

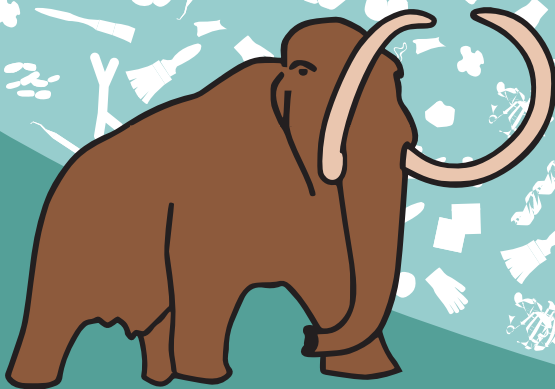
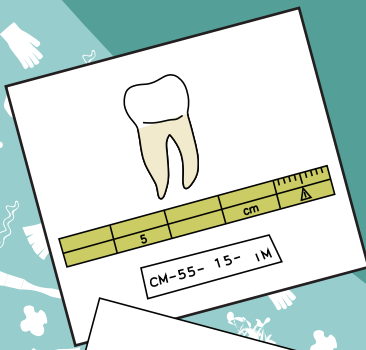
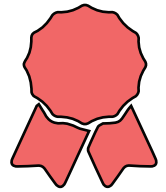
Sarantawinaka

JAQINA NA YRA KAMAÑA JAQAWIPA YÄNAKAPAMPI

Aka pankasti wank'tawiwa:

Suti

Jutiri "bioarqueologa/o"
sata aka pachatha
yatichsuwipata



Maya panká rexsuñapataki
Jach'a yatiquaña uta Max Planck
de Antropología Evolutiva

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Jach'a yatiquaña uta Max Planck
de Antropología Evolutiva

Luratawa: Jach'a yatiqaña uta Max Planck de Antropología Evolutiva

Mayjt'ayiri:: Christina Warinner

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Zandra Fagnäs

Jessica Hendy

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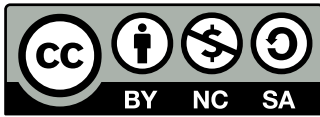
Åshild Vågane

Ke Wang

Christina Warinner

Aymara aruru kutjtayiri Yemily Cristina Cruz Quispe

Akchapi rixexña pankasti maya "ilustración científica" irnakawi kursuta taypitwa luratarakiwa.



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DOI: 10.17617/2.3372921

2022



KHITIPTANSA

“Bioarqueólogos” ukanakaxa yatxatirixtwa ukhamasa nanakaxa apnaqaptwa amawt’ata yatiqawi t’aqanaka ukhamarusa walja uñaqawinaka nayra jaqinakana jakawipata.



Paletín
sata

Ayllunxa ...

Bioarqueólogos sata Arqueólogos sata ayllunakata ukanakampi irnaqapxixa allinñataki ukhamasa apthapiñataki uñjt’ayañataki yatxatawi utana yatxatañataki.

Aka irnaqawisti thiyatawa allsutanaka uñjt’añataki, nayra pachata yänakapa t’una utjirinaka apthapiña, nayra uyunakana uywa ch’akanaka uñakipaña janiukaxa nayra pacha panqaranakana uñjawipa ajlliñaxa.

Yatxatawi uta ...

Nayra pachana ADN uka apnaqasinxa, amawt’anakaxa q’uma utanakana irnaqapxañaxawa ukhamarusa q’ara isinaka wantisanaka, wutasanaka uchkusiptxa, nayra pachana yänakapa, aka pachata ADN sata ukata jark’aqañataki.

Amawt’anakaxa walja apaxatanaka apnaqapxixa ukhamarusa walja yänaka apnaqapxi nayra pachana yänakapa yatxatañataki.



Pipeta
sata



ALLIÑANAKA

Bioarqueologos sata jupanakaxa muyupxiwa sarasisa yatxatañataki jaqina nayra sarawinaka. Ukhamasa yänaka alliñataki, yaqha pachanakanxa munasirakiwa walja yänaka suma yatxatañataki. Qhananchañatakisti, Himalaya ukansti Arqueologos sata ukanakaxa pacha may'tata ukhamasa yänaka yatjatawinaka munasixa.

Department of Immigration
TREKKING PERMIT
in accordance with the rule 33 of the Nepal Tourism Act, 2018
in the area of Mustang District (except to 19

NATIONAL TRUST FOR NATURE CONSERVATION
Entry Permit (ACAMCA/GCA)
Schedule - 2 (Relating to Sub-Rule (1) of Rule 19)
Receipt No. **0281630**
Entry Permit No.
Full Name:
Date of Birth:
Passport No.
Nationality:
Purpose of Visit:

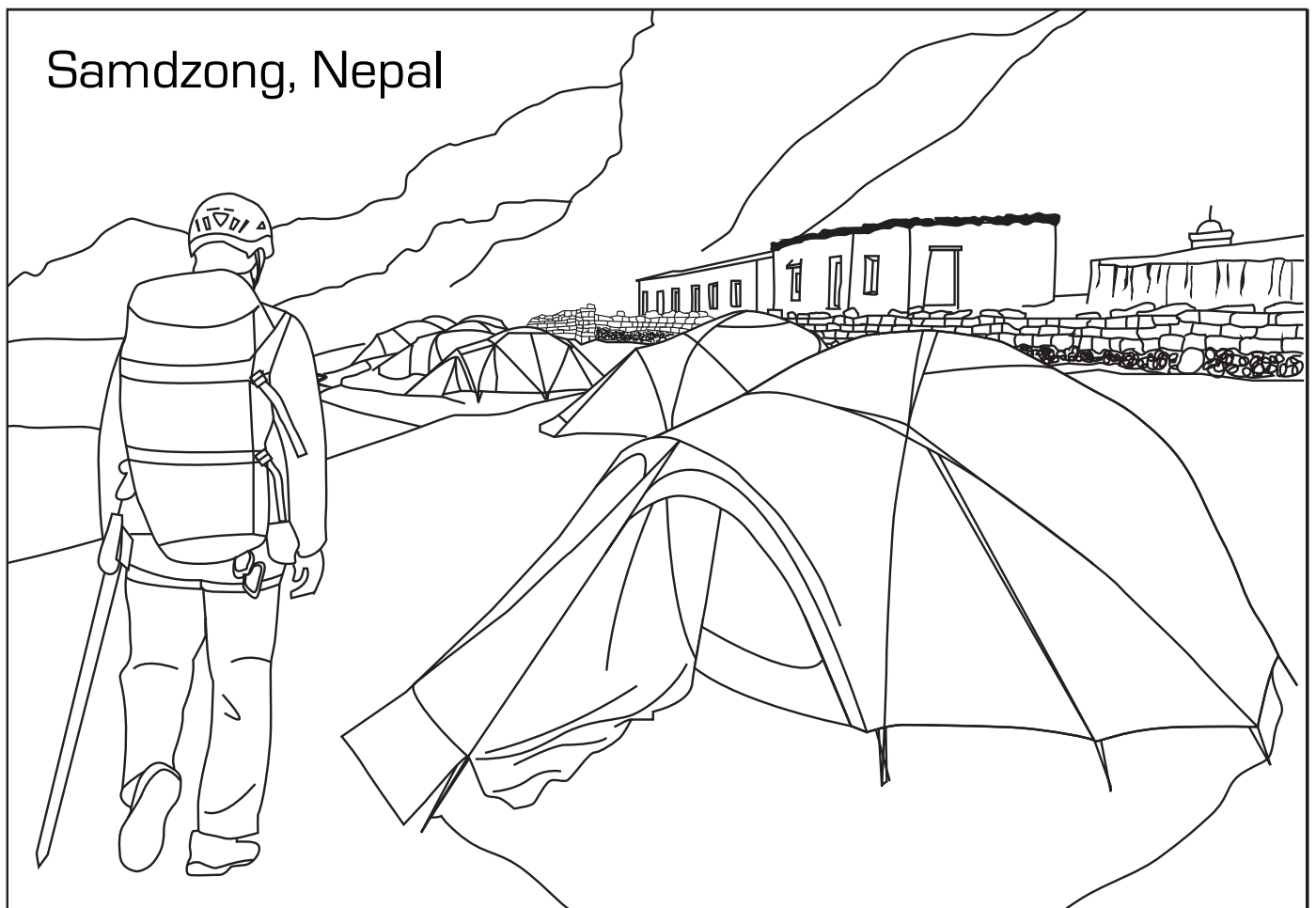
NATIONAL TRUST FOR NATURE CONSERVATION
NTNC-ACAMCA
Entry Fee Receipt
Ticket No. **0281630**
Date
Nationality
Authorized Signatory
SHERPA SHAIKUN-LA

Department of Immigration
Date:
Entry Permit Issuing Authority
Signature
Full Name:
Designation:

TOURIST COPY

Immigration Officer
No

Samdzong, Nepal

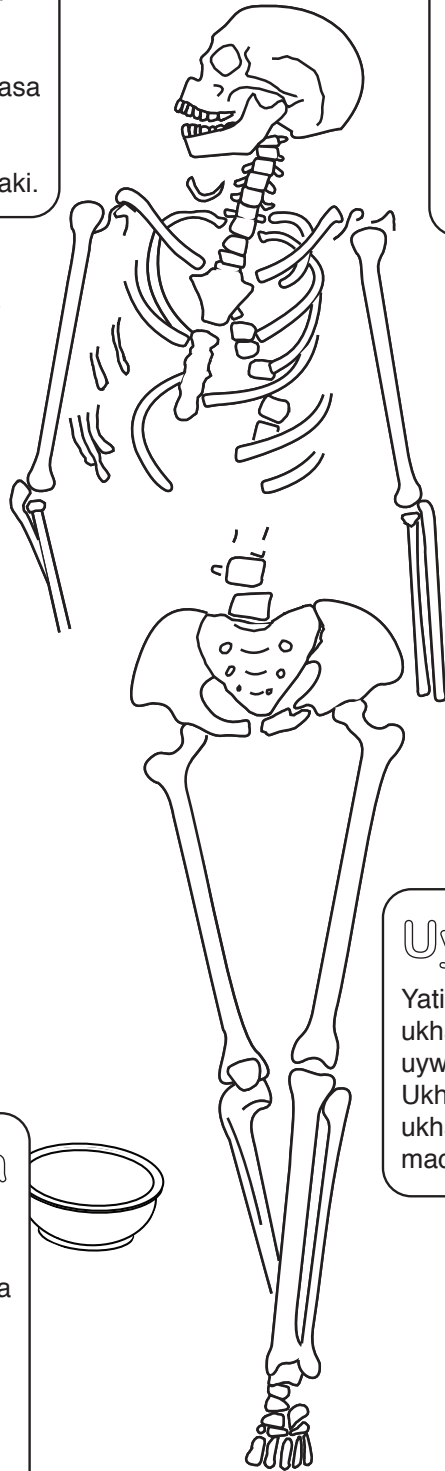


Laka ch'akanaka sarruntata

Sarruntata laka ch'aka uñt'ataraki, uka sarruntata laka ch'akanakaxa janiwa jiwkiti jiwasa jakawisanxa. Uka sarruntatanakaxa isk'a ch'iminajka katjixa ukhamasa manq'anaka katjarakixa, ukhamasa manq'aña machaqtapiyañataki apnaqasispawa ukhamasa jaqinakana q'umara utjasiñapataki.

Ch'akanaka ukhamasa laka ch'akanaka

Ch'akanaka ukhamasa laka ch'akanakaxa DNI ukanakaniwa ukanakaxa nayra jaqinakana sarnaka ukhamasa utjawinakapa yatxatayasixa, sirinktanwa nayra saminakapa janiukaxa ñik'uta saminakapa ukhamaraki yaqha wilamasinaka utjawipa. Jiwata jaqinakana llaqha usumpixa laka ch'akanakapaxa DNA sata jani walinakani ukanakanispawa.



Sañu t'unanaka

Manq'a jilt'anaka ukhamasa yaqha sañu t'unanakaxa panqara ukhamasa uywanakana 'umararanakanispawa, jisk'a t'una ch'uxñanakani ukhamasa manq'anakana ch'islli wakjayañananispawa. Aka t'una uñjt'awinakaxa suma q'umaririnaka ukhamasa nayra pacha ayllunakana jakawipa uñjt'ayasispaxa.

Uywanakana ch'akapa

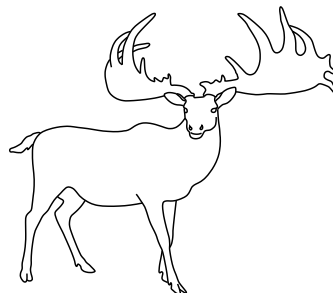
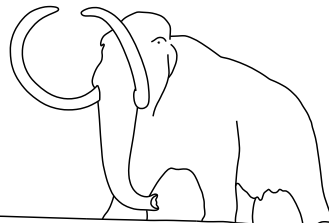
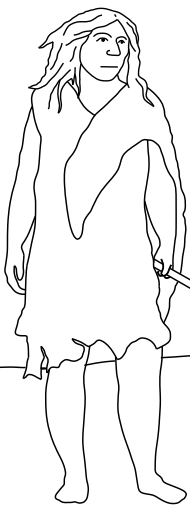
Yatiqsnawa suma q'umara utjañataki ukhamasa nayra qullqichawi uywanakana ch'akapata yatxatasisawa. Ukhamarakiwa walirakiwa apnaqañataki ukhamasa walirakiwa nayra utjawinaka machaqtapiyañataki.

KUNSA YATIQAPTANXA

Bioarqueologos sata ukanakaxa amawt'anakana yatichawipa ukhamasa jach'a lurawinaka nayra pacha yatxatawi jiskt'awinaka apanaqapxixa. Wali suma amuyt'awinakampixa walja yatxatawi maya isk'a uñjt'awimpi, ch'akampi, laka ch'akampi jan ukaxa t'unasañunakampi apnakasispaxa.

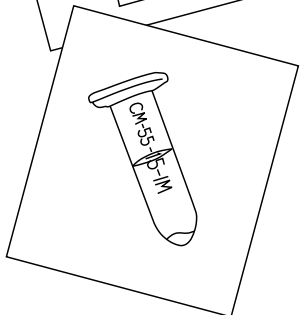
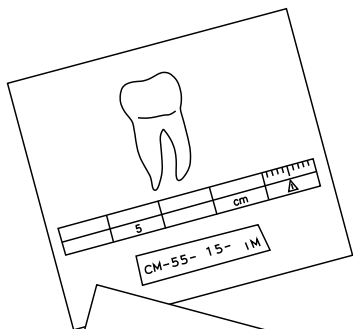
ĖYATIYATATI?

Neandertales sata ukanakaxa pusitunka waranka maranwa chhaqtapxixa, janiukaxa DNA Neandertal sata ukanakanxa isk'a ch'iminakawa jani afrikanunakana jakaskiwa.



JAKAWINAKASA UTJAWISANA

Nayra pacha DNA ukaxa yanapsituwa jak'a wilamasinakasata nayra pacha utjawipata yatiña: neandertales sata ukanaka.



Mayjt'awi

Nayra pacha jaqinakana laka ch'akanaka ukhamasa ch'akanaka yatiqawasinsti, kunjamsa nayra jaqinakaxa utjapxiritayna ukhamasa kunjamsa jichha utjirinakaxa majt'apxixa yatiqsnawa.



NAYRA PACHA MITMAÑANAKA

Nayra pacha ADN ch'akanaka lankañaxa ukhamsa laka ch'akanaka walispawa nayra pacha mitmañanaka apnaqañataki. Kunatixa kunaymana yatxatawinaka "isotopos" uka taypita maytapiyasiwa, kunjamti chinthapi "radiocarbono" taypita jani ukaxa kunaymana yatxatawi j̄isotopo de estroncio" uka taypita ukhamasa "Oxigeno" sata ukampi, uka mitmañanakaxa katjasispawa uñacht'ayaña tukita ukhamasa pacha tuqita.

Escitas, Asia Central
Edad del Hierro, 700 A.C.

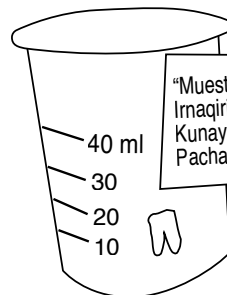


¿YATIYATATI?

"Radiocarbono" sata ukaxa janukaxa "14C", ukaxa "Isotopo" ukaxa k'atakiwa qurwantixa kunatixa panqarankana wayrapa k'ataki ch'amuntixa. Uywanakaxa p'itanakapana panqaranaka manq'apxi ukata "radiocarbono" uka churapxixa. "Radiocarbono" ukaxa pacha saraqxipanxa jalaqxiwa. "14C" maya muestrana nayrapachata tupuñaxa, walispawa yatt'ayañaxa chiqaparusa jani chiqaparusa qhawqha pachasa uka "organismo" sata jaqaskixa.



"Radiocarbono" mayjt'ayaña



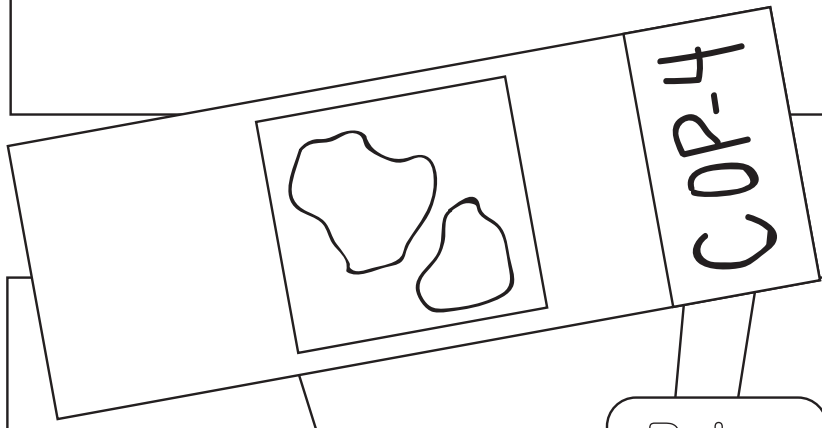
"Muestra" uka yatxataña:
Imaqiri:
Kunaymana "muestra" ukanaka:
Pacha jakhu:

"Radiocarbono" mayjt'ayaña uka taypitxa ukaxa maya lurayawa kunatixa lurasispawa nayra pacha 40000 pacha saraqawinakata uywanaka ukhamasa panqaranaka yatxataspawa.

NAYRA PACHA "DIETAS" UKANAKA

Amawt' anakaxa "microscopios" ukanaka jisk'a jilt'a manq'anaka nayra chuwanakata ukhamasa laqanakata jakiñataki apnaqaspawa. "Microfósiles" yatxatawinakatxa kunanaksa manq'apxiritayna nayra jaqinaka "Mesoamerica" uka tuqinakata 2000 pacha utjirinakata yatiyisituwa.

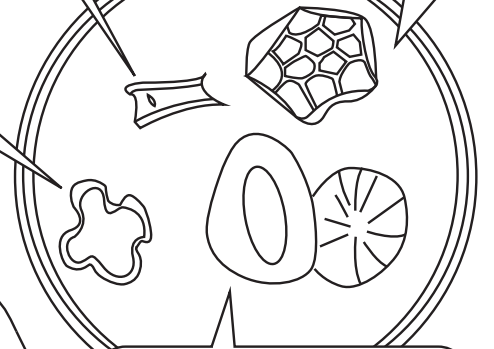
Copan, Honduras
Maya clasico, año 300 A.C.



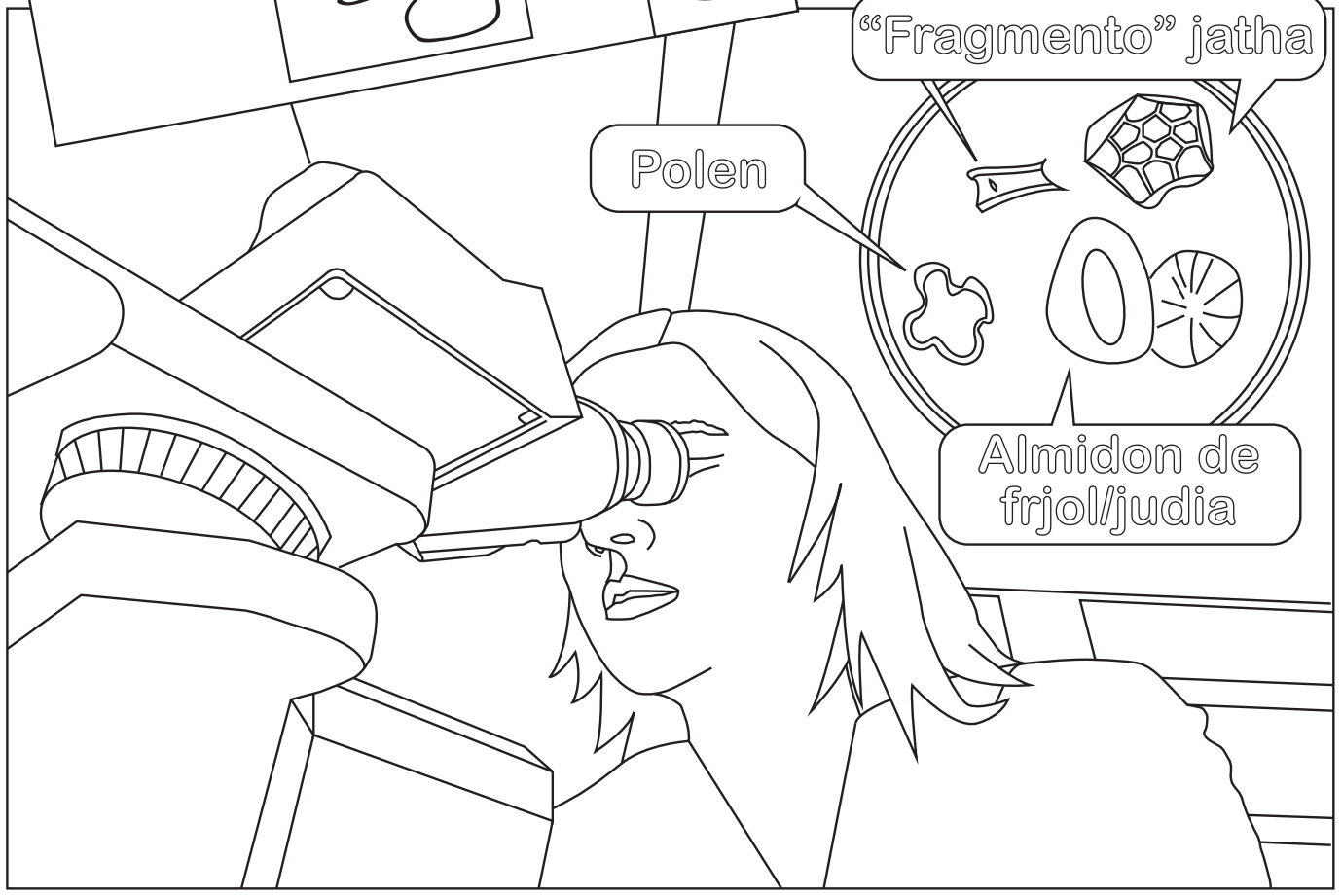
Tunqu "Fitolito"

"Fragmento" jatha

Polen



Almidon de frjol/judia

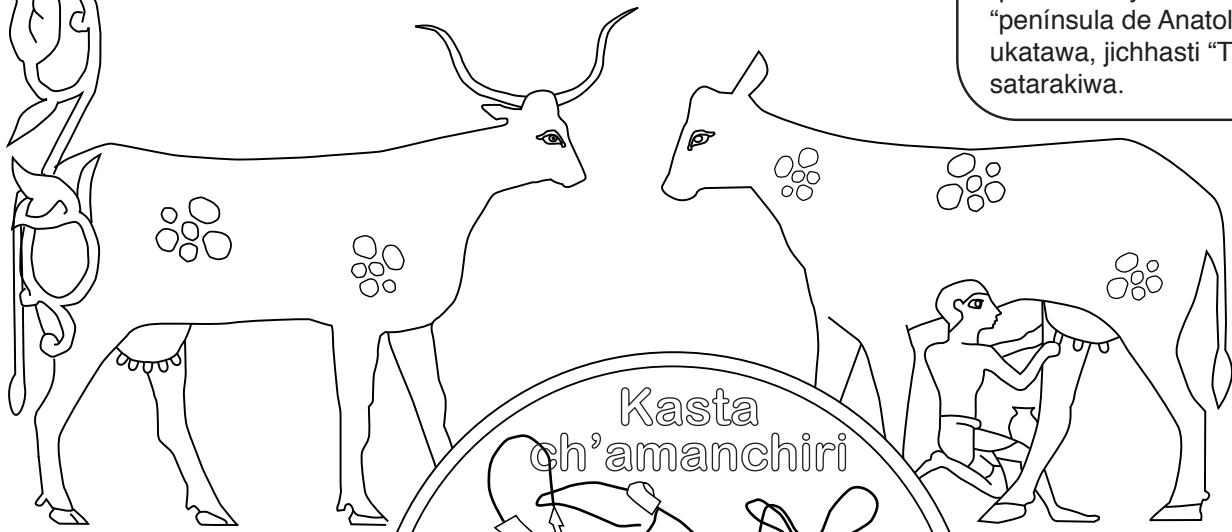


SAXRATA AXAPTAYANA

10000 pacha saraqawipatxa, jaqinakaxa panqaranaka yapuchapxixa, ukahamsa ajllita uywanaka uywapxanaxa. Uywanakaxa nayraqatankanawa axaptayañatakixa, ukhamarusa uywa uywirinakaxa ch'amanchañataki ukhamasa aychataki, millk'itaki, lip'ichinakataki uywapxanaxa.

¿YATIYATATI?

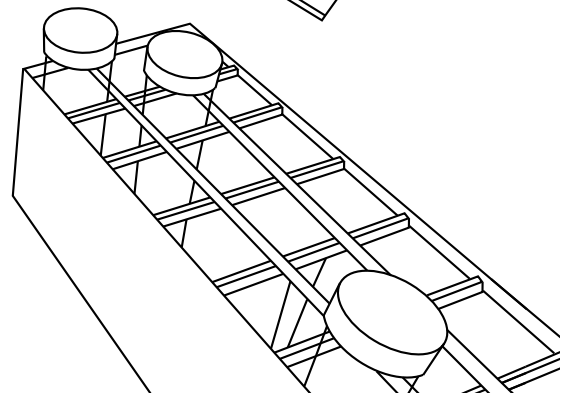
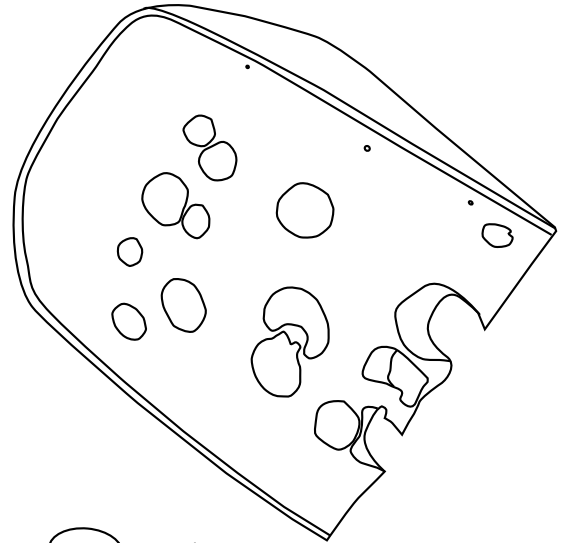
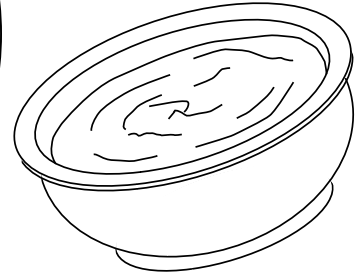
Uywanakaxa "bisontes europeos" ukanakata axaptayatanaxa (yaqha sutipasti "Uros"), ukanakaxa jach'a saxra uywanakanawa, jichhaxa chhaqtataxiwa. Wali qhanaxa nayra axa uywasti "península de Anatolia" ukatawa, jichhasti "Turquia" satarakiwa.



Kasta
ch'amanchiri

Millk'inakata manq'a uñstawiya

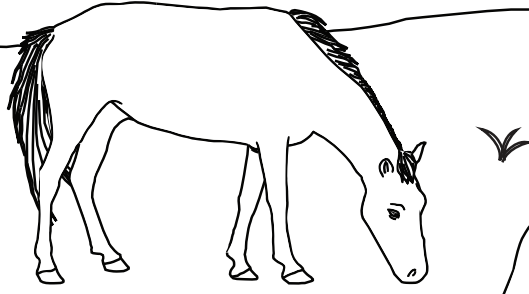
Millk'inakata manq'a uñstawipaxa janiwa wali uñt'atakiti, jani ukaxa "bioarqueólogos" ukanakaxa "espectrometría" ukwa apanaqapxixa millk'ina ch'amachiripa uñjañataki ukanaka nayra jaqinakana laka ch'akapata uñfakipapxiwa ukhamata nayra sara millk'i manq'awinakapata yatxatapxanaxa.



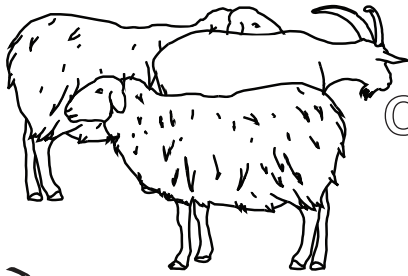
Mongolia

Walja mayja uywanaka "Mongolia" ukana utjapxixa, ukanakana utjarakiwa qawallunaka, wakanaka, yaks, cabras, uwijanaka, renos ukhamasa q'ululunaka. Nayra awatirinakaxa millk'inaka taqpacha uywanakata puquwixiritaynawa.

Qawallu

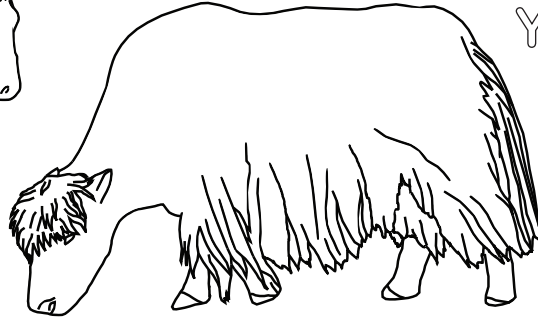


Uwija

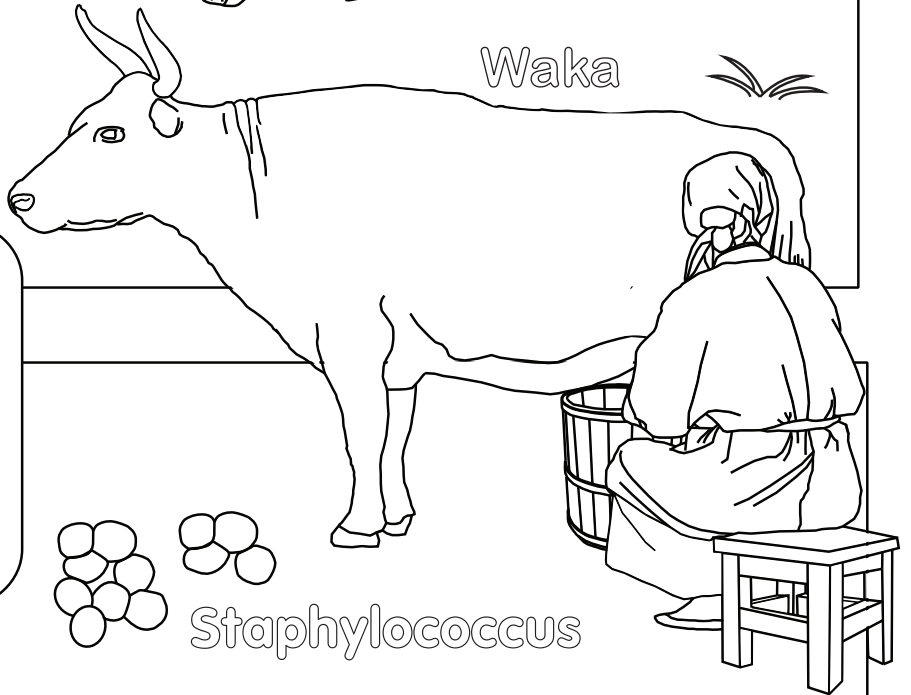


Cabra

Yak

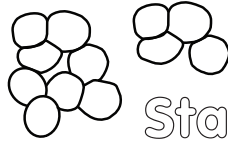


Waka

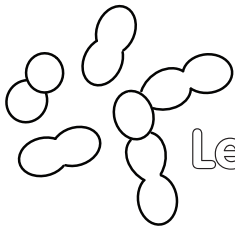


MANQ'A MILLK'INAKATA LURATA

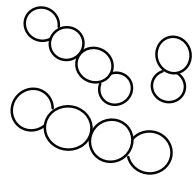
Millk'inakata lurataxa "Mongolia" ukanxa aski wakisiripuninawa utjañatakixa, Yatxatawinakata taypitxa lurakipawixa 3500 pacha saraqawitatwa yatisirakixa.



Staphylococcus



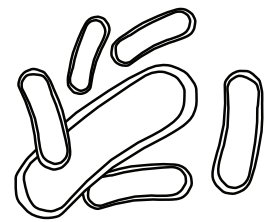
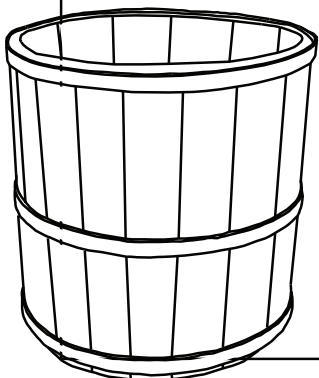
Leuconostoc



Lactococcus

"Microorganismos" millk'ita luratanaka

"Microorganismos" ukanakaxa, sitpachaxa "bacterias y levaduras", aski wakisiriwa walja millk'i luratanaka manq'a "yogurt, mantequilla" ukhamasa kisu uñt'atanaka, ukhamarusa "aaruul" uñt'atanaka (rikisuña kisuta) ukhamasa "airag" uka (millk'i sirwisa kawalluta) ukanakaxa "Mongolia" ukatanawa.



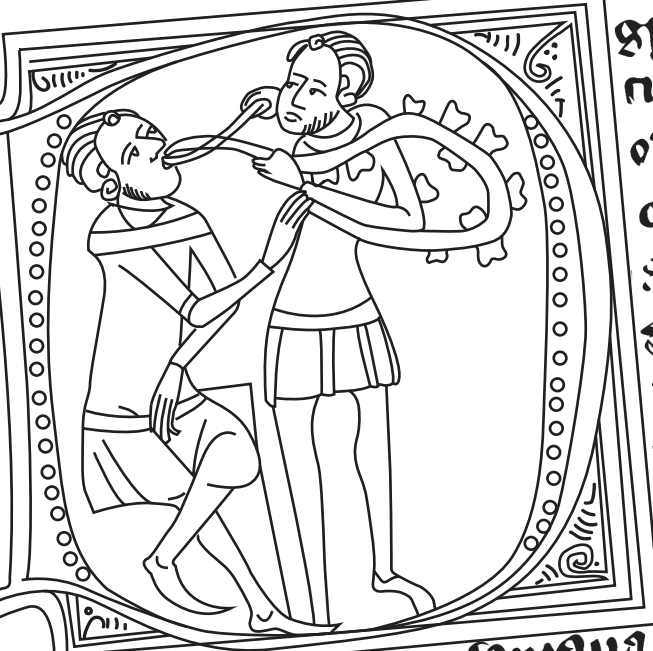
Lactobacillus

omni hilantia...
 de deo...
 de deo...

NAYRA UTJAWINA USUNAKAPA

Ch'akanaka, laka ch'akanaka ukhamasa sarruntata lakanakaxa imapxiwa nayra jaqinaka q'umarawipa wali yatxatawinaka. Qhanachañatakisti, "DNA" sata ukhamasa "Proteinas" imata sarruntata laka ch'akanakana ukanakaxa amawt'anakaruxa "gingivitis" ukhamasa laka sarruntata nayra sarawinakapata uñt'añatakapiwa.

non...
 p...
 demby p...



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 omni denotoms portan

Omne Bonum

"Omne Bonum" ukaxa uñt'araña pankawa "latin" uka aruta qillqata XIV sigluta "Europa Mediebal" utjawita, ukaxa "Biblioteca Real Britanica" ukanwa imataxa. Lakanakata yatxatanaka apxatatawa ukhamarusa qullirinaka uñjawinaka suma k'umara sarnaqañatakapi ukhamasa "edad media" usunaka qillqataxa.

postor in solio spelt
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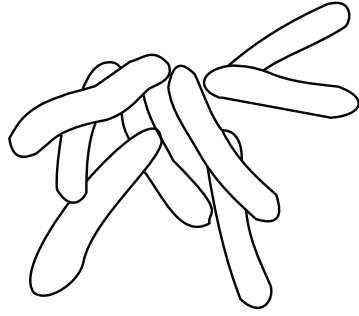
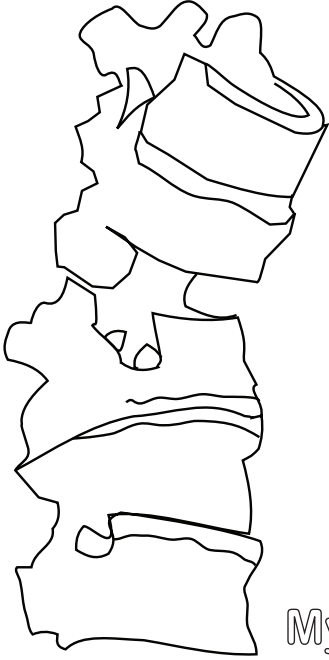


quos priores p...
 uñt'arañam f...
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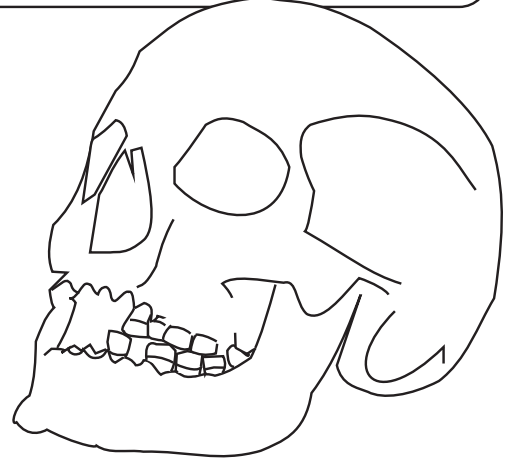
tantis. m...
 a dulcora sup me

TISIKU UKHAMASA "LEPRA"

Tuberculosis and leprosy are caused by related bacteria:
Tisuku ukhamasa "lepra" usunakaxa ch'imi laq'uthwa churasixa:
"Mycobacterium tuberculosis y Mycobacterium leprae" ukanakatwa.
Paypachawa ch'akanakaru ñusantayaspaxa, ukhamasa "DNA" karkasana
jaythatanaka amawt'anakaruxa nayra sara yatxatañaru yanapixa.

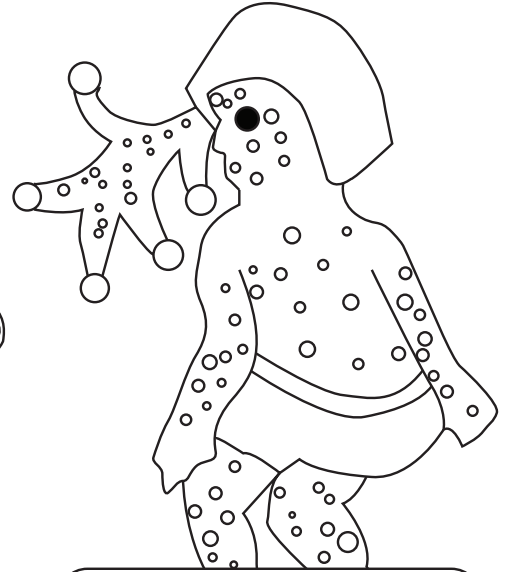


Mycobacterium leprae

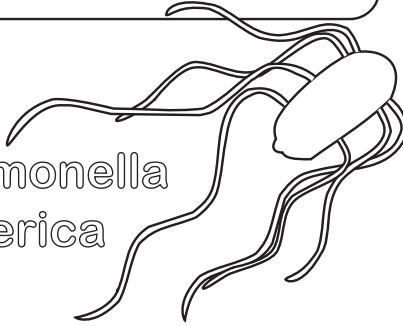


COCOLIZTLI

Yanqha usu jani yathxatata, "Cocoliztli" astekanakana sutinchata,
"Mexico" ukana 1545 marana 60% ukhamasa 90% utjirinakaru
jiwayatayna. Jichhchapinxá, "DNA" "Salmonella enterica Paratiphy
C" ukana jaqinakana laka ch'akanakapana yatxatatawa.

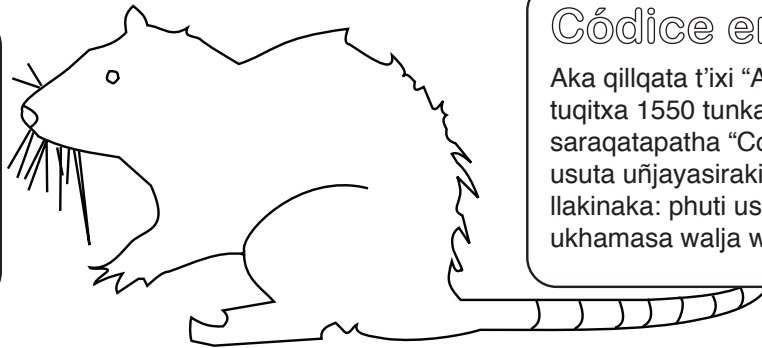


Salmonella
enterica



Dr. Schnabel

Qullirinakaxa XVII siklunxa
yanqha usu katuta jaqinakaruxa
qullapxanawa, kastutaru
thuqtiri uywana p'iqipjama
pachpa uñtata jani yanqha usu
katuyasiñtataki apnaqapxana.

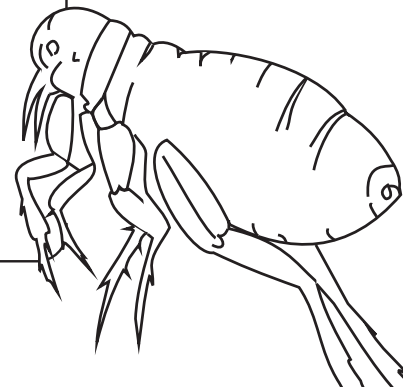


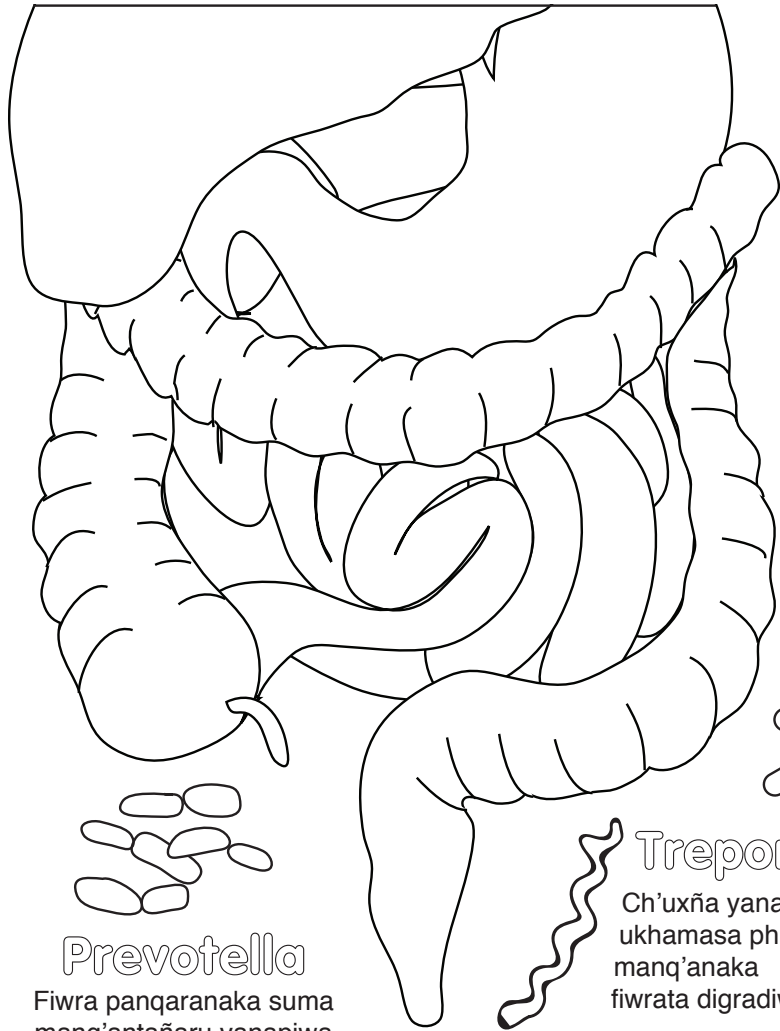
Códice en Cruz

Aka qillqata t'ixi "Asteca"
tuqitxa 1550 tunka marana
saraqatapatha "Cocoliztli"
usuta uñjayasirakiwa walja
llakinaka: phuti usu, t'iwkha usu
ukhamasa walja wila misthuniri.

YANQHA USU

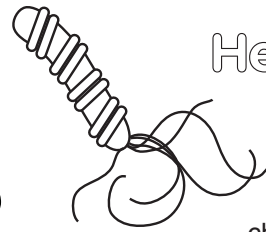
Yanqha ususti "Yersinia pestis" ch'imi laq'utwa katusixa,
ukanakaxa k'uti yaqha usu katuta utjirinaka achakunakana
aqayasíwa. Aka k'utinakampi much'intata jaqinakaxa "burbonica"
yaqha usu katuyasíxa. Aka yanqha ususti ch'iyara jiwata Negra
(1346-1353) sutinchatarakíxa kunatíxa chikatpacha "Europa"
jaqinakaru uka marana jíwayatayna.





Prevotella

Fiwra panqaranaka suma manq'antañaru yanapiwa



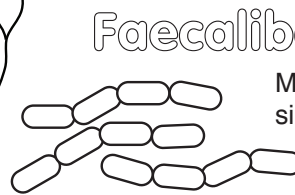
Helicobacter pylori

Purakanwa utjixa ukhamarusa jiphillanakaru chuxrispawa ukhamasa casir usu katuyaspaxa



Bifidobacterium

Asu wawanakaru milk'inaka suma manq'aña yanapixa



Faecalibacterium

Manq'anaka jiphilla silulataki uñstayaña

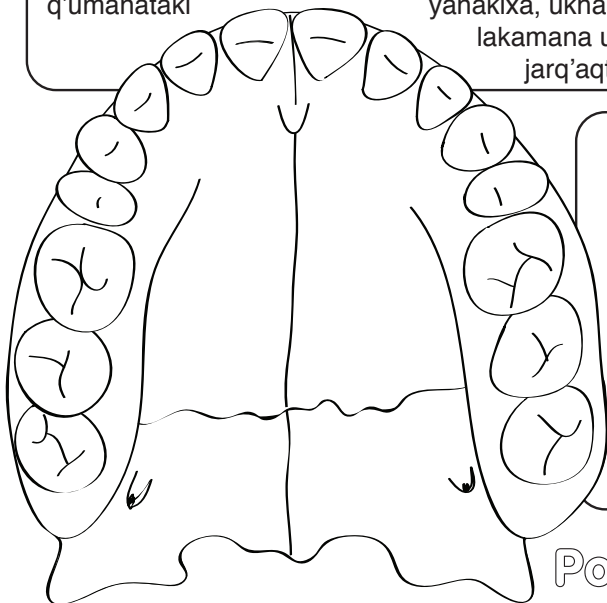


Treponema

Ch'uxña yanakaru ukhamasa phisna manq'anaka fiwrata digradiwa

"MICROBIOMAS" NAYRA PACHANAKATA

Janchimaxa kimsa jachunaka silulanakana ch'imi laq'unakana utapawa, ukhamasa q'alpachaxa "microbioma" sutinchatarakiwa. Ch'imi laq'unaka jiphillanakama utjirinakaxa suma t'una maq'añaru yanapiwa ukhamarusa suma k'umara jaqifñatakiwa. Ch'imi laq'u janchimana utjirinakaxa q'umañataki yanakixa, ukhamarusa ch'imi laq'u lakamana utjirinakaxa usunakata jarq'aqtamxa.

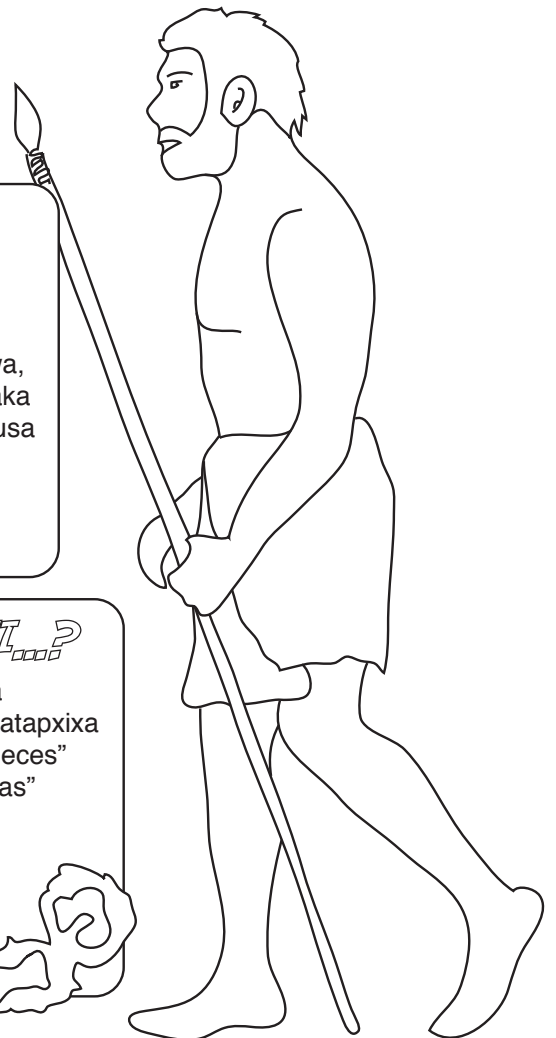


¿YATTIYATATI...?

Amawt'anakaxa laka ch'akanakattuqi yatxatapxixa ukhamarusa "paleoheces" ukanaka "microbiomas" nayra pachanakata yatxatañataki ukhamasa usunaka amuyt'añataki yanapixa.



Porphyromonas

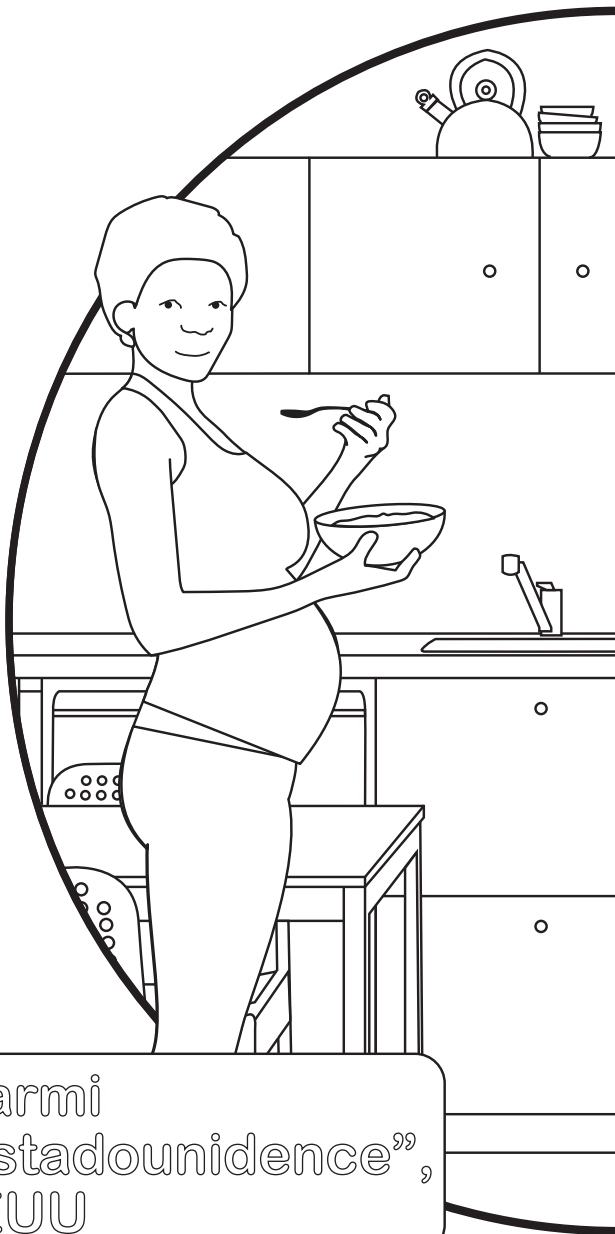


RECOLECTORES

“Recolectores” ukanakaxa, ukhamarusa katjiri – “recolectores” uñt’atanakasa, saxra maq’anaka manq’apjixa ukhamasa manq’anakapaxa marata mararuwa mayjt’arakixa.

Yapunaka jani qalltipanxa 10000 marananxa, taqpacha jaqinakawa palltapiripxanawa.

Jichha palltapirinakaxa “microbiomas” jiphillanakana ukaniwa walja q’ara yaqinakana markapjama.



Warmi
“estadounidense”,
EEUU



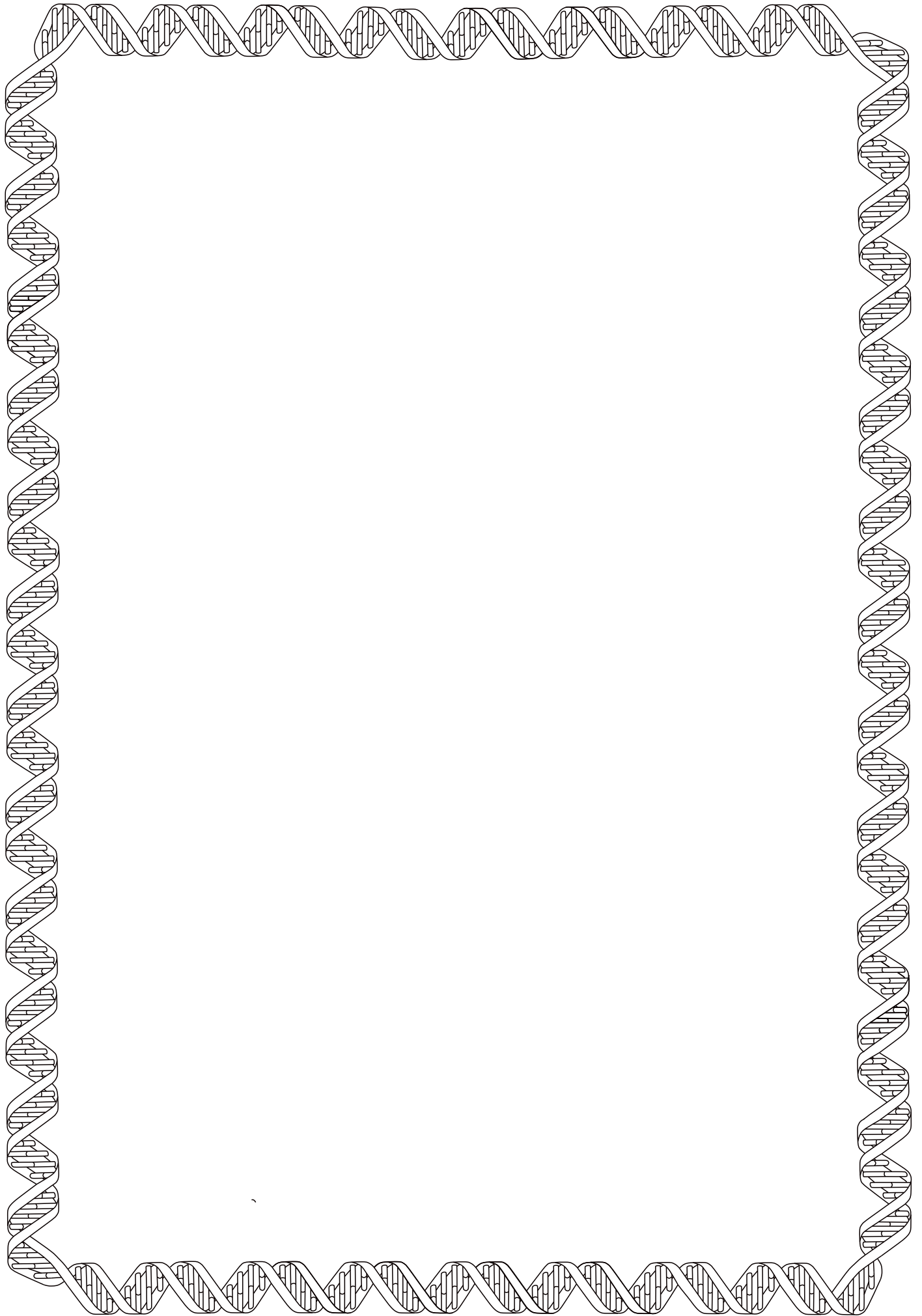
Warmi ukhamasa
“adzas” asu
wawa, “Tanzania”
ukanakata

Q’ARA JAQINAKANA MARKAPA

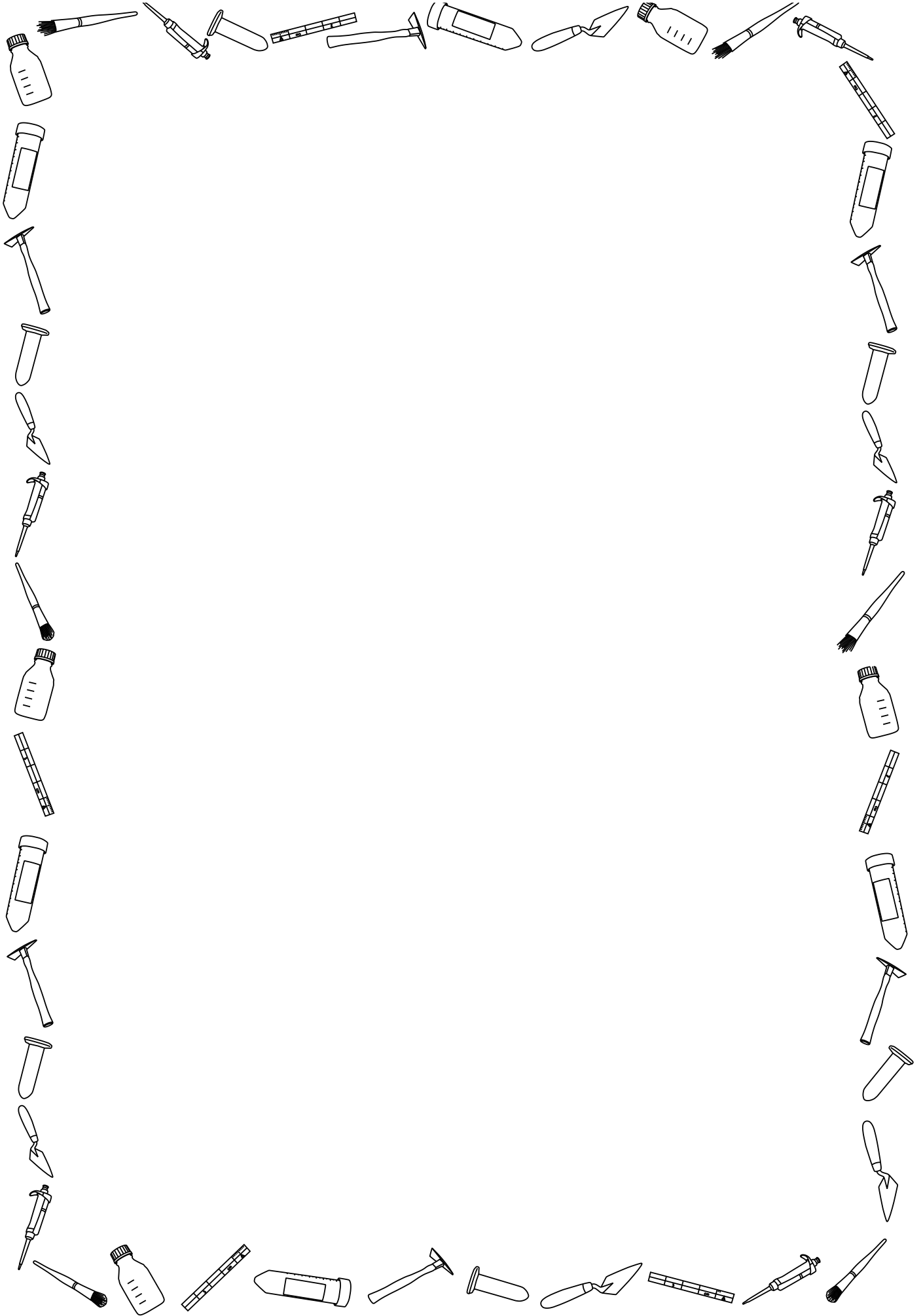
Q’ara jaqinakana markanakaxa jilpacha yapunakana ukhamasa jisk’a jaqinakana lurata manq’anaka manq’apjixa.

Manq’anaka makinakata pasirinaka, qhispiyawu ukhamasa imañanaka ukanakaxa manq’a makinata pasirinakaxa wali khusawa, ukhamarusa q’atata q’ataru jayanakaru nayraqata maq’añataki saririnakawa

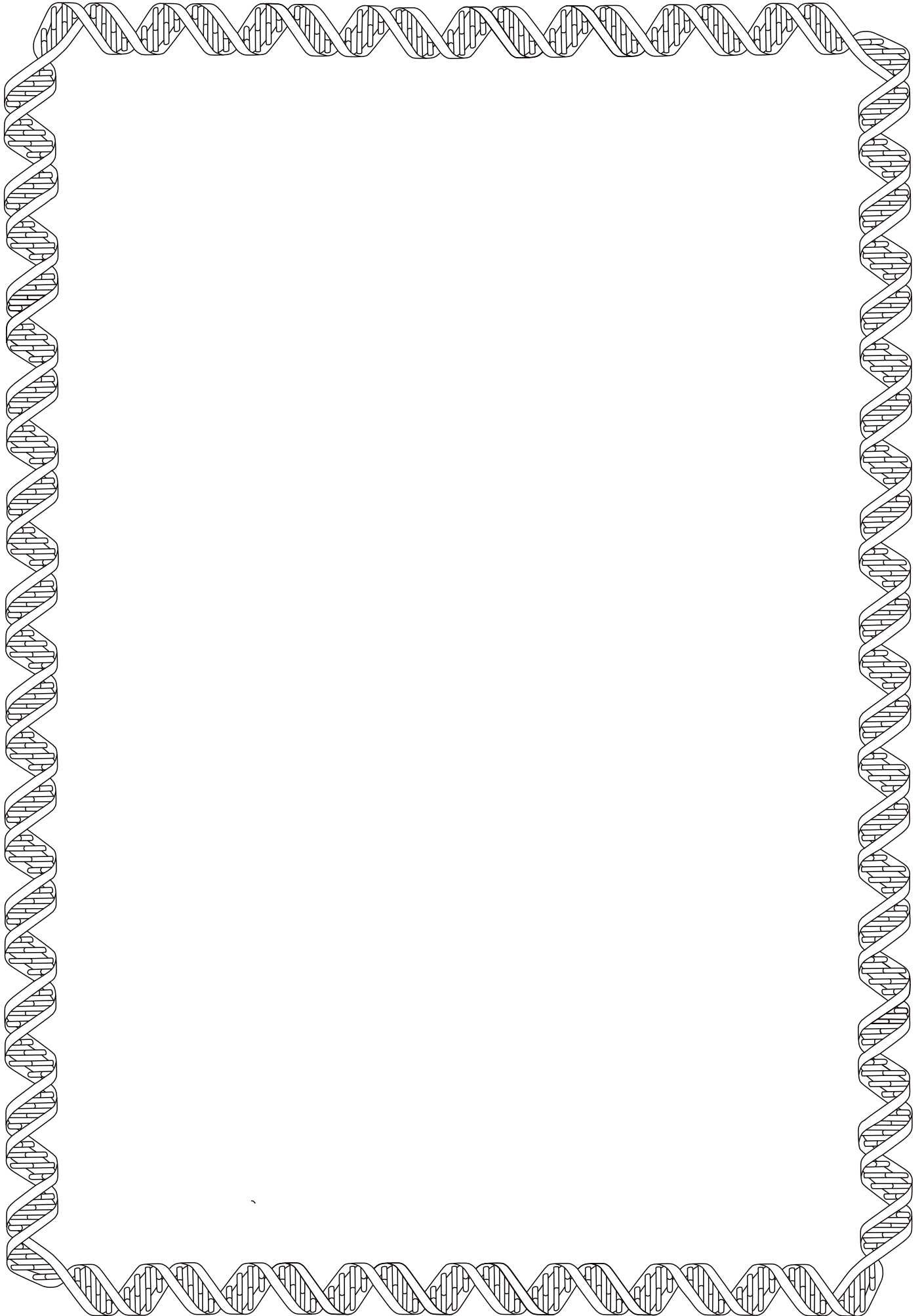
Jaqinaka jichha q’ara markankirinakaxa walja “microbiomas” ukanakaniwa, kunatixa ukanakawa p’usuntiri wiñayataki usunaka katuyaspaxa.



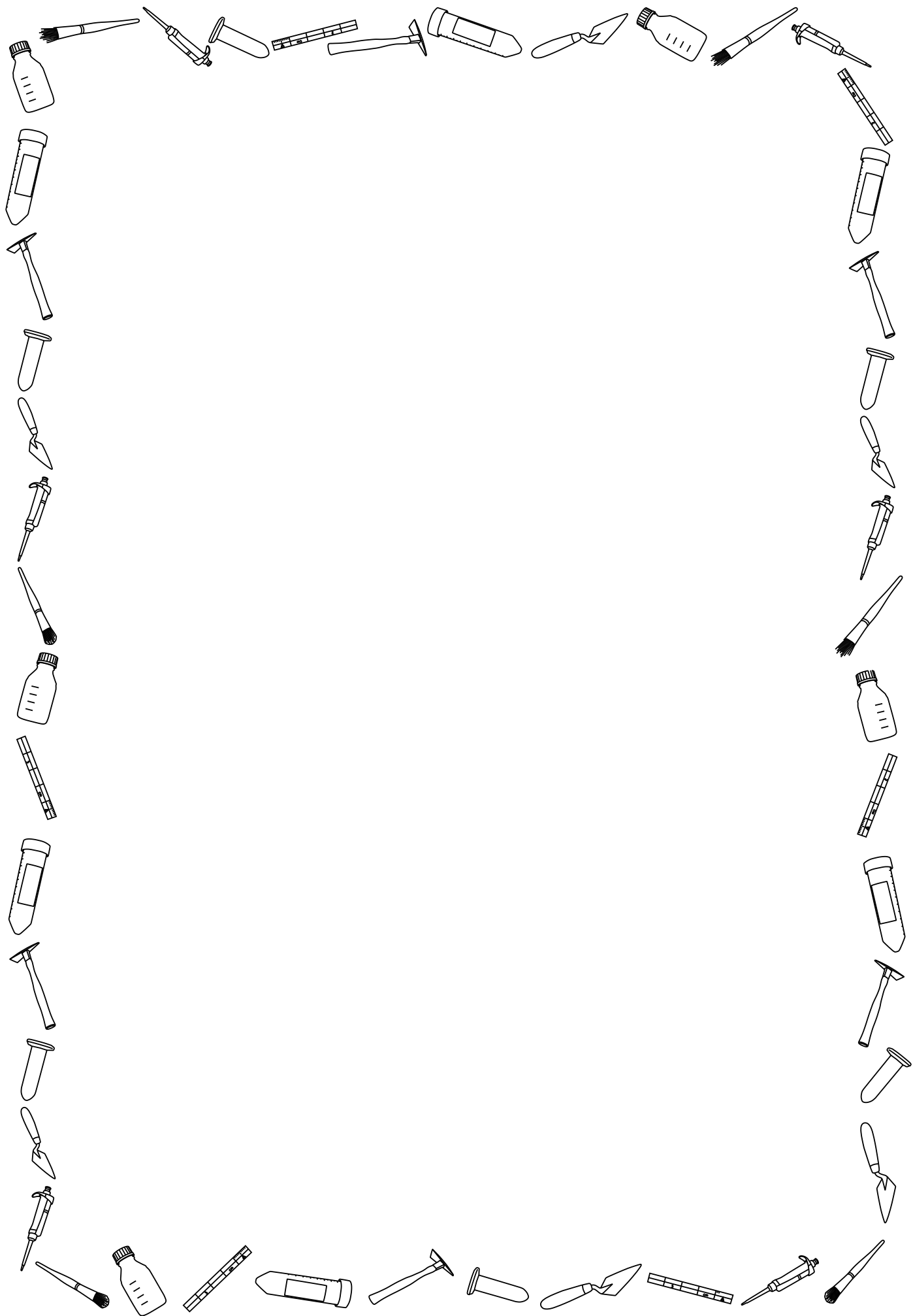




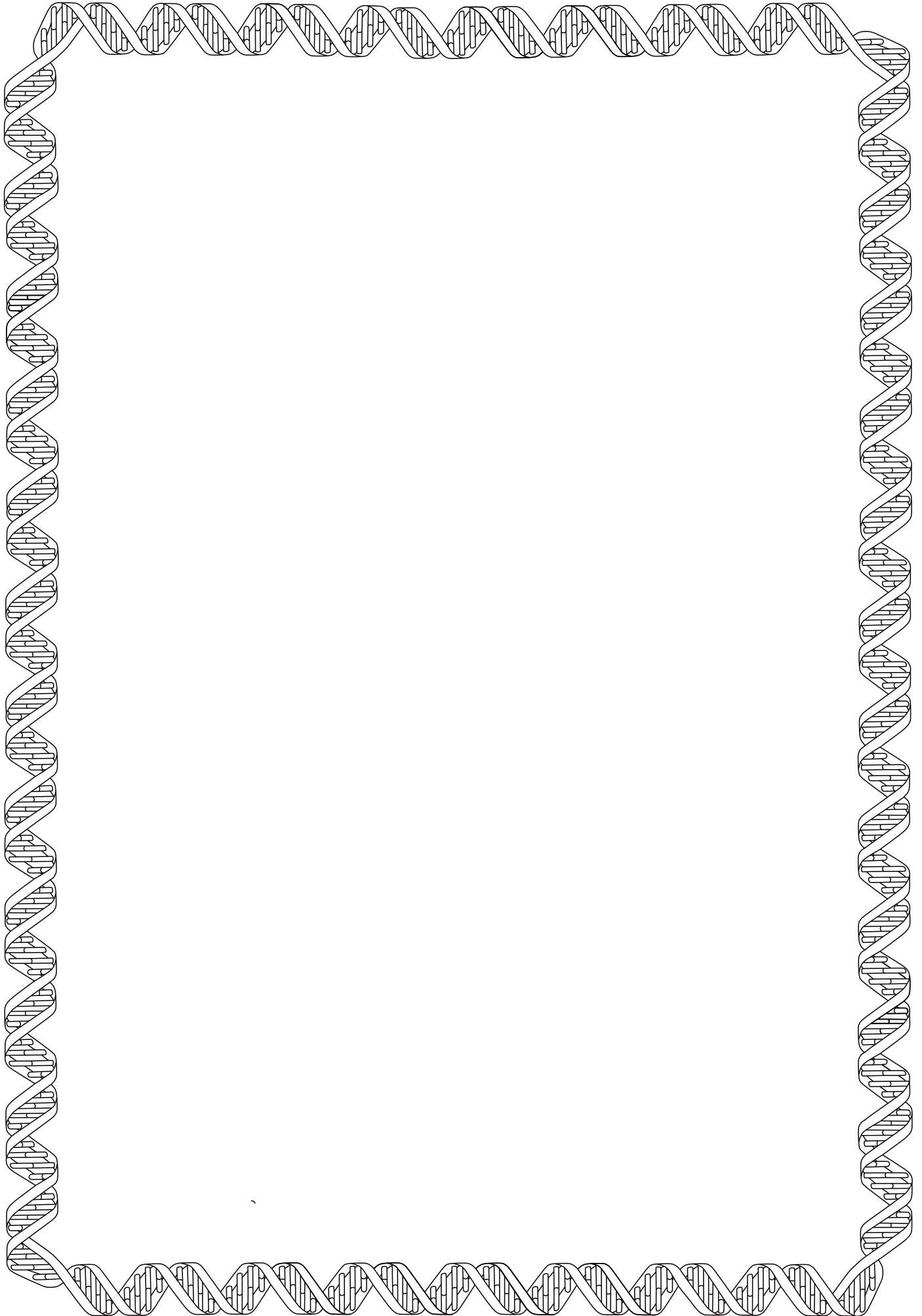






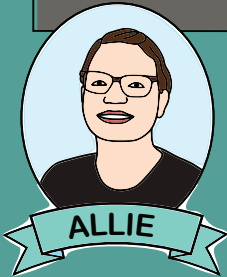




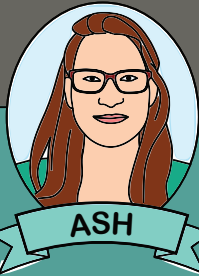




Jach'a yatiqaña uta Max Planck de Antropología Evolutiva



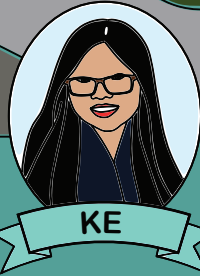
ALLIE



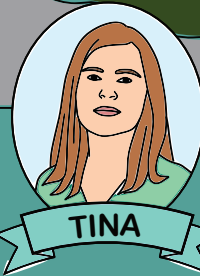
ASH



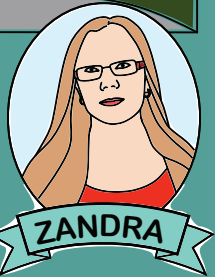
JESSIE



KE



TINA



ZANDRA

Sarantawinaka

JAQINA NAYRA KAMANA JAQAWIPA YĀNAKAPAMPI Panka rexsuñataki

¡"Arqueólogos" ukanakjama ukhamarusa "bioarqueólogos" panipawa irnaqapxi uka yatiqma nayra jaqinaka utjawipata jisk't'awinaka kutt'ayañataki! Khititansa uka chikachañataki ukhamasa kunsa yatiqtanxa, jaqinaka utjawipata yanqha uskama. Nayra sarawinakata ukhamasa "radiocarbono" kutjtirinakata yatiqma. Kunjamsa amawt'anakaxa lurapxatayna manq'anaka "Microscopicos" laphi ch'uxñata ukanaka uñaqipma. Walja khurkhuntawinaka mansucht'awitkama ukhamasa nayra kamanaka millk'ita manq'anaka lurata ukanaka yatxatma. Usunaka ukhamasa nayra yanqha usunaka thaqtqhma ukhamarusa "microbioma" nayra jaqina utjirinakata jakma.

Luratawa amawt'anakata jach'a yatiqaña uta Max Planck de Antropología Evolutiva

Aymara aruru kutjtayatawa:
Yemily Cristina Cruz Quispe



YEMILY