

Ubunyamwema: Ibijanye n'ivuka, Si umuvumo

Ibirimwo

Incamake

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Aho twabikuye

Incamake

Iyumvire isanamu nini kandi ifise amabara aboneka neza iri ku rupapuro rwa mbere rw'ikinyamakuru. Ubu rero iyunvire ko kuri iyo sanamu hari umuntu yambaye ishati y'umukinyi wa golf hakaba hariko indome canke igicapo ku mufuko w'iyo shati. Ukaraba iyo sanamu wegereye, ugerageza gusoma indome ziri kuri iyo shati. N'umubabaro mwinshi, ntushobore gutandukanya izo ndome. Isanamu yose mu bisanzwe ibona neza. Ariko uriko uragerageza gusoma izo ndome zanditseko ntushobore kuzitandukanya. Iyo uba uriko uraraba ku sanamu ya mbere ico kinyamakuru cakoreshsheje mugabo, woshoboye gutandukanya ayo majambo. Uko niko umunyamwema abona isi.

Uguhangana canke ukwitaho ibijanye n'ubunyamwema vyashizeho uguhitamwo gukomeye mu guhera mu vyo kugwanira iviyumviro vy'abafise urukoba kanaka gushika mu kwambara ibifise ibara ry'irabura n'ibara ry'imishatsi canke guhindura ibara ry'urukoba biciye mu kubagwa ngo umuntu acike uwera. Hariho abashobora kuvuga ko uko atari uguhangana na gato. Ubunyamwema buriho ahanini guhera mw'iremwa, kuva mu ntambwe za mbere z'umwana ari mu nda. Ubunyamwema ni "ibara ry'urukoba" rya kera, kera cane. Bwabonye mu mice yose y'isi, mu bihe vyose, mu mico yose izwi mu bantu. Vyaravuzwe ko ubunyamwema bushobora kuba mbere ari ibijanye n'ivuka no guhanahana ubuzima vy a kera gusumba ibindi.

Ubunyamwema ni iki

Ijambo "ubunyamwema" rijanye n'umurwi w'ivyo guhanahana ubuzima. Abantu b'abanyamwema bafise ibara rike canke nta bara bafise mu maso, mu rukoba, canke mu mushatsi. Bavukanye ibibagize bidashobora gukora ibitanga ibara vyitwa meranine bikwiye nkuko bisanzwe. Umuntu umwe ku 17.000 vy'abanyamerika afise bumwe mu bwoko bw'ubunyamwema. Ubunyamwema bufata abantu bo mu mabara y'urukoba yose. Abana benshi ba nyamwema bavyawe n'abavyeyi bafise ibara ry'imishatsi n'iry'amaso risanzwe bihwanye n'amoko yabo. Rimwe na rimwe abantu ntibamenya ko ari ba nyamwema. Ikintu gikunda kuvugwa ni uko abanyamwema bafise amaso atukura. Mu vy'ukuri hari amoko atandukanye y'ubunyamwema kandi ubwinshi bw'ibitanga ibara mu maso buratandukanye. Nubwo abanyamwema benshi bafise amaso ashaka gutukura, abanyamwema benshi bafise amaso asa n'ubururu. Hari n'abafise ay'ibara rishaka kw'irabura canke kwera. N'ubwo biri uko, ubwoko bwose bw'ubunyamwema bufatanye n'ingorane zo kubona.

Ingorane zo kubona: Abantu bafise ubunyamwema bama bafise iminsi yose ingorane zo kubona (atari ingorane zitorerwa umuti n'amarori y'izuba) kandi benshi bafise ukubona gufo. Urugezo rw'ubumuga bwo kubona ruratandukanye bihwanye n'ubwoko butandukanye bw'ubunyamwema kandi abantu benshi bafise ubunyamwema ni "impumyi imbere y'amategeko", ariko benshi barakoresha ukubona kwabo mu bikorwa bitandukanye harimwo no gusoma kandi badakoreshje indome

z'impumyi. Bamwe mu bafise ubunyamwema barafise ukubona gukwiye kubashoboza gutwara imodoka. Ingorane zo kubona ku bunyamwema ziva ku kudakura gukwiye kw'igice c'amaso kiri imbere cakira umuco hamwe n'ukudakora neza kw'imitsi ifatanya ijisho n'ubwonko. Ni ukubaho kw'izo ngorane z'ijisho gusigura ukubaho kw'ubunyamwema. Ni ukuvuga rero ko ukumenya ubunyamwema bica gusa mu gupima amaso.

Ingoranez'urukoba: Mu gihe bensi mu bantu bafise ubunyamwema bafise urukoba rutirabura, ibara ry'urukoba canke iry'amaso si ryo ryerekana ubunyamwema. Abantu bafise ubwoko bwinshi bw'ubunyamwema bakwiye kwicungera mu kwirinda ukwononekara kw'urukoba kwova ku zuba biciye mu kwisiga amavuta akingira umubiri izuba, inkofero n'impuzu zikinga izuba.

Ibituma vy'ubunyamwema

Nkuko twamaze kubivugana ubunyamwema ni ibijanye n'ivuga no guhanahana ubuzima. Ibivamwo umwana rero vy'ubunyamwema Oculo-cutane (AOC: Albinisme Oculo-cutané) bisigura umugwi w'ingorane z'ijanye n'ivyo guhanahana ubuzima zerekana wa n'ukugabanuka kwa meranine biri mu bivamwo umwana vyitwa chromosome autosomique. Autosome ni umugwi w'ibivamwo umwana (chromosome) birimwo ibivamwo umwana (genes) ku biranga umubiri wacu ahanini, bitandukanye n'umugwi w'ibivamwo umwana (chromosome) vyitwa chromosome sexuel. Mu bisanzwe dufise imigwi y'ibivamwo umwana ibiri n'ibivamwo umwana biriko – umwe dukura k'umuvyeyi wacu w'umugabo, n'uwindi dukura k'umuvyeyi wacu w'umugore. Nta nimwe murivyo bigize umwana bibiri bikora ku bantu bafise ubunyamwema. Nubwo biri uko, ubunyamwema ni ico bita mu gifaransa "**caractère récessif**", naho imwe gusa muri ivyo bigize umwana bibiri vy oculo-cutane umuntu arashobora kugira ibitanga ibara ariko akaba afise ibintu vy'ubunyamwema. Abavyeyi bompi bategerezwa kuba bafise ibivamwo umwana vy oculo-cutane bifise ako kagorane k'ubunyamwema kugira bavyare umwana w'umunyamwema. Mu gihe abavyeyi bompi bafise ibivamwo umwana bifise ako kagorane k'ubunyamwema (kandi ata n'umwe muri bo afise ubunyamwema) hari ugushoboka kumwe kuri kane ku mbanyi

yose ko umwana yovuka afise ubunyamwema. Ubwo bwoko bwo guhanahana ubuzima bwitwa mu rurimi rw'igifaransa "hérité autosomale récessive"

Ubwoko bw'ubunyamwema: Naho abanyamwema benshi bafise urukoba n'umushatsi bisa nk'ivyera cane, si bose bameze uko. Albinisme oculo-cutané (AOC) ifatanye n'amaso, umushatsi n'urukoba. Albinisme oculaire (AO), idakunze kuboneka cane, ifatanye ubwa mbere n'amaso, mu gihe urukoba n'umushatsi vyera canke bishaka kwera gatoyi ugereranije n'ivy'abo mu muryango.

Mu kiringo c'imyaka, abashakashatsi bakoresheje ubuhinga butandukanye mu gushira mu migwi albinisme oculocutané. Ahanini, ubwo buhinga bwatandukanije umugwi w'abanyamwema badafise ibitanga ibara na bike mu mubiri numugwi w'abafise ibitanga ibara mu mubiri bikeyi. Abafise ubunyamwema bo mu mugwi w'abadafise ibitanga ibara mu mubiri, urukoba n'umushatsi bifise ibara rishaka kwera ukubona nakwo kukaba kuri hagati ya 20/200. Abafise ubunyamwema bo mu mugwi w'abafise ibitanga ibara bikeyi, umushatsi ushaka gusa n'umuhondo canke gutukura gusumba kandi barabona neza gusumba abadafise ibitanga ibara mu mubiri. Insiguro za mbere z'ubunyamwema zita amazina iyo migwi nyamukuru y'ubunyamwema ngo ubunyamwema bukwiye mu gifaransa albinisme "complet" hamwe n'umbunyamwema budakwiye mu gifaransa albinisme "incomplet". Abashakashatsi bo mu nyuma bapimye bakoresheje uburyo bwo gukura umuzi w'umushatsi bagaca baraba ko wotanga ibara bawushize mu gacupa ko gupimiramwo. Ukwo gupima kwatandukanije "ty-neg" (atabitanga ibara bafise) hamwe na "ty-pos" (bafise ibitanga ibara bikeyi). Ubushakashatsi bwo mu nyuma bwerekanye ko ukwo gupima kutari gukwiye kandi ko kwungura ikintu gito ugupima ko kwa muganga.

Ubushakashatsi bwa vuba bwakoresheje ukwiwheza ADN, ikintu co mu buhinga bwa chimie cisangije ivyo guhanahana ubuzima, kugira. ngo bashike ku buhinga bwo gushira mu migwi ubunyanwema. Ubwoko bune bwa AOC ubu buzwi nka- AOC1, AOC2, AOC3 hamwe na AOC4; hari n'ubwoko bumwe bumwe bwagabuwemwo imirwi mitoyi.

Ubwoko bwa mbere bwa albinisme oculocutané (AOC1 canke ubunyamwema bufatanye na tyrosinase) iva ku ngorane y'ibivamwo umuntu muri enzyme yitwa tyrosinase (niho havuye iyo "ty" itangura). Iyo enzyme ikaba ariyo ifasha umubiri guhindura tyrosine amino-acide mu bitanga ibara mu mubiri. (Amino-acide ni ikigize protéine). Hari imigwi ibiri mitoyi muri AOC1. Muri AOC 1A, enzyme ntaco ikora kandi meranine ntikorwa, ivyo bigatuma umushatsi wera kandi umubiri usa nk"uwubona cane. Muri AOC1B, enzyme irakora mu buryo butoyi cane kandi meranine yo ku rugezo ruto cane irakorwa bigatuma umushatsi ushobora kwirabura canke ugasa nk'inzahabu, n'umuhondo canke ushaka gutukura canke nk'uwumuco ushaka kwera, kandi umuntu akaba afise n'ibara rike cane mu rukoba rwiwe.

Ubwoko bwa kabiri bwa albinisme oculocutané (AOC2 canke albinisme gène P) iva ku ngorane yo mu bivamwo umwana muri protéine P ifasha enzyme tyrosinase gukora. Abantu bafise AOC2 barakora meranine itanga ibara ku rugezo rutoyi kandi barashobora kugira ibara mu mushatsi kuva ku bara rishaka gusa n'inzahabu gushika ku bara rishaka gutukura.

Umugwi wa gatatu wa albinisme oculocutané (AOC3) ntukunze gusigurwa kandi uva ku ngorane y'ibivamwo umwana muri TYRP1, protéine ijanye na tyrosinase. Abantu bafise AOC3 barashobora kugira ibara ritari rike mu mubiri.

Ubwoko bwa kane bwa albinisme oculocutané (AOC4) iva ku ngorane yo mu bivamwo umwana muri protéine SLC45A2 ifasha enzyme tyrosinase gukora. Abantu bafise AOC4 barafise urugezo rutoyi rwa meranine itanga ibara mu mubiri isa nk'iy'abantu bafise AOC2.

Abashakashatsi barashoboye kandi kubona ibindi bavamwo umwana (gènes) biva mu bunyamwema bifise ibindi bimenyetso. Umugwi umwe muriyo urimwo nimiburiburi ibivamwo umwana umunani bitwara kuri Syndrome Hermansky-Pudlak (SHP). Nk'inyongera ku bunyamwema, SHP ifatanye n'ivyo kuva amaraso no kubabara cane. Ubundi bwoko bufatanye n'indwara z'amahaha n'insogi. SHP si ubwoko bw'ubunyamwema bukunze kuboneka ariko burashobora kwikekwa mu gihe

umuntu afise ubunyamwema yerekanye ibimenyetso vyo kuva amaraso no kubabara bidasanzwe.

Albinisme oculaire (AO1) iterwa n'ingorane y'Ibivamwo umwana iri mu bivamwo umwana vya GPR143 bifise akamaro kanini cane cane ku bitanga ibara mu jisho. AO1 ikurikira uburyo busanzwe bw'ivyo guhanahana ubuzima kuko ibivamwo umwana vya AO1 biri kuri chromosome X. Abigeme bafise izo chromosome X zibiri mu gihe abahungu bafise imwe gusa (hamwe na chromosome Y ibagira abahumgu). Kugira umuntu agire albinisme oculaire, umuhungu ategerezwa gusa gutorana kimwe mu bivamwo umwana kitameze neza kuri nyina wiwe. Kubw'ivyo rero hafi abantu bose bafise AO1 ni abagabo. Mu vy'ukuri, abavyeyi barakwiye guca bihwezwa neza mu gihe umwana w'umukobwa asanze afise albinisme oculaire.

Ku bubatse batagira umwana w'umunyamwema, nta gipimo gisanzwe kiriho cotonora nimba umuntu atwaye ibivamwo umuntu bifise ingorane y'ubunyamwema. Abashakashatsi barihweje ADN y'abantu benshi bafise ubunyamwema baratora impinduka zitera ubunyamwema, ariko izo mpinduka ntizama iminsi yose ahantu hamwe, naho ubwoko bw'ubunyamwema bwoba ari bumwe. Vyongeye, uburyo bwinshi bwo gupima ntibutora impinduka zose zishoboka. Kubw'ivyo inyishu z'ibipimo vy'ibivamwo umwana bifise ingorane ishobora kuba atariyo.

Mu gihe abavyeyi bigeze kugira imbere umwana afise ubunyamwema, kandi uwo mwana afise ubunyamwema vyaremejwe n'ibipimo vya ADN, hariho uburyo bwo gupima izindi nda zikurikira kugira barabe ko umwana ari mu nda afise ubunyamwema. Ukwo gupima gukoresha ico bita mu gifaransa amniocentèse (gushira urushinge mu giterekko kugira bakuremwo ibimeze nk'amazi) canke ico bita mu gifaransa Prélèvement de Villosités Choriales (PVC). Ama cellules ari muri ivyo bimeze nk'amazi aca apimwa kugira barabe ko harimwo ibivamwo umwana vy'ubunyamwema mu bavyeyi bose.

Hari ibindi umuntu yipfuza kumenya n'ivyo gupima ibivamwo umwana, umuntu akwiye kurondera impanuro z'umuganga yabinonosoye canke umuhanuzi wavyo. American College of Medical Genetics hamwe na National Society of Genetic

Counsellors zama zifise amazina y'abantu umuntu yokwisunga. Ivyo bipimo vyitwa ko ari ivy'abibungeze bikwiye kumenyekana kugira ba nyamwema bashobore kubaho neza muri izo ngorane zabo kandi bitume babaho ubuzima bukwiye.

Inkurikizi

Muri Leta Zunz'Ubumwe, abantu benshi bafise ubunyamwema barabaho ikiringo c'ubuzima gisanzwe nk'abandi bose kandi bagira ahanini ingorane z'indwara zishikira abandi bantu bose. Ikiringo co kubaho ku bantu bafise Syndrome Hermansky-Pudlak kirashobora kugabanuka kubera indwara z'amahaha canke izindi ngorane. Mu bundi bwoko harimwo Syndrome Chediak-Higashi hamwe na Syndrome de Griscelli.

Mu bihugu vyegereye amatropike, abadakingira umubiri wabo barashobora kudwara kansere ishobora guhitana ubuzima bwabo. Bakoresheje ibintu bikingira urukoba rwabo nk'amavuta akingira izuba agera kuri 20 SPF canke kurenga hamwe n'impuzu zizibira izuba, abafise ubunyamwema barashobora no gukora ibikorwa bibera hanze mu gihe c'ici.

Abantu bafise ubunyamwema barakunze kugira ingorane zo gukumirwa kubera ubunyamwema kenshi budatahurwa. Ugukumirwa mu kibano bishobora gushika, cane cane ahantu haba abirabure, aho urukoba canke umugabo yavyaye umunyamwema bitera ibibazo.

Ugufasha abafise ubunyamwema

Hariho ibikoresho vyinshi kandi bitandukanye bifasha kubona vyofasha abantu bafise ubunyamwema kubaho neza gusumba ubuzima bwabo. Igikoresho cose kirafise ivyo cungura n'ivyo kidashobora. Kugira igikoresho gifasha kubona gifashe cane, ni ivya nkenerwa kubona no gutahura ivyo ico gikoresho gishoboye n'ivyo kidashoboye. Kuko ibikoresho bitandukanye bifasha ibikorwa bitandukanye, umuntu afise ingorane yo kubona neza azotora ibikoresho bitandukanye bifasha kubona kugira ashobore gukora ivyo yipfuza.

Ibikorwa, ivyo gushikako, n'ubuhinga bigenda birahinduka uko igihe kigenda. Umuntu ashobora kuba amaze igihe kirekire canke gito akoresha igikoresho gifasha kubona ariko uko biri kwose akwiye kwama akoresha igikoresho gifasha kubona neza gusumba.

Amarori: Amarori ntashobora gukiza ukubona guto. Amarori y'amaso ntafatwa nk'igikoresho gikiza amaso kiretse iyo afasha mu gusoma neza canke afise ubushobozi bwo gufasha uwuyambaye gutandukanya amabara, ariko birakwiye ko tuyavuga hano kuko ashoboza amaso y'umuntu kubona ikintu neza bishoboka kandi agafasha kwitegerezva vyoroshe ikintu kiri hafi. Ni ivya nkenerwa cane ko abana bakiri bato cane bafise ubunyamwema bambara amarori kugira akosore utugorane tw'ihindukira ry'umuco iyo barwaye indwara za myopie, hypermétropie canke astigmatisme. Iyo umwana wa nyamwema akeneye amarori atayambaye, uwo mwana ashobora kuruha vyoroshe agaca aheba vuba gukora ibikorwa bimwe bimwe, bikanashobora mbere kunabuza ugukura neza kwiwe.

Ukubona hafi: Kuva mu bwana, abafise ubunyamwema bafata ibantu bavyegereje amaso kugira bashobore kubibona neza gusumba. Gushika ku myaka itanu canke itandatu, ubwo buhinga burakwiye kugira busubirize ukubona guto kuko ibitabo vy'abana bato kenshi biba vyanditswe mu ndome nini nini, canke bakicara hafi y'imbonesha kure. Nk'ingaruka yo gukoresha uko gushaka kwegera hafi y'igikenewe kubonwa, abana bafise iyo myaka kenshi ntibakenera ibikoresho bibafasha kubona. Kuraba ibantu uvyegereye ntibbabaza amaso y'umuntu, kandi ubwo buhinga burabandanya mu buzima.

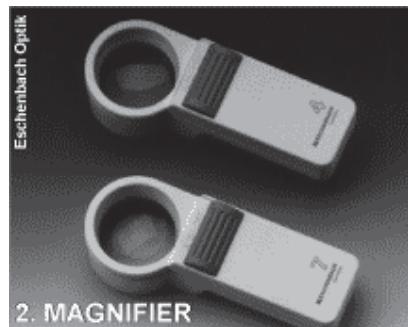
Ibikoresho bifasha kubona ibantu biri hafi: Ibikoresho bifasha amaso kwagura ivyo abona, amarori yo gusoma, bene ivyo bikoresho umuntu yifatira mu minwe canke binini biba bishizwe ahantu, na za microscopes ni ibikoresho bifasha kubona ibantu biri hafi bifasha abafise ubunyamwema gusoma, kwitegerezva amasanamu, ibicapo n'amakarata no gushobora ibindi bikorwa bisaba kurabira hafi ibantu bito bito.

Igikoresho gifasha amaso kwagura ivyo abona (loupe mu gifaransa) [Isanamu 1] ni kimwe mu bikoresho vyoroshe cane gukoresha kandi bishoboka ko coba arico ca mbere ca nkenerwa ku bantu bafise ubunyamwema. Naho kiboneka nk'igifise ubushobozi buto bwo kwagura inyandiko (incuro 1,7 gushika kuri 2,2), mu gihe gikoresherejwe hafi ibintu vyinshi bisaba gusoma birashobora kurangurwa vyoroshe naho hoba ari mu myaka ya mbere y'ishuri y'intango. Ivyo bikoresho bikunze kwitwa amazina atandukanye mu congereza nka bright field magnifiers, paper weight magnifiers, hamwe na Visolett magnifiers.



1. DOME MAGNIFIER

Amarori yo gusoma arafasha uwuyakoresha kwitegerezza inyandiko canke ibindi bintu mu guhe ico kintu cegerejwe amaso y'uwugikoresha. Amarori y'amaso arafasha kubona ahantu hagutse ugereranije n'ibindi bikoresho. Ibikoresho vyagura ico amaso araba vyaba ivyo umuntu yifatira mu minwe canke ibiba bishizwe ahantu [Isanamu 2] biragura ibintu biri hafi, bigashoboza uwubikoresha kubona ibintu n'inyandiko bito bito amaso yiwe akabibona ari kure. Hariho ubwoko n'ubunini bitandukanye nya bene ivyo bikoresho bishobora gufasha abafise ubunyamwema



2. MAGNIFIER

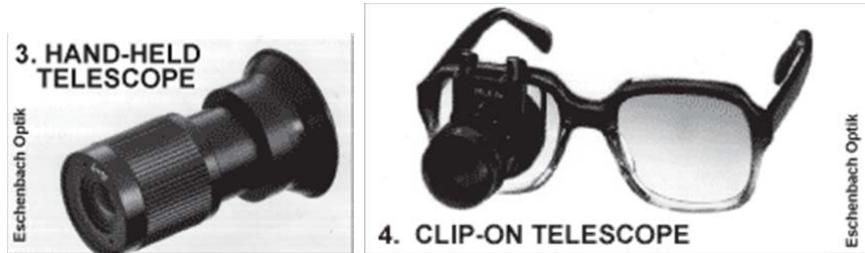
Microscopes zifasha kubona ibantu bito cane gusumba uko loupes zoshobora. Microscopes ziragura ibantu biba vyegereye nkuko telescopes zagura ibantu biba biri kure cane. Telescopes na telescopes biopsiques zimwe zimwe zakorewe kubona ibantu biri kure, ziranafasha uwubikoresha guhindura aho araba kugira zikoreshwe kubona ibantu biri hafi.

Ibikoresho bifasha kubona ibantu biri kure: Telescopes zirashobora gufasha abantu bafise ukubona guto gushobora kubona ibantu biri kure. Mu vyo kubona kure harimwo kuraba ku kibaho mw'ishure, kuraba ibijanye n'infugurwa n'ibiciro mu nzu z'uburiro, kuraba aho abaririnvyi bahagarara baririmbi mu biteramo canke ibiba mu mikino itandukanye. Ibantu bibiri bitandukanya za telescopes ni ububasha bwo kwagura ibantu hamwe n'uburebure bw'aho zibona. Ububasha bwo kwagura burerekana ingene isanamu ingana mu bunini ukoreshaje telescope ugereranije n'ingene ingana mu bunini ukoreshaje ijisho risa. Ububasha bwo kwagura mu bisanzwe kuri telescopes ziraba hafi buri hagati y'incuro zibiri n'incuro umunani. Iyo umuntu afise ukubona kwa 20/100 akoresheje telescope ibona incuro zine, uwo muntu mu bisanzwe aca abona isanamu nini incuro zine ugereranije n'ubandi, kandi vyongeye akabona ibantu umuntu afise ukubona kwa 20/25 abona.

Ahanini, uko telescope yagura cane, niko umuntu afise ukubona guto ashobora kubona ibantu vyinshi akoresheje telescope. Ariko, uko ukwagura kuba kunini, uburebure bw'aho telescope ibona canke ubunini bw'ahantu haguwe na telescope, kenshi na kenshi biragabanuka.

Kimwe mu bikoresho bifasha kubona hafi bikunze gukoreshwa ni telescope zikoreshwa n'iminwe, zitwa kandi mu rurimi rw'igifaransa monoculaire [Isanamu 3]. Telescopes zikoreshwa n'iminwe ziza zitandukanye mu bunini, ububasha bwo kwagura hamwe n'ibiciro. Telescopes zikoreshwa n'iminwe zikora neza gusumba iyo umuntu araba ikintu kiri kure anyarutsa, nko gusoma ikimenyetso canke kurondera ikintu. Telescopes zifata ku kintu zifasha uwuzikoresha kwambika canke gufatisha telescopes ku marori yiwe kugira akore adakoreshaje amaboko yiwe [Isanamu 4]. Telescopes zifata ku kintu zikoreshwa neza ku muntu ashaka gukoresha telescope

umwanya muremure, nko kuraba imboneshakure, ireresi, canke igiteramo. Uwuyikoresha arashobora kuyikurako akayikoresha amaboko iyo akeneye kuyirabisha mu gukora ibintu bimateba.

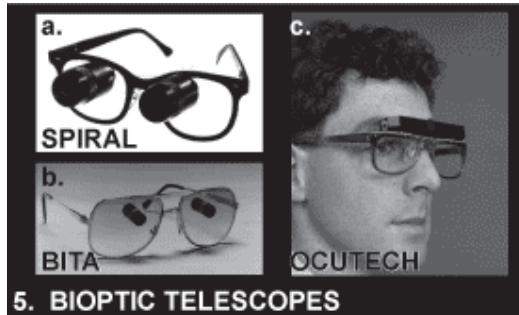


Biopsique ni amarori adasanzwe afise telescope yama iri ku biyo vy'amarori. Mu gihe araba imbere yiwe, uwukoresha biopsique abona nkuko bisanzwe, isanamu itaguwe arabiye mu marori. Mu gihe naho amanuye umutwe gatoyi, uwukoresha biopsique aca abona bunonyene isanamu yaguwe muri telescope. Ubwo buryo « bubiri bwo kuraba » bushoboza uwuraba guhindura vuba na vuba ukubona bisanzwe hamwe no kubona ibintu mu buryo bwaguwe umuntu atarinze gukoresha amaboko yiwe. Mu bice bimwe bimwe, abantu bamwe bamwe bafise ukubona guto barashobora gukoresha biopsique mu gutwara umuduga.

Umuntu afise ubunyamwema arashobora gukoresha biopsique muri ubwo buryo nyene, ashobora gukoresha telescope y'imine, nko mu kuraba ku kibaho mw'ishure. Abanyeshure bukuze bashobora gukoresha telescope zidafatwa mu maboko kugira bashobore kwandika banyarutsa. Kandi borohewe mw'ishure. Bamwe mu bakoresha biopsique bahitamwo gushira telescopes ku maso yose, mu gihe abafise ubunyamwema bensi bayikoresha bahitamwo gushira telescope ku jisho rimwe ribona neza gusumba.

Imwe mu bwoko bwa biopsique zoroshe kandi zikunzwe gukoreshwa ni izikorwa na Disigns for Vision [Isanamu 5]. Biopsique ya Designs for Vision ikoresha telescope irenzako hafi cm 2 kuri cm 3 imbere y'ibyo vy'amarori hamwe na cm 2 kuri 2,5 mu bwaguke. Designs for Vision itanga telescopes uwuzikoresha adahindura uko zibona zikaba ziri mu kantu kazipfutse gakozwe mu kuma kirabura hamwe na telescopes uwuzikoresha ashobora guhindura gatoyi uko zikoreshwa zikaba ziri mu kantu

kazipfutse kari muri plasike yirabura. Baranakora ndetse telescopes za biopsique ziri mu kantu kazipfutse kabona kugira biopsique ise neza gusumba.



Kugira umuntu ashobore gukoresha biopsique imeze nk'iinyegeje, Edwards Optical yakoze ubuhinga bwa BITA [isanamu 5b]. Iyo biopsique ikoresha telescopes ingana mu burebure no kuva kuri cm 1 gushika kuri cm 1,30 ikaba ingana n'ikaramu yo gucupa mu bwaguke. Telescopes kandi zirarenga inyuma y'ibyo vy'amarori hako zoja imbere yayo. Ubwoko bwa BITA rero ni buto ugereranije na biopsique zimenyerewe ariko rero telescopes ntoyi zibona ahantu hatari hanini.

Ocutech irakora ubwoko bwa biopsique bushira telescopes hejuru ya harya ibiyo bibiri vy'amarori bitandukanira [isanamu 5c]. Ubwo buryo bushoboza kubona ahantu harehare mu buryo bwo kwagura bunini ugereranije n'ubwoko bwa biopsique zimenyerewe, kandi ikaboneka ugutandukanye. Ocutech iranakora ndetse biopsique yihindurira uburyo bwo kubona, ikaba yihindurira buno nyene uburyo bwo kubona uko uwuyikoresha aravye ibintu bitandukanye. Biopsique yihindurira uburyo bwo kubona ni nini kandi irazinvye ugereranije n'ubundi bwoko bwa biopsique.

Ibikoresho vy'ubuhinga (électroniques): Igihe ibikoresho bifasha mu kubona guto bidafashije kugira umuntu arangure ico yashaka, ibifasha bikoresheje ubuhinga birashobora gufasha. Ubwoko bita mu congereza ngo Closed- Circuit Television (CCTV) canke mu gifaransa Télévision en Circuit Fermé, burafasha abantu baba bakeneye ukwagura ibintu kunini gusumba ukw'amarori , ibikoresho vyo kwagura (loupes) na microscopes bitanga [isanamu 6]. Ubwoko bwa CCTV burashoboza kandi uwubukoresha guhindura ubunini, umuco, n'ugutandukana kw'amabara

vy'isanamu kugira uwuyikoresha ashobore kubona neza nkuko agomba. Uwuyikoresha arashobora no gusoma indome zanditse n'ibara ryera ku kibaho c'irabura kugira abone neza. Ubwoko bwa CCTV bwagiye buraboneka kuva muri kahise nk'ubwoko buzimvye cane kandi butoroshe gutwara ugereranije n'ibindi bikoresho bifasha kubona hafi. Ubwoko bushasha bwa CCTV ariko nka MagniCam®, ubu ni butoyi, bukora ibintu vyinshi, buroroshe gutwara, kandi burazimbutse gusumba ubwoko bwa CCTV bwa kera. Ibindi bikoresho vy'ubuhinga birafasha ababikoresha kubona ibintu biri kure.

Imashini z'inyabwonko (ordinateurs) na Logiciels: Inyabwonko ngendanwa n'izitari ngendanwa zarateje imbere ubushobozi bw'abafise ubunyamwema mu kwiga, guhanahana amakuru, no kubandanya ubuzi bitoreye. Aho barabira (écrans) zifise ubunini butandukanye ziraboneka kugira umuntu wese arabire mu bwaguке akeneye.

Ubwaguке bw'ibirabwa burashobora guhindurwa mu ma logiciels atandukanye nka Microsoft Outlook, Excel, na Word. Ivo bishobora gukorwa mu nzira zinyuranye nko kwihindurira uciye kuri "barre d'outils", canke mu gufyonda ahanditse "Affichage". Ubundi buryo ni kuguma ufyondye hasi ahanditse Ctrl kuri clavier ugaca uza urahindura akameze nk'akanyonga kari hagati ya souris ugatwara kure yawe canke ukiyegereza kugira uhindure ubunini bw'ivyanditswe ku bintu vyinshi bijanye n'inyandiko hamwe na écrans HTML.

Logiciels zabigenewe nazo nyene ziraboneka nka Zoomer, ZoomText, Kurzweil, canke Big Shot. Izo rero zifise ibintu vyinshi biteye imbere nk'ubwaguке bw'ahantu hamwe hamwe ku rupapuro canke kugabura mu bice aho umuntu arabira.

Ibikoresho bifasha gutandukanya amabara: Ku bantu bafise ubunyamwema, ubunini ntibwama ari bwiza iminsi yose. Ukwongereza ugutandukanya kw'amabara mu gisomwa kenshi birafasha gusumba ukwongereza ubunini bw'igisomwa. Ikaramu zirabura hamwe n'impapuro zifise imirongo y'irabura zirashobora gufasha abafise

ukubona guto bagira ukworoherwa mu kwandika. Ikaramu z'ugucapa #1 (zitandukanye n'ikaramu z'ugucapa #2 zimenyerewe) hamwe n'ingwa zifise ibara ribona zirashobora gufasha abanyeshure bafise ubunyamwema.

Ibuntu bifasha mu kwandika, vyerekana aho umuntu yandikira, birashobora gufasha abantu kwandika ku murongo, canke gukora ibindi bintu nko kwandika kuri cheke y'amahera. Amabara amwe amwe iyo agiye hamwe birashobora gufasha gusoma. Amabara abona cane afise uruhara runini k'ukubona kw'abantu bafise ukubona gutoyi. Ukugerageza amabara abona cane atandukanye, nahantu hari umuco birashobora kworosha igikorwa c'umuntu. Umuntu akwiye kwama yibuka ariko ko umuco mwinshi hamwe n'umuco muke vyose bishobora gutera ingorane.

Ukuronka ibikoresho bifasha kubona hafi: Umuhinga w'indwara z'amaso yanono soyeyi ivyo kubona hafi, arapima amaso y'umuntu, hanyuma agasabira ibikoresho kanaka bivanye n'ivyipfuzo vy'umurwayi hamwe n'ivyo yipfuzza gushikako. Amavuriro y'indwara zo kubona guto kenshi na kenshi aba afise ibikoresho bitandukanye aho nyene kugira ngo uwukeneye kubikoresha abibone kandi ashobore kubigerageza, ayo mavuriro kandi aba afise n'abavyigiye bashobora gufasha ababikoresha kuronka ibikoresho vyiza kandi bishasha. Kubera ko ukubona n'ivyo abantu bipfuzza gukora bitandukanye, ni ivya nkenerwa kugerageza ibikoresho vyinshi cane bishoboka imbere yo guhitamwo. Kenshi, igikoresho gishasha gusumba ibindi canke kizimvye gusumba ibindi si co kiba ari igikwiye guhitwamwo. Mu gihe umuhinga w'ivyo kubona guto yandikitse ibikoresho vyahinguriwe hamwe gusa, umurwayi arashobora guca aja kuraba ayandi mavuriro afise ibikoresho bitandukanye imbere yo kugura igikoresho, na cane cane ibikoresho bizimvye nka biopsique n'iv'y'ubuhinga bwa CCTV

Hariho amashirahamwe agurisha ibikoresho bifasha abafise ingorane zo kubona guto, nk'amarori y'izuba, ibikoresho vyo kwagura ibantu hamwe na telescopes umuntu yifatira mu minwe. Iyo umuntu azi neza ico akeneye, kugurira ibikoresho muri ayo mashirahamwe birashobora kuzimbuka gusumba kugurira umuhinga w'ivyo kubona guto.

Kwikingira Izuba: Abantu bafise ubunyamwema barashobora kuryohererwa ibibera hanze bikingiye ukwiha umuco w'izuba, bambaye inkofero n'impuzu bikwiye, hamwe no mu gukoresha neza amavuta akingira umubiri. N'ubwo biri uko, igikorwa co gukinga ukwononekara kw'umubiri mu kiringo c'ubuzima bwose ni ikintu kigoye. Kwirinda uguturira kw'izuba ni nkenerwa, ariko ntibikiyi mu kurinda ukwononekara kw'umubiri bivuye ku zuba.

Ni igice kitaboneka c'umuco w'izuba ukaze cane bita mu gifaransa Lumière Ultraviolette conona umubiri. Ico bita mu gifaransa rayonnements courte longueur d'onde, UVB, gifise uruhara runini mu gutera ubushe buvuye ku zuba gusumba longue longueur d'onde UVA. Amahinguriro akora amavuta azibira izuba akinga UVB ariko ntakinge UVA, kugira ngo abantu bafise ibitanga ibara mu mubiri bagire urukoba rusa nk'urwirabura ariko badaturiwe. Ubushakashatsi bwa vuba buvuga ko UVA, kuko ynjira indani mu mubiri gusumba, ishobora gutera kansere yo ku rukoba kandi igasazisha urukoba hataragera. Ubu rero abahingura amavuta azibira izuba yandika ko ayo mavuta azibira UVB na UVA yompi.

Amavuta azibira izuba: Abantu bafise ubunyamwema bakwiye gukoresha amavuta yanditsweko SPF ya 20 kuri 30. "SPF" isigura "Sun Protection Factor" (Ubushobozzi bwo gukinga izuba). Ivo biharuro biva ku gipimo gisanzwe giteguwe mu nzu y'ubushakashatsi. Ico gipimo cerekana umuntu afise amavuta azibira izuba mu rugezo rusanzwe ruteguwe ari ku zuba riturira umwanya amara ari munsi y'itara rya ultraviolet, ugereranije n'umwanya yomara ata mavuta afise. Mu yandi majambo, nimba umuntu yomara iminota 10 ku zuba adaturiwe kandi atamavuta azibira izuba afise, yisize amavuta azibira izuba ya SPF 20 ashobora kumara ku zuba iminota 10 incuro 20 canke iminota 200 imbere yuko asha.

Ubuwinga bwa SPF busanzwe buriho bvitaho ibijanye n'uguturira kw'izuba, kandi bugapima cane cane ugukinga UVB. Kuko UVA ynjira mu mubiri indani ariko idafise inguvu nyinshi zo guturira, abashakashatsi baragize ubwoba ko amavuta akinga izuba ashobora gutanga ukwizera kw'umutekano ukwiye atarikwo, agatuma abantu

baguma bonona urukoba rwabo. FDA iriko irategura kwongerako ubundi buhinga bwo kwongerako gukinga UVA.

Mu buryo busanzwe bwo gukora, amavuta yo gukinga izuba arashobora kudatanga ugukinga izuba guhwanye n'uko SPF yayo yaharuye, cane cane kuko abantu batayashirako mu buryo bukwiye. Abantu benshi bakoresha nk'igice c'urugezo rw'ibipimo vya SPF. Ugukinga umubiri wose ku muntu akuze bisaba gukoresha icakabiri c'ikiyiko c'icayi incuro icenda canke yose hamwe g 28,35. Ku mavuta akinga izuba aza mu macupa ya g 125, urwo rugezo rungana n'icakane c'icupa uko umuntu akoresheje ayo mavuta.

Abantu barakunda kugira amabara avuye ku guturirwa n'izuba ku bice bitasizwe. Kuko uguturira kw'izuba kuba amasaha abiri canke ane inyuma umuntu ari ku zuba, kandi uguturira kw'izuba kugashobora kuduga mu nkomezi gushika ku masaha 24 inyuma yo kuba ku zuba, ni ivya nkenerwa gusiga amavuta neza. Ntimwibagire gushira hejuru yamatwi no ku bice vy'inyuma ku maboko no ku maguru. Abanyonga amakinga barakwiye gusiga ibice vy'epfo ku mugongo aho amashati aduga iyo bariko baranyonga.

Birafasha cane iyo ayo mavuta umuntu yayasize inusu y'isaha imbere y'uko umuntu aja ku zuba, kuko bimwe mu bice bigize ayo mavuta bibanza gufatana n'umubiri. Mwibuke ko kwihanaguza za mpuzu zihanagura amazi iyo umuntu ahejeje kwiyoga canke ugukoranyako amaguru iyo umuntu yambaye impuzu bishobora gukurako ayo mavuta akingira. Kwibira mu mazi ntibikurako amavuta yanditsweko mu rurimi rw'icongereza "very water resistant" bisigura mu Kirundi "ararinda cane amazi" (iminota 80 mu mazi nkuko bisigurwa na FDA) canke "water resistant" bisigura "ararinda amazi" (iminota 40 mu mazi). FDA yasavye ko hokurwaho ijambo "amazi ntiyinjira". Abantu benshi, cane cane abana, bakora ibintu vyinshi mu mazi bitari ukwibira gusa. Bashobora gukurako ayo mavuta, nico gituma ukugabisha kwa kera kwavuga ngo "subire musige muhejeje kwoga" kwofasha cane.

None ni ayahe mavuta akinga izuba abantu bafise ubunyamwema bokoresha? Biragoye guhanura gukoresha ubwoko kanaka bw'amavuta kuko ubuhinga bwo kuyakora bugenda burahinduka. Consumer Reports (Inkuru z'umuguzi) irasohora urwandiko ku bijanye n'amavuta akinga izuba uko imyaka ibiri iheze, kandi mu myihwezo yabo basanze inyandiko SPF na ararinda amazi kenshi ziba zihwanye. Ku bijanye n'ukugereranya ibiciro kwagizwe na Consumer Reports, amwe mu mavuta arazimvye gushika ku ncuro zishika zitandatu gusumba ayandi. Bamwe mu bahingura amavuta baradandaza ayo mavuta arinda izuba mu macupa manini ku giciro gito cane.

Mbega abafise ubunyamwema bakwiye gukoresha amavuta afise SPF nini gusumba ayandi ashobora kuboneka? Gukoresha amavuta akinga izuba afise SPF irenga kuri 30 nta kamaro kanini bitanga, kandi iyo ibiyagize biri mu buhinga bwa chimie bibaye vyinshi bishobora kwonona umubiri canke ndetse bigatera indwara zivuye mu kutagugwa neza. FDA yasavye ko igitigira cogarukira kuri 30. Ku bwanje rero vyoba vyiza gukoresha amavuta ayariyo yose afise SPF iri hagati ya 20 na 30. Kugura amavuta azimvye ngo nuko afise SPF irenzeko gato bishobora kuba ukwonona gusa. Amavuta akinga izuba afise SPF iri muri urwo rugezo azoba arimwo Oxybenzone canke ikindi bisa gishobora kuyafasha "gukora neza cane gusumba". Oxybenzone irashobora gukinga umuco wa UVA ariko atari umwe twita longue longueur d'onde UVA. Ikindi kigize ayo mavuta Parsol 1789 canke avobenzone, kirashobora gufasha neza "cane" gusumba kandi gishobora gufasha abantu bafise urukoba rworoshe gukinga ukwononekara kuvuye ku zuba. Ico avobenzone itandukanyeko na Oxybenzone nuko yemewe kandi izimvye, bigaca bituma idakoreshwa mu mavuta menshi (nka Shade UVA Guard). Amavuta arimwo Titane na Oxide de Zinc arakinga neza kandi, iyo ufashe umwanya ukwiye wo gusiga neza, arashobora gufasha cane kandi akarinda utudwara dushobora kwandurirwamwo.

Ugushima kwa buri muntu nikwo kuzokwerekana amavuta meza, hama ibintu bimwe bimwe nk'ibiyagize hamwe n'akamoto birafise uruhara runini mu bijanye no guhitamwo. Amavuta amwe amwe afatiye kuri alcool ishobora gufasha kunyerera neza mugabo ashobora kugira akamoto gakaze kandi ashobora gutuma urukoba

rwuma. Ayandi afatiye cane ku mavuta yoroshe nkamwe asigwa abana bato cane. Bene ayo mavuta yoroshe cane arashobora gutuma haba ukwongerekana kw'utugorane tw'urukoba. Amavuta yumye aba arimwo plastique nka polymers ituma aba ayarinda amazi cane. Naho atameze nk'ayoroshe cane, arashobora gutuma urukoba rwawe rumera nk'urufashwe cane.

Amavuta akinga izuba amijwako arafata cane kandi aragoye gusiga ku mubiri mu buryo bumwe ku mubiri wose. Amavuta yokwisiga afasha umubiri ku zuba arimwo ibantubihindura umubiri ugashaka kwirabura iyo uhuye n'izuba. Naho ayo mavuta yohava akwega kwega abafise ubunyamwema bakayashima, mu vyukuri ayo mavuta iyo akoreshejwe umubiri ucumera nk'uwfuse utubara canke nk'uwucafuye kuko ibiyagize vyo mu buryo bwa chimie bica bigwirira mu mirongo no mu ntoboro z'urukoba.

Ingorane z'amavuta akinga izuba: Amavuta azibira izuba arashobora gutera utudwara bita allergies mu gifaransa. Kimwe mu bikoreshwa muri ayo mavuta akinga izuba citwa PABA kiratera bene utwo tudwara kenshi, nico gituma ubu amavuta yose "atarimwo PABA". Birashoboka ko haba bene utwo tudwara tuvuye ku kigize ivyo bizibira Imishwarara ya Ultra Violet mbere no ku bitazibira bigize ayo mavuta canke ivyo bimota. Abantu baterwa utudwara na bene ayo mavuta barakwiye gusaba impanuro umuganga w'urukoba. Umunsi umwe imbere yaho utegura gukoresha amavuta mashasha, uyasige ku gice gito co ku kuboko kumwe hanyuma urindire urabe ko haba ukuribwa canke ukuvyimba. Kugira ukinge utudwara twova ku mavuta azibira izuba, ni vyiza ko ukurako ayo mavuta ukoresheje amazi mw'ijoro.

Amwe mu mavuta akinga izuba yanditsweko ngo "ku rukoba rworoshe". Amwe muriyo arimwo ibizibira UV bisanzwe bikoreshwa kandi ashobora kuba atarimwo ibikinga utudwara yiharije. Ayandi arimwo dioxide de titane, ata kintu itera kandi kenshi ikunda gukoreshwa nk'igitanga ibara ryera mu vyo gusiga amarangi. Kugira ishobore kugira ico itera, dioxide de titane itegerezwa kuba ari nini bikwiye ishobora kuboneka; bisigura, "ntisigwa" neza ku mubiri mu buryo bworoshe kandi ikahasiga ibara ryera. Amwe mu mavuta azibira izuba agizwe n'bitanga ibara bitareka ngo

umuco urengane nka dioxide de titane hamwe n'amabara abona asigwa ku zuru, amatama, canke amatwi nk'amabara asigwa mu maso, kandi ivyo vyofasha kwongerako amavuta azibira izuba asanzwe akoreshwa ku bana.

Amavuta azibiri izuba aba ariko kandi inyandiko yo kugabisha "baza umuganga imbere yo gukoresha ku bana batarakwiza amezi atandatu". Ingorane nuko inzoya zishobora gukwega vyinshi muri ivyo vya chimie mu rukoba rwabo, hama ivyo bigize amavuta vya chimie bishobora gutera ingorane zitari zabonywe kare. Biragoye cane yuko hazoshobora kuba ubushakashatsi ku bijanye no gukingira inzoya hakoreshejwe amavuta azibira izuba. Amavuta azibira izuba arimwo ibantu ataco bitera nka dioxide de titane bishobora kuba arivyo vyokinga, ariko uko biri kwose kirazira ko inzoya zoja ku zuba cane.

Ukwirinda Imishwarara Yonona: Haba no ku bana bariko barakura canke abantu bakuze bafise ubunyamwema, ni ivya nkenerwa ko umuntu atokwizera cane amavuta azibira izuba kandi ko bogabanya cane kuja ku zuba. Imishwarara ya Ultraviolet ahanini iza hagati y'isaha zine z'igitondo n'isaha umunani z'umuhingamo ku mwanya usanzwe canke kuva isaha zitanu z'igitondo gushika isaha icenda z'umuhingamo mu gihe buteba kwira. Gutegura ibikorwa bibera hanze mu gihe c'igitondo canke c'ijoro ni bwo buryo bwonyene bukwiye ku bantu bafise ubunyamwema mu kwikingira ukwononekara kuvuye ku zuba.

Ibiro bijejwe kwerekana ingene ikerere kizoba kimeze muri kazoza ka hafi vyitwa National Weather Forecasting Service birerekana ingorane zishobora kuva kuri UV bikoresheje ibipimo 1 (ntoyi) gushika kuri 10 (nini) ivyo ikabigira aho abantu baba hatandukanye. Ivyo babikora bisunze uburyo izuba rizoba rimeze aho hantu kandi kuri uyo munsi, uburebure bw'amaja haruguru bw'aho hantu hamwe n'ingene biteze ko igicu kizoba gipfutse. Ng'uku rero uko ivyo bintu bikoreshwa:

Ukuba kure kw'ahantu ugereranije n'umurongo ugabura isi mu bice bibiri Equateur mu gifaransa (Latitude): Umuntu ashobora kwhangana isaha imwe ku zuba i Floride ntashe arashobora kwhangana amasaha abiri ku zuba i New Jersey mu gihe ibantu bimeze kumwe.

Igihe: Umuco wa Ultraviolet uba ukomeye cane gusumba kw'itariki yegereje 22 Ruhenshi. Uwa 1 Rusama uba unganya mu nkomezi n'uwa 15 Myandagaro.

Uburebure bw'amaja haruguru ugereranije n'ikiyaga (Altitude): Hafi m 305 zose ziyongera kuri altitude zongerako ibice 4 kw'ijana ku bukomezi bw'imishwarara iturira y'izuba. Ubukomezi bw'umuco w'izuba ku km 1,5 buba bw'iyongereye hafi ibice 20 kw'ijana ugereranije n'ubukomezi bw'ahantu haringaniye n'ikiyaga.

Ibihe vy'ikirere (climat): Umunsi ufise akazuba ukaba kandi ufise agacu gato gapfutse uba ufise ibice 60 gushika kuri 80 kw'ijana vy'imishwarara y'izuba iba iri ku munsi usanzwe ata gacu gapfutse kahari. Ibicu birashobora gukanyisha bigatuma umuntu yokwhihenda akibaza ko gushobora guturirwa n'izuba ari gutoyi.

Hiyongereye kuri ivyo bimenyeshwa vyerekana ingene ivya UV bizoba bimeze muri kazoza ka hafi, umuntu arakwiye no kurabira ku bimwegereye. Umusenyi urashobora kurungika gushika ku bice 25 kw'ijana canke birenga vy'imishwarara ya ultraviolet ivyo bigatuma bishoboka ko umuntu yoturirwa n'izuba kandi yicaye mu gatutu ku musenyi w'ikiyaga. Amabuye aboneka ahantu hakanye yitwa mu gifaransa neige ashobora kurungika ibice 70 gushika kuri 90 kw'ijana vy'imishwarara ya ultraviolet. Amazi nayo nyene arashobora kurungika imishwarara ya UV. Umuco uvuye ku zuba ugakubita ku mazi hama ukarungikwa urashobora guturira ahantu mu bisanzwe hari hapfutswé nko munsi y'izuru canke agasakanwa. Ibice bigera kuri 96 kw'ijana vya ultraviolet birashobora no kw'injira mu mazi meza.

Impuzu n'Inkofero: Impuzu ni nkenerwa cane. Ibice bishika kuri 50 kw'ijana vy'imishwarara ya ultraviolet birashobora kwinjira mu mipira itose ikozwe mu pampa ikunze kwambarwa mu kwoga. Impuzu z'amabara hamwe n'impuzu zisonwe ahanini ntizireka ngo hinjire umuco mwinshi. Muri kino gihe abahingura impuzu bariko bakora impuzu zisonywe zigashika ahanini ku mubiri zisa neza kandi zigatanga « ihemero » kugira zikinge izuba. Izo mpuzu rero kandi zifise amaboko maremare kugira zishobore gukinga mu gihe c'ubushuhe. Muri kazoza ubwo bwoko bw'impuzu bushobora kuzozimbuka kandi bugakoreshwa cane.

Inkofero ni nkenerwa. Inkofero zifise ahaseruka ku mpande zose hangana cm 7,5 mu bwaguke nizo nziza cane zishobora gukingira mu maso, amatwi, hamwe no kw'izosi. Inkofero zifise ahaseruka hato, nk'izabakina urukino rwa tennis, zishobora gukingira n'imiburiburi amatwi gusa.

Ukwonona kuvuye ku Zuba:

Ni ibihe bintu vyo kwihiweza:

Umuco wa ultraviolet hacieye imyaka myinshi utuma haba mu rukoba ihinduka ryitwa "actinique", kandi ugatuma haba ukwongerekana kw'ugushobora kurwara kansere y'urukoba. Zino ngorane zirashobora gutuma umuntu yotinya ariko atari gose.

Impinduka za actinique zirimwo imifunyunu, uguhinduka kw'ibara rigasa nk'umuhondo, kwaguka no kuguma, ukwaguka kw'amashami y'amacapillaires, zica ziseruka nk'uduhere duto duto dutukura duserukira ku rukoba hejuru.

Umuti nyawo kuri izo mpinduka za actinique ni ukwirinda. Biragoye gukiza izo mpinduka hakoreshejwe uburyo bwa chimie canke biciye mu kubagwa.

Umuti umwe kuri izo mpinduka za actinique ni trétoïne (Retina, Renova, n'ubundi bwoko). Umuti w'amavuta wa Trétoïne urashobora gukiza zimwe muri bene izo mpinduka, n'imiburiburi mu kiringo kanaka. Trétoïne itegerezwa kwama isigwa buri munsi mu kiringo c'amezi menshi, kandi ugutukura, ukuribwa, n'ukwongereza kubabazwa n'izuba ni ingaruka zikunda kujana n'uwo muti. Ikoreshwa rya Trétoïne ku bafise ubunyamwema ntiririgwa, ariko ivyigwa vy'intango vyaramaze kugirwa ku mbeba ya nyamwema idafise amoya kandi biboneka ko Trétoïne ishobora gukora ku bafise ubunyamwema bashobora kwihanganira ingaruka z'uwo muti. Trétoïne ni umuti utangwa na muganga, kandi utegerezwa gukoreshwa gusa mu gihe hari umuganga akurikirana uwuwukoresha.

Ukwonona kwa UV gushobora mbere gutera ivyo bita mu gifaransa "kératoses actiniques". Ivyo ni utuntu duto dutukura canke dushaka gusa n'umuhondo tuzanana ndetse hamwe n'ugutimba canke ugusaduka kw'umubiri kenshi. Ivyo bikunda kubonekera cane cane mu maso hamwe n'inyuma ku biganza, na cane cane mu

buhanza. Mu kiringo c'emyaka myinshi, zimwe muri izo zirashobora kuvamwo ugasadagurika kw'amacellules ya kansere y'urukoba mu gihe zitavuwe. Abaganga barashobora gukuramwo zimwe muri keratoses actiniques hakoreshejwe azote liquid ngo izikanyishe cane. Kuri keratoses actinique zatandukiriye ahanti, abaganga b'uruhi barashobora kwandika umuti w'amavuta ukabura nka 5- fluorouracile, utera ugutukura hamwe n'ukuvako umubiri.

Kansere z'urukoba ahanini ni ubwa mbere na mbere kansere z'amacellules. Ivyo bisa n'ibivyimba bishaka gutukura, bifise impera imwe iduze ibonekamwo amabara kandi bikabonekamwo imitsi itukura itwara amaraso. Bishobora kubonekamwo hagati ugusaduka n'ukuguma cane. Mu bimaze kuboneka kenshi, kansere zifata ubwa mbere na mbere amacellules zirashobora gukurwamwo hakoreshejwe ugukorwa ahanini gusanzwe, kandi biboneka ko zidakunze gutandukira ahanti mu mubiri.

Kansere y'ugusadagurika kw'amacellules ya kansere ntikunze kuboneka kubantu bafise ubunyamwema muri Leta zunze Ubumwe za Amerika, ariko zishobora kuba mbi cane. Ziboneka nk'ibivyimba bitukura kandi bikomeye bibandanya gushika aho bigira igikomera gikikujwe n'impera igumye. Zikunze kuboneka ku mushatsi, amatwi, inyuma y'ibiganza, canke umunwa w'epfo. Iyo ivuwe kare, kansere y'ugusadagurika kw'amacellules nayo nyene irashobora gukira bivuye mu gukorwa, ariko ubuhinga butegerezwa gukoreshwa kugira hamenyekane neza ko kansere yose yakuwemwo. Kansere y'ugusadagurika kw'amacellules ihereye ku rukoba irashobora gutandukira ibindi bice mu mubiri kandi ivyo bikaba bishobora gushika hafi ku bice bitatu kw'ijana vy' abarwaye iyo ndwara. Iyo bitandukiriye ahanti, aho biba biteye ubwoba cane ku buzima kuko ukuvurwa kuba kugarukira hafi cane.

Abafise ubunyamwema bashobora kwirinda ingorane nini zoterwa na kansere y'urukoba mu kwikingira izuba, mu kwihiweza neza umubiri wabo na cane cane ahantu hose hababajwe n'izuba hakaguma amabara igihe kirekire, hamwe no kwama bagirisha "ibipimo vyo kwa muganga kenshi" vy'urukoba nk'abantu bakuze.

Amashirahamwe y'abantu bafise ubunyamwema: Hariho infanshanyo nini ku bantu bafise ubunyamwema hamwe no ku bigisha no ku Bavyeyi b'umwana afise ubunyamwema ishobora kuboneka mu mpande zose z'isi. Amwe muri make azwi yanditswe aha hakurikira:-

ABLEDATA ni umugambi uhaza amashirahamwe washinzwe ufise ihangiro rya mbere ryo gutanga inkuru zivuye mu gihugu canke hanze y'igihugu ku vyerekeye ubuhinga bwo gufasha hamwe n'ibikoresho vy'ugusubiriza bishobora kuronkwa ku baguzi, amashirahamwe, abahinga, hamwe n'abafasha muri Leta zunze Ubumwe za Amerika.

Natalie's **Way Foundation** ryanshinzwe kw'iteka rya Natalie Stasi, yavukanye mu mwaka 1997 indwara ya Albinisme Oculocutané (AOC). Iryo shirahamwe riratororokanya amahera biciye mw'ihiganwa ry'umukino wa golf. Ihangiro ry'iro shirahamwe ni ugutanga amahera kugira ngo habe ubushakashatsi mu vy'ubunyamwema no ku bana bafise indwara z'amaso.

The Nyastagmus Network (Ubwongereza) rirafasha abadwaye nystagmus, hamwe n'abavyeyi n'abigisha b'abana badwaye nystagmus. Aho ku ngurukana bumenyi handikwako hafise ihangiro ryo gutanga amakuru ku vyerekeye ukwo kuntu kujanye n'ivyamaso, kandi impapura zimwe zimwe zirajanye ahanini n'abahanzwe n'ukwo kwononekara kw'amaso.

Positive Exposure: Positive Exposure ya Rick Guidotti niyo yonyene ishira hamwe utugenegene tujanye n'ukubona (arts visuels), ivy'ihanahana vy'ubuzima (génétique) hamwe n'ivy'idero canke amashure.

Bioptic driving: Inkuru ku bijanye no kunyonga na biopsique

Inyigisho ku Bavyeyi no ku Barimu b'abana bafise ubunyamwema

Ikintu ca mbere gifiseko ubushoboz (Influence): Ukudashobora canke

Ugushobora: Haba abantu basanzwe muri rusangi canke abafise ubunyamwema ntibahuriza ku kuba bokwita ubunyamwema ukudashobora. Ukwo kudahuriza ku nsiguro gutuma haba ingorane mu nvugo ikoreshwa mu kuvuga ibijanye n'ubunyamwema. Biranagora ndetse abafise ubunyamwema mu gushobora kwitahura nk'umugwi. Mu buryo butandukanye, ubunyamwema ni ukuntu (condition) kwisangijwe. Ariko rero ukwo kwisangizwa, gutuma haba ugutandukanya no gukumirwa ku bantu benshi. Ukwifata kw'abantu mu kibano ku bijanye n'ubunyamwema kenshi na kenshi kurasa n'ukwabandi bafise ukudashobora canke imigwi mito bakunze kubona. Muri izo nyinfato harimwo ukudatahurwa, ugutinya ico umuntu atazi, hamwe n'ivyo abantu baca bishiramwo bivuye ku vyo babona.

Amategeko y'Abanyamerika bafise ukudashobora asigura ku bijanye n'umuntu ngo "ukwononekara kw'umubiri canke mu bwenge kuba ahanini kimwe canke vyinshi mu bikorwa vy'ubuzima vy'uwo muntu; ukumenyekana kw'ukwo kwononekara; canke kuboneka nk'uwufise ukwo kwononekara." Kuko rero ubunyamwema bujanye n'ukwononekara kw'amaso, abantu bamwe bamwe baca babufata nk'ukudashobora. Insiguro imwe y'ubumuga ni "ibibuza umuntu ahura navyo mw'ishitswa ry'amahangiro y'ubuzima bwiwe hatarabwe ico ivyo bibuza bivako." Ivo bisigura ko umuntu afise ukudashobora ashobora canke ntashobore kunanirwa kubaho ubuzima ashaka kubaho.

Ukwita ubunyamwema ukudashobora kuza kutoroshwa n'ico bita ubuhumi bwemewe. Muri Leta zunze Ubumwe, umuntu yemerwa nk'impumyi mu gihe ukubona kwiwe kudashobora gukosorwa n'amarori canke ngo ashobore kubona neza gusumba kuri 20/200 akoresheje ijisho ribona neza gusumba. Hakurikijwe iyo nsiguro, bamwe mu bafise ubunyamwema baraja muri uwo mugwi w'abemewe nk'abafise ukwononekara kw'ukubona abandi ntibajemwo. Naho biri uko, naho ukubona neza kugenda kuratandukana, nyinshi mu ngorane abafise ubunyamwema bahura nazo ziguma zisa.

Ikintu ca kabiri gifiseko ubushoboz: Ugusa k'umumubiri: Ikintu ca mbere ku bunyamwema abantu babona n'ukudasanzwe kw'umuntu ku mubiri. Umushatsi hamwe n'uruhu vyera vya albinisme oculocutané ni ikintu gikomeye cane kuva igihe c'amavuka. Uruhinja rukivuka usanga kenshi rufise ibara ribona cane gusumba abandi bantu bose bo mu mryango. Ku batari abazungu ibara ry'uruhinja rwa nyamwema ni ikintu gitandukanye cane ku muryango no ku kibano. Ibara ni ikintu kiranga cane mu mico yacu haba muri kino gihe canke muri kahise. Abandi bantu batari abahafi baca bavuga ibantu bidakenewe kandi bitari vyiza ku bijanye n'ugusa kw'umwana afise ubunyamwema.

Turetse n'ibara, amaso y'umwana usanga aguma aja hirya n'inno vuba na vuba kandi adatumbereye hamwe. Umwana ashobora gutegerezwa kuraba imirazi, guhindukiza umutwe, hamwe no gufatira ibantu hafi yiwe kugira ashobore kubona. Abana bafise ubunyamwema kenshi bakoresha amarori hamwe n'ibikoresho bifasha kubona kugira bashobore kubona. Kubwivyo rero umwana afise ubunyamwema kenshi yiyumva ko ari wenyene atari gusa ku bijanye n'uko asa ku mubiri ariko kandi bijanye n'uko yitwara mu buzima bwa minsi yose.

Ukuboneka nk'uko umuntu atandukanye n'abandi bishobora gutuma umuntu akoresha inguvu nyinshi kugira ashobore kumera "nk'uwsanzwe" uko ashoboye. Abafise ubunyamwema bashobora kwumva uburemere bwinshi cane bushobora kuva kuri bonyene hamwe no ku bandi bantu, kugira ngo bagerageze kugabanya ubudasa buterwa n'ubunyamwema. Izo nguvu nyishi zishobora gutuma umuntu aruha cane kuko yama agerageza kwongereza cane ubushoboz bwo kubona. Ubwo buremtere bushobora mbere no gutuma umuntu afise ubunyamwema yanka ko afise ubunyamwema na gatoyi bigatuma atakaza ikintu gikomeye cane kijanye n'akaranga k'umuntu.

Umuryango hamwe n'abagenzi bashika barashobora kurwanya iryo kumirwa hamwe n'ukwo kwankwa. Gushimirwa no guhabwa agaciro nk'umuntu akwiye ni urufatiro rwo kwiha agaciro no gukomera mu mutima ubuzima bwose.

Ikintu ca gatatu gifiseko ububasha: Imvugo, Imigani itabaho, hamwe n'Ivyiyumviro abantu bemera: Imvugo ishobora guha ishusho iviyiyumviro kandi ikarema ukuri. Ijambo “albino” rirakunzwe gukoreshwa mu ndimi nyinshi harimwo n’Icongereza. Abantu bamwe barumva ataco bibatwaye bagashima mbere ko babita albino canke nyamwema. Bensi bumva bibaka ubuntu kuko babita ukuntu bameze. Naho asa nk’ayagoye buhoro, amajambo “umuntu afise ubunyamwema” hamwe na “abantu bafise ubunyamwema” aha ikibanza ca mbere umuntu hanyuma hagakurikira ukuntu umuntu ameze.

Ugucokora hamwe no kwita amazina ni ubundi buryo invugo ishobora kwaka ubuntu. Abana nka bose baracokorwa mu myaka y’ishure yabo nico gituma bakwiye kwiga uburyo bujanye kandi bwiza. Abavyeyi, abigisha hamwe n’inyigisho ijanye n’ubunyamwema irenzecho birashobora gufasha kuri ico kibazo.

Mu mpande zose z’isi, abantu barafise ukudatahura kw’ubunyamwema, uhereye mu kwibaza yuko abantu bafise ubunyamwema bafise ububasha bw’amangetenete gushika mu kwibaza yuko badakomeye neza mu mutwe. Mu kabira k’abanyamerica b’abirabure, hari ikinyoma c’uko inzoya zifise ubunyamwema ziva mu guhura kw’umugore w’umwirabure n’umugabo w’umuzungu. Ikindi kinyoma n’uko abafise ubunyamwema bategerezwa kuba bafise amaso atukura. Abantu bafise ubunyamwema kenshi baba bafise amaso asa n’ubururu canke ibiara riri hagati y’iryera n’iryirabura bituma rimwe na rimwe aboneka nk’ayatukura ku matara amwe amwe. Rimwe na rimwe, ibinyoma birakwiragira ku buryo n’umuntu afise ubunyamwema avyemera.

Ibitangazamakuru, harimwo ibitabo n’amareresi vyaragize uruhara mu vyo abantu bemera atari ukuri. Uwuba nyamwema usanga kenshi yerekawna nk’umuntu ataco yibanga, akora ibitemewe, afise ubushobozi budasanzwe canke w’inkozi y’ikibi. Kandi amakuru amwe amwe hamwe n’inyandiko zitanga insiguro z’amajambo zarashizemwo inkuru zitari zo canke zidakwiye ku bijanye n’ubunyamwema. Biragoye cane ku bantu muri rusangi kumenya ukuri n’ikinyoma ku bunyamwema.

Ikintu ca kane gifiseko ubushobozi: Umuryango- Ni nkenerwa cane ko umuryango uronka inkuru z'ukuri ku bijanye n'ubunyamwema. Abavyeyi bashasha barakeneye gushigikirwa n'umwanya kugira ngo batahure ukuntu umwana wabo ameze. Abavyeyi n'abaryango barakwiye kandi guhangana n'ibinyoma vyubatswe ku bijanye n'ubunyamwema bigishijwe. Abavukanyi barakwiye gutahura igituma musaza wabo canke mushiki wabo asa ugutandukanye n'igituma bameze nk'abakwiye kumwitaho cane. Nta bundi bukomezi bungana n'umuryango mu gufasha umwana kwitahura no kwemera uko ameze.

Ikigize ibigumbagumba mu bunyamwema: Hamwe n'ibantu bifise ubushobozi vyo hanze mu kibano, umuntu wese arafise inyishu z'ibigumbagumba za nkenerwa kandi zihambaye ku vyo bagenda barahura navyo mu buzima bw'umwe umwe wese ku bunyamwema. Izo nyishu za buri muntu ni zo zubaka abo turi n'ingene tubana n'ubunyamwema. Inyishu ikomeye y'ibigumbagumba ni igice gisanzwe c'ubuzima, c';ugukura, hamwe n'ugukura mu bwenge. Ibigumbagumba bikuwemwo kenshi biragaruka mu muntu hanyuma bigatera uburuhe bwo mu mutwe, ukuyinga, hamwe n'indwara zo mu mubiri.

Inyishu z'ibigumbagumba ku bunyamwema zizoza zirashika mu kiringo cose c'ubuzima kubera ibabazo n'imbabaro vyinshi ukwo kuntu gutera hamwe n'ibantu vyo mu kibano bifiseko uruhara twamaze kuvuga. Ni nkenerwa cane gose yuko tumenya gusohora no kwakira ivyo bigumbagumba mu buryo nyabwo ku neza y'amagara yacu. Ubwa mbere ni ngombwa yuko tumenya uko twiyumva no gutegera ico vyavuyeko. Abavyeyi barashobora gufasha abana kumenya ingene biyumva, hanyuma bagafasha abana gufatanya uko biyumva n'insiguro canke ikintu kanaka kizwi. Nk'akarorero, umuvyeyi arashobora kuvuga, "ndazi ko ubabaye kuko utegerezwa kwisiga amavuta akinga izuba imbere yuko woga." Hanyuma umuvyeyi arashobora guca afasha umwana "gukora" ikintu bijanye n'ivyo bigumbagumba nko kubiganira, gukina, gusemerera, kwiruka, gukoma induru- igikorwa icarico cose co kwibagiza gishobora gusohora uko kwiyumva. Uko kwemera no gusohora ni nkenerwa mu gukorera ivyo bigumbagumba.

Abafise ubunyamwema bakuze bashobora kugira ukwo gukorera ibigumbagumba mu kugira abagenzi n'umuryango bumviriza umibabaro yabo, ugucika intenge kwabo, canke ivyishimo vyabo. Zimwe mu nzira zo gusohora ibigumbagumba ni ibikorwa vy'umubiri, kugira ico ukoze mu buryo bwo kwigisha canke kuvugira abandi, kwandika ico ukora iminsi yose canke ikete, canke kwiyigisha. Rimwe na rimwe infashanyo y'umuhinga mu vy'impanuro canke ivyo kuvura irashobora gufasha umuntu gukora mu gihe ari mu bibazo bikomeye bijanye n'ubunyamwema. Kugira ico ukoze ku bijanye n'ubunyamwema kenshi ntivyoroha na gatoyi. Ariko kuva mu bibazo ubunyamwema butera, turetse yuko bijana mu munezero mwinshi w'umuntu, biranatuma umuntu agira ugutahura kwinshi kuri kiremwa muntu.

Kumenya ukwitwara mu bijanye no gucokora no kwita amazina: Abavyeyi benshi bavuze ko ugucokora, ukutagira ikigongwe, hamwe n'ukutamenya ku bijanye n'ubunyamwema arizo ngorane nyamukuru. Abakiri bato bavuze ko bitwa amazina nka "nyamweru", "umudimudimu", "maso ane", "mpumyi", "nyokuru", hamwe na "sokuru". Barababaza igituma imitwe yabo yama ijugumira, nimba barisutseko isabuni yeza, n'ibindi bibazo bibabaza. Baranavuze yuko bakumirwa mu mikino kuko "batakina neza bikwiye."

Ugutegera uko kwitwara ni imwe mu ntambwe za mbere mu kumenya ico wokora kuri ivyo bigenda biragushikira canke mu gufasha umwana wawe kugira ngo amenye uko abana n'ubunyamwema.

Ni ibiki bitera abana (n'abandi) bacokora kandi baja no muvyo kwita amazina? Ni ibiki bituma haba amajambo mabi ababaza? Ukwitwara kubabaza hamwe n'ibibazo bitagira imbabazi?

Igituma kimwe gishobora kuba ubwoba. Abantu ba kera bizera yuko kwita izina ikintu kwari ukukiganza. Uno munsi turazi yuko abantu bashobora kwisanga baganzwa bivuye ku mazina bagenda baritwa kenshi mu gihe bisanze bamaze kuyizera hanyuma bagatangura kubaho nkuko avuga.

Ibindi bituma vyo kwita amazina, ugucockora no kutagira imbabazi ni ukubura ubumenyi, ugushaka kumenya, ugushaka kumenya kw'ukuri, hamwe n'ukunanirwa kubaza mu buryo bwubaka.

abantu bamwe baracokora kugira ngo bashobore kumenya neza gusumba uwundi muntu canke berekane urukundo. Ubwo buryo bwo gucockora kenshi na kenshi usanga butababaza. Ariko, mu gihe umuntu acokorwa adafise ishusho nziza y'ukuntu yibona kandi ataryohere we ubunyamwema, n'ugucockora kurimwo urukundo kurashobora kumubabaza.

Ubwa mbere, menya kugira ishusho nziza yawe no kwitwara neza mu bijanye n'ubunyamwema. Wongerekero kumenya ibwina ubunyamwema ubwabwo uzoca wisanga unezererwa kubuganira n'abandi. Ibibazo bizwi utaronkera "inyishu" birashobora gucika akaryo ko kwigisha mu gihe umuntu afise ukwiyizera.

Abavyeyi barashobora gufasha abana babo kumenya uko bitwara imbere y'amajambo ababaza mu kubahimiriza kuza baraganira ivyo bagenda baracamwo hamwe n'uko biyumva. Abavyeyi barashobora mbere no gufasha abana babo kuronka ubundi buryo bwiza kandi bushasha bwo kwishura muri kazoza ugucockorwa n'amazina babita kandi bakabigira mu buryo bw'imikino aho bagira nk'uko vyoba vyashitse mu kuri. Rimwe na rimwe gutanga inyigisho zijanye n'ubunyamwema mw'ishure birashobora kugabanya ugucockora n'ukwita amazina. Abavyeyi canke abanyeshure barashobora gutegura neza kandi bakavuga bivanye n'ibihe. Abavyeyi bashobora gusanga bakwiye kwigisha abigisha ubwa mbere.

Amashure akwiye kwigisha abana ko ukwitwara kubabaza imbere y'abantu bafise ubudasa ubwo ari bwo bwose ari ubryo bumwe bw'ikumira. Inyigisho zikurikirana k'ukudashobora zishobora gutanga inyigisho ku bijanye n'ubunyamwema mu nyigisho zijanye n'ukudashobora gutandukanye n'ubundi budasa. Amasanamu, ivyese vy'abana, n'ibindi bikoresho birashobora kwigisha ico cigwa ku rugezo rw'umwana. Hariho n'ubundi buryo bwo kugira ico ukoze ku bijanye n'ugucockora hamwe n'ukwita amazina, nk'akarorero, ugukoresha ugutweza.

Abanyeshure bensi bafise ubunyamwema barashobora gukurikirana amashure atanga inyigisho nk'izabandi hongeweko ibikorwa vyobafasha bibagenewe. Kuko abanyeshure bose bafise ubunyamwema batabona neza kumwe, kandi kuko bose badakoresha ukubona kwabo neza co kimwe, ni nkenerwa ko harabwa ubushobodzi bw'umwe umwe wese, ivyo akeneye, n'urugezo rw'ukumenya kw'umwana wese.

Abajejwe ivy'indero bakwiye gutunganya indero ku buryo ikumirwa ku bana bafise ukudashobora "rigabanya wa bishoboka." Ivyigwa bikwiye kuba bijanye nivyo umwana wese akeneye nk'indero. Kuri bensi mu bana bafise ubunyamwema, ivyo ni ahantu hashinzwe inshore "kanaka", hari umwarimu afise uruhusha rwo kwigisha abanyeshure bafise ukwononekara kw'amaso kandi yorosha uburyo bufasha umwana gukurikira neza ibikorwa vyose.

Umwarimu yigisha abana bafise ukwononekara kw'amaso ni umwigisha yaninosoye ivyo kwigisha abanyeshure bafise ukwononekara kw'amaso. Kugira bamenye umwigisha yigisha abana bafise ukwononekara kw'amaso no kugira bashobore gushikira ibikorwa bijanye n'indero bikwiye, abavyeyi b'umwana afise ubunyamwema bakwiye kurondera uwujejwe ivy'indero wabo. Ukwo kumurondera gukwiye kuba neza na neza imbere y'amashure yo kwimenyereza. Mu ma Leta yose, abajejwe ivy'indero barashobora gutanga inkuru ku bijanye n'amashure yo kwimenyereza hamwe n'ibikorwa n'infashanyo bikenewe kare. Guhera ku myaka itatu, amashure ya Leta ategerezwa gutanga inyigisho hamwe n'ibikorwa bijanye n'indero ku bana bose bafise ukwononekara gushobora kwitwa ukudashobora mu vy'indero kwaba ukw'umubiri, kw'ibigumbagumba, kwo kwiga, canke kw'ukubona, ukwumva, n'ibindi vyose bijanye n'ubwonko twokwita mu gifaransa sensoriel.

Ku bana bafise ukubona gutoyi, muri ivyo bikorwa hazoba harimwo ugupima ukubona kw'amaso, hamwe n'ugupima kw'inyigisho n'ukundi gupima kwose gukenewe. Impanuro ku bavyeyi z'ukungene bakwiye gufasha umwana wabo ni ikintu ca nkenerwa muri iyo nzira yo gupima. Ukwo gupima gutegura inzira ku murwi w'indero y'umwana gushiraho Integuro y'Indero ya buri Muntu. Ni umurwi rero

utungunya aho kwigira harabwe ibishoboka bitandukanye bishobora kuboneka hamwe/canke ibikenewe bikwiye kushirwa hafi kubw'umwana.

Ibijanye n'Ishure: Umunyeshure, abavyeyi biwe, umwarimu, umwarimu yigisha abafise ukwononekara kw'amaso hamwe n'umuganga w'amaso bakwiye gukora nk'umurwi. Uwo murwi ukwiye kuraba aho kwicara, umuco, ibikoresho, ugukura mu vy'umubano canke ibigumbagumba, inkurikizi y'ukwononekara kw'amaso mu gukura hamwe n'ikoreshwa ry'ubuhinga bukwiye n'ibikoresho bifasha kubona.

Umunyeshure, umwarimu, umwarimu w'abafise ukwononekara kw'amaso bakwiye kuganira ibijanye n'aho kwicara. Abanyeshure bafise ukwononekara kw'amaso bazokwicara ku ntebe y'imbere ariko si bose bashobora kubona k'urubaho naho boba bicaye aho. Abanyeshuri bamwe ntibazokwipfusa kwicara imbere kandi bakwiye kudashirwaho ku gahato, ariko bakwiye guhanurwa mu buryo ubu canke buriya. Ahantu hokwicara hakwiye kuba hatari umuco mwinshi uca mu madirisha hamwe n'umuco wo hejuru y'umutwe, kandi hakwiye kuba ata bitutu bariho. Mw'ishure ahari umuco urungika imishwarara miremire, intebi iri hagati y'imishwarara ni nziza gusumba iyiri munsi neza na neza y'imishwarara.

Umunyeshure ashobora gukenera guhindura aho yicara kugira ashobore kuraba ireresi. Abanyeshure benshi bafise ubunyamwema bashobora kuzogira ikibazo co gusoma kuri projecteur iri hejuru yabo kubera umuco mwinshi. Umunyeshure ashobora kwimura ivyari kuri projecteurs umwarimu ahejeje kuzikoresha. Canke umunyeshure agasaba kwimura akuye mu vyanditswe n'abandi banyeshure. Canke umunyeshure arashobora kwimura habiri akoresheje karbone hanyuma agaha ivyanditswe neza umwana afise ukubona gutoyi.

Ikoreshwra ry'indome nini: Abanyeshure bafise ubunyamwema barashobora gukenera indome nini canke ntibazikenere. Umurwi urashobora gupima ijisho ukaraba ingene ribona hafi canke kure. Umwarimu w'abana bafise ukwononekara kw'amaso ashobora gupima ukubona kw'umunyeshure akoresheje indome zifise ubunini butandukanye. Umwarimu w'abana bafise ukwononekara kw'amaso akwiye kwegeranya ibitabu vyose bizokenerwa mu mwaka ukurikira mw'ishure akarabira

hamwe n'umunyeshure kugira ngo amenye neza ibikenewe kwagurwa. Ikoreshwa ry'amabara atandukanye rishobora kuba ariryo ngirakamaro gusumba iyagurwa ry'indome. Icipfuzo c'umunyeshure ku vyerekeye ibitabu bikwiye kwagurwa ni ikintu gikomeye muri iyo nzira yo gushinga amategeko.

Ibikoresho bisanzwe bikoreshwa gushika mu mwaka wa gatatu birimwo ubwa mbere na mbere indome nini, kenshi na kenshi usanga zifise ubunini bukwiye ku bafise ukubona gutoyi. Kuva mu mwaka wa gatatu canke uwakane, twohanura yuko bokwagura ibitabu vy'ibiharuro kubera ibimenyetso bimwe bimwe ari bito cane. Abanyeshure bashobora kwipfuza gukoresha indome nini mw'ishure kuva mu mwaka wa kane gushika mu wa gatandatu. Ariko abanyeshure bo mu gice ca nbere c'amashuri yisumbuye barashobora kutipfuza gukoresha ibitabo bifise indome nini bivuye ku kwigana abandi. Ariko barashobora kwipfuza gukoresha ibitabo bifise indome nini imuhira. Ni nkenerwa k'umurwi kwiyumvira ingene boshobora gufasha umunyeshure gucika uwutagira ubwoba mu gukoresha ibikoresho bisabwa mw'ishure. Si vyiza kwiyumvira ko umunyeshure atazoryohererwa gukoresha indome nini canke ibindi bikoresho mw'isomero.

Ibitabu vy'inyigisho zo kwandikisha imashini yo kwandika canke y'inyabwonko bisabwa kenshi kwagurwa kandi bigashirwa ahantu hashobora kubonwa bitagoranye kubera bidakunda ko umuntu yegera cane aho vyanditswe mugihe ariko arandika. Nkuko nyene, amanota y'umuziki y'bicurarangisho vy'abari mu migwi w'umuziki arakwiye kwagurwa kubera baba bari kure y'ayo.

Kuri abo banyeshure bakenera ibitabu n'ibindi bikoresho bifise indome nini, umwarimu w'abanyeshure bafise ukwononekara kw'amaso arashobora kenshi na kenshi kuronka ubwoko bw'ivyo bitabu bisanzwe bikoreshwa mwishure aciye muri American Printing House for the Blind; ahahingurwa ibitabu vy'abatabona muri Louisville, Kentucky, canke ahandi hoba hakorerwa ibitabu bifise indome nini. Hamwe hamwe, ibiro bijejwe ivy'indero ahantu kanaka birashobora kw'ifotorera vyonyene ibitabu mu buryo bwaguye. Abanyeshure bamwe bashobora guhitamwo ivyafashwe amajwi gusumba ivyanditswe hakoreshejwe indome nini.

Ivyigwa umwigisha ategura guha abanyeshure bikwiye kuba vyafotowe mu buryo bwaguwe canke bigasomerwa abanyeshure. Mu gufotora, kenshi birashoboka kwongerako ukubona kw'ivyandiko canke ibicapo bifise ibara ritabona neza.

Amanota y'ibibazo bisanzwe ashobora gukenera ko afotorwa kandi akagurwa kuko udutabu tw'ibabazo kenshi dukenerwa gusubira gukoreshwa ivyo bigatuma batandikamwo amanota, kandi ugasanga indome ari ntoyi. Eka mbere n'ahandikamwo amanota kandi hishurirwako utubazo hazanana n'utwo dutabu handitsweko mu buryo butoyi cane. Ico gikorwa rero co kuraba mu dutabu tw'utubazo hama umuntu akishurira ahandi hanyuma agasubira nkuko, kenshi cane, ni igikorwa kiruhisha gose abana bafise ukwononekara kw'amaso. Mu guhe indome z'utubazo zaguwe, umwana arashobora kwishurira mu gatabu. Mu nyuma, inyishu zirashobora guca zirungikwa ahantu hagenewe kwishurira hatangirwako amanota. [ACT's, PSAT](#) na [SAT's](#) birashobora kuboneka mu buryo bwaguwe no kuri kasete bivuye kuwabikoze akabicisha ku shuri.. Ivyo bibazo bishobora kwakirwa nk'uko umugwi w'indero wahisemwo ibijanye no kubazwa.

Ibikoresho bitari ivyo gufasha kubona: Imashini z'inyabwonko zishobora kuba nkenerwa cane ku banyeshure bafise ukubona gutoyi. Abanyeshure bafise ubunyamwema bakwiye kwiga gukoresha kwandika ku mashini hakoreshejwe imikino y'imashini kuva bakiri mu myaka yo kwimenyereza; bakwiye kwiga neza na neza kwandika ku mashini kuva bakiri mu mwaka wa gatatu. Inyabwonko zifise aho kurabira hagutse hamwe n'ubuhinga bwo kwagura indome zishobora gufasha abanyeshure bakuze mu bikorwa vyabo vyo kwandika.

Iyo bita mu gifaransa [Télévision en circuit fermé](#), irashobora gufasha abanyeshure gusoma ibicapo vy'ibiharuro, ibicapo bisanzwe n'inyandiko. Mu gihe uriko urakoresha [télévision en circuit fermé](#), urakwiye guhindura amabara atandukanye nk'akarorero indome zera zanditswe ahantu hirabura, ivyo bigafasha kugabanya umuco mwinshi.

Ibikoresho bifasha kubona: Mu gusoma, umunyeshure afise ubunyamwema arashobora gukoresha ibikoresho vyagura indome (loupe) biri ahantu hamwe, loupe

umuntu yifatira mu minwe, canke amarori yagenewe gusoma, nkayo bita mu gifaransa lunettes à double foyer afise ububasha bunini bwo gusoma canke ubuhinga bwo gusoma mu buryo bwa telescope.

Ayo bita mu gifaransa lentille de contact canke verre de contact arashobora gufasha kubona ahantu kure. Abanyeshure bamwe barakoresha ivitwa mu gifaransa telescopes monoculaire (telescopes ntoy i umuntu ashobora kwifatira mu ntoke). Abandi banyeshure barashobora gukoresha ibiyo vyo mu bwoko bwa biopsique, bishobora gusoma no kubona ibintu biri kure. Biopsiques zirimwo ibiyo vytelescopes mu marori asanzwe, kugira afashe abantu gushobora gukoresha bashatse ibiyo bisanzwe vyo kuvura amaso canke telescope kugira bashobore kubona ahantu kure canke hatari kure cane. Biopsiques zimwe zirashobora kuba zirimwo telescopes zibiri zitandukanye- imwe yo kubona kure iyindi yo gusoma- zose zishizwe ku kiyo kimwe kizitwaye. Biopsique zikorwa mu buryo bushasha zikoresha ibiyo bitoyi biremurutse kandi bikundwa kubw'ubwiza, ariko zigoye gukoresha kuko zifise aho kuraba hatoyi.

Mu mubonano n'umwarimu yigisha abafise ukwononekara kw'amaso canke umuganga w'amaso afise ubumenyi mu vyo kubona gutoyi ashobora kwandikira umunyeshure umwe wese ubwiwe ibikoresho vyo kubona bikenewe.

Inyuma yuko igikoresho canditswe, umwarimu yigisha abanyeshure bafise ukwononekara kw'amaso aca akorana n'umunyeshure mu gihe aba ariko ariga kugikoresha neza. Abavura ivyo kubona gutoyi bakwiye kwemerera abanyeshure gukoresha ibikoresho vyo kubona mu kwimenyereza ubwambere, hamwe no gushobora kubisubiza mu gihe basanze ivyo bikoresho ataco bibafasha. Kugira umunyeshure arabe neza yuko ibikoresho vyo kubona bikora nkuko bikwiye, akwiye gusubira kwa muganga nko mu kwezi kumwe inyuma y'igihe yandikirwa umuti.

Kenshi na kenshi abanyeshure baratinya gukoresha ivyo bikoresho kubera bituma abantu babaraba cane. Kugira ngo bashobore kuba nk'abandi bose, abanyeshure bakunze kwirinda gukoresha ivyo bikoresho ngo bereke abandi ko babona naho

ataco babona. Abanyeshure bakiri bato bashobora kanyegeza amarori yabo, kuyata canke kuyamena. Iminsi yose ni vyiza kandi ni nkenerwa gufasha umunyeshure kubona akamaro k'igikoresho hamwe no kwumva aryohereye kugikoresha mu bantu bitandukanye.

Icigwa co kunonora imitsi: Abarongoye ishure bakwiye kurondera uburyo bwo guha ikibanza abanyeshure bafise ukubona gutoyi mu bikorwa vyose, no kwirinda kwama babasiga bicaye iruhande baraba gusa. Imikino "y'udupira duto duto" (tennis, badminton, softball, baseball) iragoye ku bana bafise ubunyamwema, bivuye ku buto n'ukunyaruka kw'udupira. Imikino ikoresha imipira minini yoyo biragendeka (football, kickball, basketball). Imipira isa n'umuhondo n'iyyfise amabara ituma imipira ishobora kuboneka neza gusumba ku mwana afise ubunyamwema. Ukwoga, aerobic, gymnastique, kwiruka, ukugwana, ukugendera ku mafarasi, na ski, ni imikino bashobora gukina mugabo mu gihe hariho ibantu bikeyi nya nkenerwa babanje gukwizwa. Ni nkenerwa cane ko abategura icigwa co kunonora imitsi bokwama bibuka iki kintu yuko ukwiga ivy'imikino n'ibikorwa (Ibibuga vy'imikino, amategeko, ico umwe wese akora mu mugwi, n'ibindi n'ibindi) bikenewe navyo nyene, mbere rimwe na rimwe nkenerwa gusumba gukina umukino neza.

Imfashanyo mu mubano: Abigisha bakwiye kwirinda kudoma urutoke umunyeshure afise ubunyamwema ku bantu bijanye neza na neza n'ubunyamwema. Abanyeshure bafise albinisme oculocutané (urukoba n'amaso) baraboneka uko biri kwose, kandi bakenera gufashwa mu mutima kugira bashobora kwishura abanyeshure bigana. Abavyeyi barashobora gufasha abana babo kugira ico bakoze ku bijanye no gukorwa canke ubundi bwoko bw'ikumirwa mu kubahimiriza kuganira nabo ivyo bagenda barahura navyo hamwe n'uko biyumva muri bo. Ibiganiro birimwo umunyeshure, umwarimu, umwarimu wo kubona, hamwe n'umuvyeyi birashobora gufasha umunyeshure.

Ibihoboka bitandukanye n'ibisanzwe bimenyereye: Naho abanyeshure benshi bafise ubunyamwema bashobora kumenya mw'ishure risanzwe, rimwe na rimwe ahantu hari ikumirwa ritoyi cane ku mwana hashobora kuba mu kibanza yomaramwo

nk'igice c'umunsi arikumwe n'abandi bana bafise ukwononekara kw'amaso, canke ikirasi cabigenewe canke mbere ishure ryagenewe abanyeshure bafise ukwononekara kw'amaso. Umunyeshure ashobora gukenera inyigisho ahanti hantu hatari mw'ishure asanzwe yigiramwo kubera umwana aba yisuzugura, canke abadafise urugezo rwo kumenya rungana n'abandi banyeshure bigana, canke mu bigumbagumba vyiwe adashobora kugira ico akoze mu bisabwa n'ahantu asanzwe yigira.

Nimba izo ngorane zisaba ko umwana akurwa mw'ishure, ni ngombwa ko umugwi w'indero utegura uburyo bwo gutorera umuti izo ngorane, nko kwumviriza mu mugwi canke umwe umwe nk'ikintu coba igikorwa c'umunsi w'ishure, inyigisho yagenewe umuntu umwe mu vyigwa adashoboye, canke ivyigwa vyagenewe umuntu umwe mu bumenyi bwo kwiga, ubumenyi bwo gutunganya ibintu hamwe n'ubumenyi mu vy'imibano. Ni nkenerwa cane ko haba ugushiraho umwanya wo gusozerwa ivyo bikorwa, no kurabira hafi ihangiro n'iterambere.

Mu kuraba ivyoshoboka bitandukanye, ni ngombwa kumenya ko atari inzira imwe gusa ishika ku nyishu itomoye ku bana bose bafise ubunyamwema. Nubwo biri uko, mu kwihangana, ugutahura, n'ugukora cane, umugwi urashobora gushika ku buryo umunyeshure yokora neza mu vyigwa bisanzwe.

Ku Bavyeyi: PEI ku mwana wawe

Plan d'Education Individuel (Integuro y'indero kuri buri buntu) canke PEI ni nkenerwa cane mu rugendo rujanye n'ivy'indero ku munyeshure afise ukwononekara kw'amaso. PEI ni integuro ku mwaka aba ugira utangure. Irerekana neza ivyohinyanyurwa n'ivyohinduka bisabwa ku munyeshure kugira ashobore guhiganwa na bagenzi biwe babona neza. Ku bavyeyi n'abanyeshure, amanama ya PEI rimwe na rimwe aboneka nk'ayateye ubwoba kandi yuzuyemwo ukutamenya ikivamwo, ariko arafasha abavyeyi gutegera urugendo barimwo n'uburengazira bwabo.

Abavyeyi bakwiye kwitegurira iyo nama mu gutahura ico bipfuza gushikako, hamwe n'uburengazira bwabo mw'Itegeko ry'Indero riraba Abantu bafise Ukudashobora.

Hiyongereye kw'itegeko mpuza ma Leta, amaleta menshi yaremeje amategeko kandi n'ubuyobozi bw'indero mu ntara bushobora kuba bufise ingingo ngenderwako bwitunganirije.

Abavyeyi barashobora kuronka amakopi yayo mategeko mu mashure. Ishure risabwa n'amategeko kuronsa abavyeyi ikopi y'uburengazira bwabo munsi ya IDEA mu buryo bushobora kubashikira bitagoranye.

Abavyeyi bashobora kuzana mu nama urutonde rw'ibibazo canke bakabirungika k'uwrongoye ibijanye n'indero idasanzwe imbere y'inama. Bakwiye kwibuka ko bafise imbere yabo ubumenyi buri hamwe bw'abahinga bazoba bari muri iyo nama.

Ni ngombwa ko baba bafise ivyashikirijwe n'umuganga w'amaso vy a vuba. Ivo birashobora gufasha cane, hamwe n'ibiba vyashikirijwe n'umwarimu w'abana bafise ukwononekara kw'amaso, mu guhitamwo ibikwiye guhinduka ku bijanye n'ukuntu ishure rimeze hamwe n'ibijanye n'ibikoresho vyanditsweko.

Abavyeyi bakwiye kwama bafise idosiye y'ivyavuye mu ma PEI ya kera hamwe n'ivyashikirijwe vy a vuba n'umu psychologue w'ishure, uwujejwe ivy'umubano, hamwe n'ibindi bijanye n'iv'y'indero vy a nkenerwa mu nama mpuza ma Leta, ya Leta hamwe n'amategeko ya PEI yaho umuntu abaye. Abavyeyi barashobora gusaba ivyo bishikirizwa canke vyandikwa (rapports) n'abakozi b'ishure babijejwe.

Umuwi wa PEI ukwiye kubamwo amuvyeyi canke abavyeyi, n'imiburiburi umwigisha umwe w'inigisho zisanzwe hamwe n'umwigisha umwe w'inigisho zidasanzwe, uwuserukira ibiro vy'indero aho umuntu abaye ashobora gutanga uruhusha rw'ibikorwa, umuntu ashobora gusobanura inkurikizi z'iv'y'indero yisunze ivyavuye mu bipimo canke utubazo, hamwe nuyo wese yoba afise ubumenyi canke ubuhinga budasanzwe ku bijanye n'umwana, harimwo abakozi batandukanye bakora ibantu bijanye. Ni ngombwa ko abavyeyi bose b'umwana baseruka mu nama ya PEI-birazana ubudasa. Umwana na we nyene arashobora kwitaba inama ya PEI kandi

mu gihe yoba amaze gukwiza imyaka 18 mu ma Leta atari make, ategerezwa kwitaba iyo nama ya PEI.

Abavyeyi bakwiye kwama bibuka ko ari bo bazi umwana wabo neza gusumba abandi. Bakwiye kwumviriza umwana wabo, kandi bakamuvugira. Birafasha kwama umuntu yimura kugira ngo yibuke ibantu akeneye gutomorerwa, kandi akabaza ibibazo inyuma y'ibishikirizwa (rapport) canke mu mwanya ukwiye mu gihe c'inama. Abavyeyi ntibakwiye gutera umukono kuri PEI imbere yuko bayisoma kandi bumvikanye ku birimwo. Ariko, bashobora gusabwa gutera umukono ku rupapuro rwemeza ko bari bitavye inama, naho PEI yoba itarandikwa. Ni vyiza ko utera umukono ko witavye inama.

Ivyiyumviro bisangiwe na benshi bishobora kuba bidahuye n'uwo mwana. Rimwe na rimwe, indome nini canke ivyigwa vyafashwe amajwi ntivyama ari vyiza iminsi yose, kandi bishobora kutemerwa nk'ibisubirira ibikoresho bifasha kubona. PEI irarekurira abavyeyi b'abana bafise ukudashobora kwo kubona kuvugira umwana wabo ngo agire integuro y'ivyigwa ihuye neza na neza na we.

Ugusozeria

Ikintu nkenerwa c'urufatiro kuri kiremwa muntu ni "kubonwa" n'uwundi muntu-kumenywa no kwemerwa. Ukwo ni ukuri kubabaje ku muntu afise ubunyamwema ashobora "kubonwa" vuba na vuba n'abantu benshi, ariko "akabonwa kandi akamenywa" neza na bake. Ivo bisigura igituma ubunyamwema busa nk'ikintu kinyegeje naho kiboneka vyoroshe.

Ukuja hamwe n'abandi ni inzira yo kugabanya ukwikumira hamwe no gushira hamwe ubumenyi n'ivyo abagize umugwi bagenda barahura navyo. Ni uburyo bwo kwongereza ubushizi bw'amanga n'inkomezi mu gutorera inyishu ingorane zijanye n'ubunyamwema.

Ubunyamwema, kenshi na kenshi butaba bwitezwe mu muryango, bushobora kuba intango y'ukwemerwa, ugutahurwa, n'urukundo rukikuje abagize umuryango bose n'ubudasa bufiswe n'umwe umwe wese. Ni ikintu kiboneka k'umubiri ciharijwe n'umuntu, ciharije umunezero n'ukugora. Biciye mu kugerageza kw'imiryango n'abantu bitanga batiziganya, ubunyamwema buramenya bukongera bugatahurwa.

Aho twabikuye

<http://www.albinism.org>

<http://www.rickguidotti.com/>

<http://home.clara.net/knowlton/family/Albinism/bianca.htm>

<http://albinism.med.umn.edu/>

<http://www.medhelp.org/web/hpsn.htm>

<http://www.lowvision.org/albinism.htm>