Imiyalelo kaThisha: Funda lezigaba ezilandelayo ngaphambi ngokokuba nikhulume ngemibuzo ngxoxo nabantwana. Lokhu kuzokusiza ukubuza imibuzo ngokuzethemba nokusiza ukuyisebenzisa njengamathuluzi okusiza abantwana ukuthola ukuthi kwenzekani endatsheni nokuthi eziphi izifundo abangazithola kuyona. Ngokubuza imibuzo nokuthi abantwana baqhamuke nezimpendulo; ukufunda kwabo kuzoba mnandi futhi kube nempumelelo kunokuthi uvele ubanike zonke izimpendulo. Uma beba nobunzima ukuthola izimpendulo, sebenzisa izigaba ezilandelayo ukubasiza bagxile endleleni efanele.

Indaba efingqiwe

UNeo uthola inhlanzi enombala wegolide njengesipho sakhe sokuzalwa esiphuma kubaba wakhe. UNeo uyawyithanda ihlanza yakhe esagolide futhi umangazwe ubuhlakani bayo. Inhlanzi esagolide nayo iyamthanda uNeo futhi iyakuthokozela ukuba naye. Ngesikhathi uNeo ephumela emnyango nobaba wakhe ukuyodlala ibhola, inhlanzi esagolide izibona inganakiwe. Okunokuba ihlale idinwe, inhlanzi esagolide yasungula into ezoyenza ukuthi ikwazi ukuhamba iye ezindaweni ezahlukene bese ikwazi ukudlala nabo. Ngeshwa, eyakusungula akubanga impumelelo kodwa kwaphenduka ingozi enkulu. Kungagabe uNeo uzofika ezoyikhulula inhlanzi? Noma inhlanzi esagolide izophenduka ukudla kwe-Octopus? Hlanganyela nathi ekufundeni incwadi nokuthola kabanzi.

Okuqukethwe

- Funda indaba
- Imibuzo ngxoxo nezihloko
- Umsebenzi wokufunda 1: Izinto ezisindayo nezilula
- Umsebenzi wokufunda 2: Umdwebo wekhasi olithandayo
- Umsebenzi wokufunda 3: Yakha iphazili
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- Umsebenzi wokufunda 5: Inkohliso yesandla ewu 3D
- Umsebenzi wokufunda 6: Yakha indlu yenhlanzi
- Umsebenzi wokufunda 7: Qhathanisa, uhlaziye
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Funda indaba

Ngaphambi kokuba ufunde incwadi, bheka ingaphandle layo bese ubuza abantwana ukuthi uma becabanga indaba ingani? Nanka amathiphu angakusiza ukuhlahla indlela ngaphambi, phakathi nangemuva kokufunda incwadi:

- Banike isikhathi esanele sokusho abakucabangayo nabakuzwayo.
- Chitha isikhathi ekhasini ngalinye bese uyachaza ukuthi kwenzekani.
- Buza imibuzo ngokwenzekayo esithombeni ngasinye noma ubanike amasu.
    - Uma ucabanga uNeo uyasithokozela isipho sakhe sosuku lokuzalwa?
    - Ucabanga ukuthi inhlanzi yayiphatheke kabi?
    - Ucabanga ukuthi uNeo benobaba wakhe babezama ukuyibiza inhlanzi?
    - Yafika kanjani inhlanzi olwandle?
- Uma usuqedile ukufunda, buza abantwana ukuthi yini abayithandile ngendaba.
- Buza eminye yalemibuzo engezansi (khetha imibuzo ebukeka isesigabeni sabantwana onabo).

- Qiniseka ukuthi **wonke umuntu** oyalithola ithuba lokubuza nokuphendula imibuzo. Ungavumeli abantwana asebekhulile nabazethembayo ukuthi benze yonke into.

Imibuzo ngxoxo nezihloko

Imibuzo yokuqondisisa ongayibuza abantwana- Lemibuzo yakhelwe ukubona ukuthi abantwana bayiqondile yin indaba:

- Watholani uNeo ngosuku lwakhe lokuzalwa?
- Yafinyelela kanjani inhlanzi esagolide olwandle?
- Ubani owanikeza uNeo inhlanzi esagolide? Kungani bamnikeza yona?
- Ngabe inhlanzi esagolide inawo amakhono ahlukile? Imaphi?
- Inhlanzi esagolide yazisebenzisa kanjani izibalo kanye nesayensi ukuxazulula inkinga yayo?
- Ngabe inhlanzi iyahlangana nezidalwa ezahlukile olwandle? Ngabe iyahlangana nezinye ezidelelayo?
- Ngabe ihlanzi esagolide ibambeka kuphi ngemuva kokubalekela i-octopus? Yeqa kanjani?
- Yaphatheka kanjani inhlanzi esagolide ngesikhathi uNeo nobaba wakhe bephumela emnyang
- Ngabe inhlanzi esagolide yazama kanjani ukuxazulula inkinga yokungabandakanyeki emdlalweni?

Imibuzo ngxoxo ongayibuza abantwana – Lemibuzo yakhelwe ukusiza abantwana bacabange kabanzi noma ngokwehlukile ngendaba bese beqhamuka nawabo amacebo nemibono:

- Laphatheka kanjani ikati ngesikhathi uNeo ejabuliswa inhlanzi esagolide? Uma ucabanga kungani liba   nomona ikati?
- Ngabe uNeo nobaba wakhe bazama ukukhipha inyumbazane inhlanzi esagolide? Ngabe bamukhipha inyumbazane ngempela? Wake wazizwa sengathi awusiyona ingxenye? Kwenzakalani? Kwakwenza wazizwa kanjani? Wake wamkhiphela omunye umuntu ngaphandle kwanoma ngabe yini? Wawukwenzelani lokho? Ucabanga ukuthi leso isenzo esihle?
- Inhlanzi esagolide ihleli endishini yayo futhi ayinayo inkululeko efana nale yabantu noma yekati; kungani lokhu kunzima kwinhlanzi? Ungaphatheka kanjani ukuthola ukuthi kunabantu ohlala nabo abakwazi ukuya nokwenza nona yini abayithandayo wena ungakwazi? Kungakwenza uphatheke kanjani ukuhlala endishini yeglasi kanhlanzi?
- Kungani uNeo nobaba wakhe bekhathazekile uma bebona inhlanzi esagolide indiza idlula kubona? Inhlanzi esagolide ayibonakali ikhathazekile; uma ucabanga iyabona na ukuthi isengozini?

Umsebenzi wokufunda 1: Izinto ezisindayo nezintantayo

- **Okudinayo:**
    - Indishi noma isitsha esivulekile esifakwe amanzi
    - Izinto ezisindayo nezintantayo

Umsebenzi: Faka amanzi endishini bese abantwana behlola ngezinto ezahlukahlukene ukubona ukuthi yini entanta nokuthi yini ezikayo. Banikeze ithuba lokhuchaza ukuthi kungani lokho kwenzeke okwenzekile nokuthi kwenzeka kanjani.

Umsebenzi wokufunda 2: Umdwebo wekhasi olithandayo

- Okudingayo:

- Incwadi
- Ipeni lomsizi
- Irabha
- Iphepha

Umsebenzi: Dweba ikhasi olithandayo encwadini ephepheni, lomsebenzi usiza ukuthuthukisa amakhono amahle emoto, ukuhlaziywa okubukwayo, ukwakha ukunaka nokunye!

1. Encwadini, abantwana mabakhethe ikhasi abalithandayo bese bebuka indlela elakhiwe ngayo nelibukeka ngayo. Nikeza abantwana iphepha nepeni lomsizi bese beqala ukudweba ikhasi labo lelo abalithandile encwadini.
2. Abantwana mabakhrayone ikhasi abalidwebile.
3. Abantwana mabethule ukuthi kungani libalulekile lelikhasi kubona.

Umsebenzi wokufunda 3: Yakha iphazili

- **Okudingayo:**
  - Ucezu lika khalibhothi
  - Isikelo
  - I-glue
  - Amakhrayoni

1. Kulomsebenzi uzodinga ikhophi yephepha lephazili elinezingcezu eziwu 12, ucezu lika khalibhothi, isikelo, i-glue kanye namakhrayoni.
2. Printa iphepha lephazili elinezingcezu eziwu 12 bese uyalela abantwana ukuthi bayikhrayone ngemibala egqamile.
3. Namathisela iphepha lephazili kukhalibhothi.
4. Siza abantwana ukusika izingcezu zephazili.
5. Abantwana mabadlale ngephazili bazame ukubuyisela isithombe ebeyiyiso.

Umsebenzi 4: Yakha isondo lemibala

- **Okudingayo:**
  - Ukhalibhothi
  - Amakhrayoni
  - Intambo
  - Iglu
  - Iphepha elinesondo lemibala
  - Isikelo

Umsebenzi: Nikeza abantwana iphepha elinesondo lemibala (elinikeziwe encwadini yezifundo). Abantwana mabakhrayone isondo labo lemibala belandela izitephu ezinikeziwe. Uma sebeqedile ukukhrayona, vula izimbobo emacashazini anikeziwe (ngaphakathi kwindilinga) bese ufaka intambo phakathi nendawo. Pinisa indingiliza yakho ngokubamba ngasekugcineni kwentambo bese uzwingisa indilinga yakho izikhathi ezimbalwa ukuze intambo iphotheke. Donsa izintambo kanye kanye njengoba

usuke udlala inkositini ukwenza indilinga yakho ipine ngokushesha. Ukukwazi ukuyipinisa ngokushesha kuzokwenza ukwazi ukubona inkohliso evelayo kuyona.

- **Kwenzakalani?**
  - Ngesikhathi upinisa indilinga ngokushesha, kuzobonakala engathi imibala iyanyamalala bese indingiliza iphenduka ibemhlophe. Lokhu kwenzeka ngoba uma upinisa indilinga ngokushesha kakhulu, amehlo ethu awabe esakwazi ukubona okuyikhona / ukulandela imibala ngesivinini esikhulu. Ngoba indilinga yakhiwe imibala yothingo lwenkosazane, uma isipina ngesivinini esikhulu, sibona lonke uthingo lwenkosazane ngokushesha bese luba mhlophe.

Umsebenzi wokufunda 5: Inkohliso yesandla ewu 3D

- **Okudingayo:**
  - Ikhophi yenkohliso yesandla ewu 3D
  - Ipeni lomsizi
  - Irabha
  - Iphepha
  - I-marker

Umsebenzi: Nikeza umntwana ngamunye ikhophi yomsebenzi wesandla kanye nezinto abazozidinga ukwenza umsebenzi. Abantwana mabadwebe izandla zabo ephepheni ngepeni lomsizi. Basize ukulandelanisa izitephu zomsebenzi. Uma sebeqedile, bagqugquzele ukuthi babuke into abayenzile bese bethula umsebenzi wabo ophelele. Babuze ukuthi bazizwa kanjani ngokwenza lomsebenzi? Iziphi izinselelo abahlangabezane nazo nokuthi bazinqobe kanjani? Umabengathola ithuba lokuthi bawuphinde lomsebenzi, ikuphi abangakwenza kangcono?

Umsebenzi wokufunda 6: Yakha indlu yenhlanzi

- **Okudinayo:**
  - Ukhalibhothi
  - Amakhrayoni
  - Amapeni omsizi
  - I-glue
  - Akuphoqi: izinto zemvelo (izintingo, inhlabathi, amatshe, amagqabi, njalo njalo)

Umsenbenzi: Kukhalibhothi abantwana mabadwebe inhlanzi yabo abayithandayo. Bangabheka endabeni ngamanye amacebo, kodwa bagqugquzele ukuthi bangafanekisi ncamashi nosencwadini kodwa bangabasebenzisa abasencwadini ukubona amacebo bese beqhamuka nezitayela zabo ezahlukile. Uma abantwana sebeqedile, bayalele ukuthi banamathisele ofishi babo komunye ukhalibhothi omkhudlwana bese behlobisa ikhaya likafishi elingaphansi kwamanzi.

Umsebenzi wokufunda 7: Qhathanisa, uhlaziye

Funda incwadi **uGoldfish Genius** kanye **noSpringloaded** nomntwana/nabantwana. Iba nengxoxo ngendlela lezi zincwadi ezimbili ezifana ngayo nezihluke ngayo. Abantwana mabaqhamuke namasu kuqala kodwa uma behluleka, banikeze imibono.

- **Nazi ezinye zezinto ezifanayo ngezincwadi zombili:**
    - InoNeo, ubaba wakhe kanye nekati njengabalingisi.
    - Idwetshwe ngokufana
    - Zifundisa ngokubaluleka kwabanye abantu.
    - Zifundisa ngobungozi bokuba namasu angaphelele noma bokuzithemba kakhulu.
    - Zinabalingisi bakhona basebenzisa izimalo kanye nesayensi ukuxazulula izinkinga.
    - Zinabalingisi abangena enkingeni.
    - Zinabalingisi abanganaki/abaziba abanye abalingisi okoubayisa enkingeni. (Ezincwadini zombili abenzi bokubi babuye baqaphele izindlela ezingalungile bese izindaba ziphela bonke abalingiswa bezizwa beyinxenye futhi behlangene).

Kuningi okunye osangakuthola, cabangisisa!

- **Nazi ezinye izinto ezihlukile ngezincwadi zombili:**

Goldfish Genius	Springloaded
• Unenhlanzi esagolide • Yenzeka ngaphansi kwamanzi • Kukhona i-octopus • Inomlingisi owenza okubi (i-octopus) • Kukhona iphathi/umcimbi.	• Kunezicathulo zekhethelo ezineziphringi • Ayikho inhlanzi esagolide • UNeo nobaba wakhe ibona abasungula izinto. • UNeo uyena ongena enkingeni kunokuthi kube nguyena oxazulula inkinga.

Futhi, kuningi kakhulu okwehlukile ngalezincwadi ezimbili, ngakho ke gqugquzela abantwana ukuthi bacabangisise bese uyabona ukuthi kungaphi abakwazi ukuqhamuka nako.

- Uma sebezishilo ezinye izibonelo, buza abantwana lemibuzo elandelayo:
    - Zombili uNeo kuSpringloaded, kanye nakuGoldfish Genius basungula izinto ezingajwayelekile, kodwa abacabangi ngobungozi obukhona kulokhu abakwenzayo, futhi zombili ziphetha sezisenkingeni enkulu. Baphunyuka kuphela ngoba bethola usizo emndenini noma kubantu ababanakekelayo.
        - Ngabe lokhu kusinikeza mqondo muni ngokubaluleka kwabanye abantu?
        - Ngabe lezizindaba zingasisiza kanjani ukuthi sicabange ngo'buntu'?
        - Ucabanga ukuthi izindaba zombili zizama ukusenza sicabange ngani?
        - Ucabanga ukuthi ikuphi okubalulekile kakhulu incwadi ezama ukusenza sicabane ngakho?

Umsebenzi wokufunda 8: Inselelo yokungasebenzisi izandla

Thola amatshe amabili alinganayo noma amabhokisi obisi amadala amabili (noma eziphi ezinye izinto ezimbili ezinosayizi abafanayo nezincane ngokwanele ukuthi umntwana akwazi ukuzibamba). Abantwana mabazame ukubamba into eyodwa ngezikhathi bese bezama ukusebenzisa lento abayibambile ukucosha nokunyakazisa izimo ezahlukene eziseduze nabo. Hlaziya ngezinto ezingosayizi nezimo ezahlukile. Abantwana mabazame ukubona ukuthi bazokwazi yini ukunyakazisa ezinye izinto ezibekwe phansi bazibeke etafuleni noma esihlalweni besebenzisa amabhokisi abo ukuzibamba. Nabantwana asebekhululi, ningabheka amasu afana nokuthi:

- Bekulula ukucosha izinto ezisindayo noma ezilula?
- Bekulula ukucosha izinto ezinkulu noma ezincane?
- Ngabe isimo sezinto obuzicosha zikunikezile ubunzima ukuthi uzibambe?

Qaphela: ukubuza imibuzo efana nalena kuyakusiza ukuphumelelisa ukuthuthukisa abantwana ezintweni eziningi. Yenza isiqalo esihle kubantwana ukuze bakwazi ukubhekana nezinkinga ezinzima kanye nasekuthuthukiseni amakhono okuzicabangela. Kuphinde kube ithuba elihle lokwengeza noma ukufaka amagama amasha. Ngokwethula amagama afana nelithi "texture" endaweni yokudlala, abantwana abafundi kuphela ngaphandle kokuqaphela abakufindayo, kodwa babuye bakhumbule ulwazi olusha kalula ngoba imiqondo yabo ihlanganisa igama nesigameko. Ngokufanayo, amagama afana no "big" no "small" aba ngawangampela kalula kubantwana uma bewaqondanisa nezigameko ezenzekayo ezimpilweni zabo. Ngesikhathi amagama afana no "big" nelithi "small" esebenza emdlalweni, aphinde asebenze ngokujulile emiqondweni yabantwana. Lokhu kusiza ukususa igama ekubeni into bese beqala ukuliqonda njengento abangakwazi ukuyizwa okwangempela.

Ngokwama-Legos: Lomsebenzi uyefana nowedlule, kodwa abantwana kumele basebenzise amabhulokisi abo amabili (elilodwa esandleni ngasinye) ukuhambisa amabhulokisi. Bangazama ukwakha umbhoshongo noma ukuhambisa amabhulikisi esuka phansi eya etafuleni noma esihlalweni. Bangabuye bazame ukuhambisa ezinye izinto abangazithola.

Thanda is a non-profit organisation based in rural Mtwalume, KwaZulu Natal South Africa. Our curriculum is made up of activities that we have developed over 12 years. The ideas and inspiration for our activities come from is a wonderful combination of educators, books, websites, YouTubers, and other places and people on the internet. We are very grateful for all of them. Where we use ideas or activities directly from a source, we always endeavour to give credit to the creator. We do not endeavour to profit from these story studies, we only wish to add value to the lives of people we may have the opportunity of crossing paths with.

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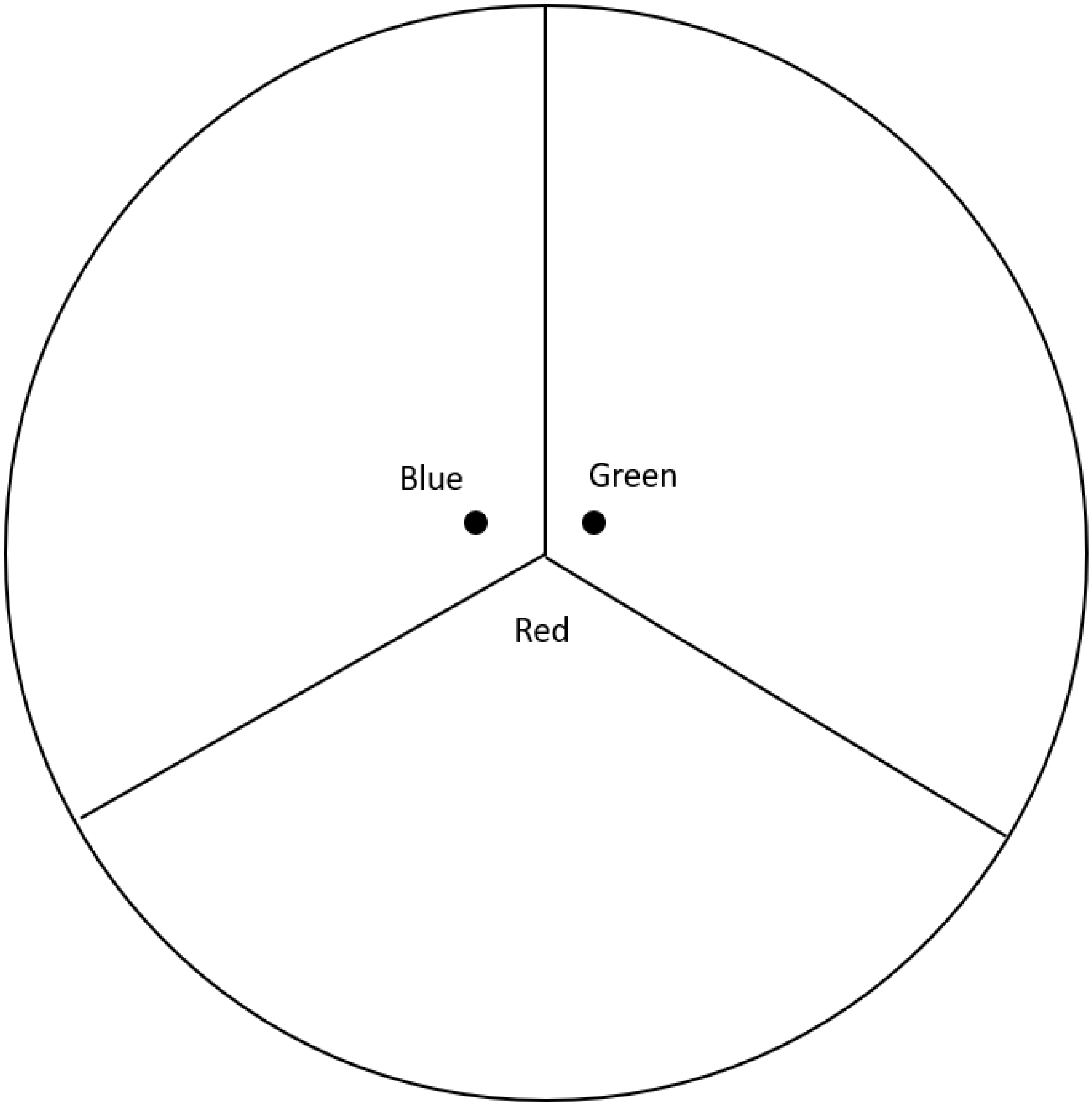

Blue
Green
Red

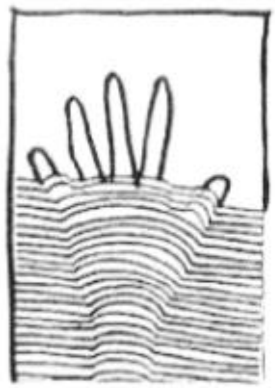
3D Hand Illusion

Ozokudinga:

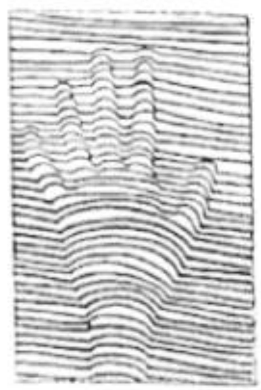
Iphepha
Imakha
Ipeni lomsizi
izandla zakho

1. Dweba ngokulandelela ubunjwa besandla sakho ngepeni lomsizi.

2. Manje thatha imakha uqale ngezansi kwephepha udwebe imigqa uze ufike lapho udwebe khona isandla. Uma usufika lapho, dweba imigqa egobile njengoba ukhonjisiwe ngenhla.



3. Qhubeka udwebe imigqa eqondile, bese uyigobise uma usufika lapho odwebe khona isandla sakho ngepeni lomsizi.



1. Ncoma isandla sakho esiwu'3D!