012 392 9300

8. ISebe i-WCED liya kuhlawula iintlawulo zokungenela ukhuphiswano zabafundi abayi-30 ngesikolo ngasinye, ngesigaba ngasinye, kumaBakala 4 ukuya ku-9 kwi-Natural Sciences kunye nakumaBakala 10 ukuya ku-11 kwi-Physical and Life Sciences Olympiads. Oku kusebenza kuhela kubafundi abavela kwizikolo ii-Mathematics, Science and Technology (MST) focus schools nakwii-Science, Technology, Engineering and Mathematics (STEM) club schools. Zonke ezi zikolo zimele ukuthumela ngqo ubungqina okanye ikopi yemisebenzi yokungenela ukhuphiswano yabafundi bazo nge-imeyili engadlulanga **u-15:00, ngoMvulo, we-26 Meyi 2025**, kwaba:

Suanne Rampou: [Suanne.Rampou@westerncape.gov.za](mailto:Suanne.Rampou@westerncape.gov.za) kwi-Natural Sciences,

Jean Goliath: [Jean.Goliath@westerncape.gov.za](mailto:Jean.Goliath@westerncape.gov.za) kwi-Life Sciences

Marius Diergaardt: [Marius.Diergaardt@westerncape.gov.za](mailto:Marius.Diergaardt@westerncape.gov.za) kwi-Physical Sciences.

Lorenzo Meyer: [Lorenzo.Meyer@westerncape.gov.za](mailto:Lorenzo.Meyer@westerncape.gov.za), kwi-MST Interventions and Projects

## 9. Imigaqo yokhuphiswano Iwe-AstroQuiz ka-2025

### Imfuno zokungenela ukhuphiswano

Ootitshala mabababhalisele ukungenela ukhuphiswano abafundi babo ngekhompyutha. Amaqela abafundi abane iqela ngalinye, **ngaphandle** kwakumjikelo 1 apho ootitshala banokukhetha phakathi kokuba bangenele ukhuphiswano beliqela **OKANYE babhalisele ukungenela bonke abafundi beBakala 7 abanomdla**. Oku kwenza ukuba utitshala akhethe abona bafundi bagqwesileyo ukuba bangenele umjikelo 2.

### Imihla yokhuphiswano

Umjikelo	Inqanaba	Ifomathi	Umhla
1	Elesikolo	Luyabhalwa (ngepeni nephepha)	ULwesine, we-10 Apreli
2	Elesithili	Kwikhompyutha	ULwesine, we-15 Meyi
3	Elephondo	Kwikhompyutha	ULwesine, we-14 Agasti
4	Elikazwelonke	Kwikhompyutha	ULwesine, we-04 Septemba

### Ingcaciso ngokubanzi

- Iqela ngalinye kufuneka libe nabafundi abane (abangekho mbalwa, abangekho ngaphezulu).
- Amangenelo asimahla.
- Akukho sikolo sivumelekileyo ukuba sitsibe umjikelo.
- Zonke izikolo mazingenise iziphumo zazo phambi kokuba zivunyelwe ukuba zibhalisele umjikelo 2.
- Umjikelo 1 uya kubhalwa ephepheni yaye ubhalelwya esikolweni.
- Imijikelo 2 ukuya ku-4 iya kwenziwa kwikhompyutha.
- Umjikelo ngamnye unemibuzo ekhethisayo (*multiple choice questions*) engama-30.
- Amaqela AMATHATHU agqwesileyo kumjikelo wephondo kwakunye NAMATHATHU agqwesileyo kumjikelo kazwelonke angaphumelela amabhaso.

### **Umjikelo 1: Ngolwesine, we-10 Apreli 2025**

- Utitshala unokukhetha **ukungaliqingqi** inani labafundi beBakala 7 abathatha inxaxheba kwikhwizi, o.k.t. unokubhalisa abafundi beBakala 7 abaninzi kangangoko enqwenela **okanye** akhethe iqela elinye ukuya kwamabini lamalungu amane kwinqanaba ngalinye.
- Eli phepha lemibuzo liya kuthunyelwa nge-imeyili kubo bonke ootitshala ababhalisileyo phambi komhla wokuvala.
- Bonke abafundi beBakala 7 esikolweni bavumelekile ukuba bathathe inxaxheba.
- Yakuba ibhaliwe ikhwizi, utitshala kufuneka anikezele iziphumo kwi-NRF-SAASTA zikwithemplayithi, aya kuyifumana kunye nephepha lemibuzo.
- Abafundi banemizuzu engama-30 yokugqiba umjikelo.
- Utitshala wenza isigqibo/ukhetha ukuba ngawaphi na amaqela (amaqela AMABINI angawona maninzi) angathanda ukuwabhalisela kumjikelo 2.

### **Umjikelo 2: Ngolwesine, we-15 Meyi 2025.**

- Imjjikelo 2 ukuya ku-4 iya kuqhutya kwikhompyutha) yaye utitshala ngamnye othumela iziphumo zakhe zomjikelo 1 kwi-NRF-SAASTA, uya kufumana ilinki yokubhalisa iqela (amaqela) lakhe. **Ngamaqela AMABINI angawona maninzi kwisikolo ngasinye aya kuvunyelwa kumjikelo 2.**
- Amaqela akhuphisana kwisithili.
- Amaqela amathathu agqwesileyo kwisithili ngasinye adlulela kumjikelo wephondo.
- **Ixesha:** Amaqela anemizuzu engama-30 yokugqiba/yokugqibezela ikhwizi.
- Ukuba kukho ukubambana ngamanqaku phakathi kwezikolo ezithathu eziggwesileyo kwisithili kumjikelo 2, ngoko ke onke amaqela abambeneyo aya kuvunyelwa ukuba adlulele kumjikelo 3.
- Ukuba kunokwenzeka ukuba kubekho ukubambana ngamanqaku phakathi kwamaqela amabini asuka kwisikolo esinye, aya kunikwa uvavanyo lokuqhawula ukubambana ukwenzela ukuba kubonwe ukuba leliphi na iqela eliya kudlulela kumjikelo 3. Ukuba, emva kokuqhawulwa kokubambana kwamaqela, kusekho abambeneyo, i-NRF-SAASTA iya kujonga ixesha elithathiweyo ngamaqela ukugqiba imibuzo yokuqala yekhwizi kwikhompyutha kumjikelo wesi-2 ukufumana iqela eliphumeleleyo. Iqela eligqibe ikhwizi yokuqala kwikhompyutha ngexesha elikhawulezayo, liya kuba liphumelele koko kubambana yaye liya kudlulela kumjikelo olandelayo.

### **Umjikelo 3: Ngolwesine, we-14 Agasti 2025**

- Amaqela akhuphisana namaqela aphumeleleyo azo zonke izithili kumaphondo awo ngokwahlukenyeyo.
- Amaqela akhuphisana ngeendawo ezintathu zabaggwesileyo kwiphondo.
- **Ixesha:** Amaqela anemizuzu engama-30 yokugqiba ikhwizi.
- Iqela eliphumeleleyo lidlulela phambili ukuya kumela iphondo kumjikelo kazwelonke, oko kukuthi umjikelo 4.
- Amaqela abambene ngamanqaku kwiindawo ezintathu zabaggwesileyo kwiphondo wona aya kulindeleka ukuba abhale uvavanyo lokuqhawula ukubambana. Ukuba, emva kokuqhawulwa kokubambana, abe amaqela esabambene, i-NRF-SAASTA iya kujonga ixesha elithathiweyo ngamaqela ukugqiba imibuzo yokuqala yekhwizi kwikhompyutha kumjikelo wesi-3 ukufumana iqela eliphumeleleyo.

#### **Umjikelo 4: Ngolwesine, we-04 Septemba 2025**

- Amaqela akhuphisana ngeendawo ezintathu zabagqwesileyo kuzwelonke.
- **Ixesha:** Amaqela anemizuzu engama-30 yokugqiba ikhwizi.
- Ukuba kukho amaqela abambene ngamanqaku namanye kwiindawo ezintathu zabagqwesileyo, iqela eligqibe ngexesha elikhawulezileyo liya kuba lilo eliphumeleleyo. Akusayi kubakho kuqhawulwa kwamaqela abambeneyo.

#### **Inani lemibuzo kunye nobude bomjikelo ngamnye**

- Yonke imijikelo iqulethe imibuzo ekhethisayo (*multiple choice questions*).
- Yonke imijikelo inemibuzo engama-30 yaye abafundi bavunyelwe imizuzu engama-30 (umzuzu omnye kumbuzo ngamnye) ukugqiba umjikelo.
- Apho abafundi babambene khona (ukusuka kumjikelo 2 ukuya phezulu), kuya kusetyenziswa imibuzo eli-10 yokuqhawula ukubambana ukufumanisa amaqela aphumeleleyo aya kudlulela kumjikelo olandelayo.

#### **Yintoni efunekayo ukuze uphendule ikhwizi yekhompyutha kumjikelo 2 ukuya ku-4?**

- Nayiphi na i-smartphone okanye ithablethi. Kufuneka ube nedivayisi (device) enye kuphela. Ukuba unamaqela AMABINI, angathatha imibuzo yekhwizi iqela elinye emva kwelinye.
- Ngokwe-avareji, idatha eya kufuneka ayisayi kuba ngaphezu kweendaleko zokuthumela imiyalezo ye-WhatsApp eyi-4 ukuya ku-5 ukugqiba ikhwizi nganye.

#### **Amabhaso**

Amaqela AMATHATHU aggwesileyo kumjikelo wephondo kwakunye nawona maqela MATHATHU aggwesileyo kumjikelo kazwelonke angafumana amabhaso. Bonke abafundi baya kufumana izatifikethi zokuthatha inxaxheba ngekhompyutha (*electronic participation certificates*).

**Imibuzo: Idilesi ye-imeyili entsha:** [astro@saasta.nrf.ac.za](mailto:astro@saasta.nrf.ac.za).

10. ISebe i-WCED linqwenela ukukhuthaza izikolo ezininzi kangangoko linako ukuba zithathe inxaxheba kuhuphiswano i-Natural, Life and Physical Sciences Olympiad kunye nokhuphiswano i-Astroquiz Competition ngo-2025.
11. Ziyacelwa iinqununu ukuba zazise okukule ngcaciso imfutshane bonke ootishala bamaBakala 4 ukuya ku-11 be-Natural, Life ne-Physical Sciences ukuze bakuthathele ingqalelo.

**ISAYINWE:** NGU-B LORISTON

**USEKELA MLAWULI-JIKELELE WEKHARTYHULAM NOLAWULO LOVAVANYO**

**UMHLA:** 2025-03-13