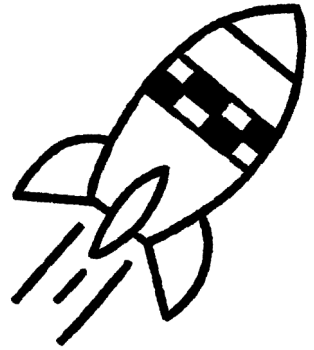


Dhaxalka iyo walxaha hidaha (genetic material)

Sayniska

Cutub: Dhaxalka iyo DNA



Natiijo

Waxaan sharxi karaa in qaar, laakiin aan dhamaantood ahayn, astaamaha ay dhaxlaan marka walxaha hidaha (genetic material) laga gudbiyo waalidka ilaa ubadka.

Erayada muhiimka ah

deegaanka (environment)

qaab nololeed (lifestyle)

dhaxal (inherited)

walxaha hidaha (genetic material)

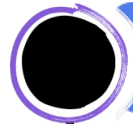
Deegaanka (environment) nooluhu waa agagaarkiisa iyo xaaladaha uu ku nool yahay.

Qaab nololeedka (lifestyle) nooluhu waa waxyaabaha uu sameeyo iyo go'aamada uu qaato, tusaale: cuntada iyo jimicsiga.

Qaar ka mid ah astaamaha ubadka waxaa laga dhaxli karaa waalidka, iyada oo loo maro habka taranka (reproduction).

Walxaha hidaha (genetic material) waa walax ku jirta unugyada oo ka kooban tilmaamo astaamo iyo habab nololeed oo kala duwan.

Dhaxalka iyo walxaha hidaha (genetic material)



Astaamaha deegaanka (environmental features)



Walxaha hidaha (genetic material) iyo dhaxalka



Dhaxalka iyo deegaanka (environment)

Astaamaha nooluhu waxay noqon karaan kuwo dhaxal ah (laga soo gudbiyay waalidkiis) ama waxaa laga heli karaa inta uu nooluhu nool yahay.

Astaamaha la helo inta nolosha dhexdeeda ah waxay u sabab yihiin deegaanka (environment) ama qaab nololeedka (lifestyle).



Deegaanku waa agagaarka noolaha shaqsiga ah sida iftiinka qorraxda, wasakhawga ama helitaanka nafaqooyinka.



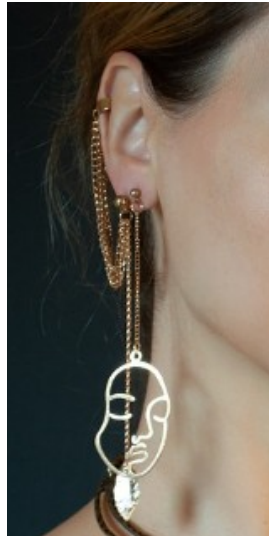
Gabbaldhac (sunflower) heerkul sare ah marka loo barbardhigo heerkulka ugu fiican (optimum temperature).



Dhir (herb) biyo (water) la'aan ah marka loo barbardhigo biyaha ugu fiican (optimum water).

Qaab nololeedka (lifestyle) qofku waa waxyaabaha uu sameeyo iyo go'aamada uu qaato, sida cuntada (diet), jimicsiga (exercise) iyo moodada (fashion).

Astaamaha lagu soo kordhiyey deegaanka (environment) ama qaab nololeedka (lifestyle) lama dhaxli karo faraca noolaha (organism's offspring).



daloolinta jirka (body piercing)



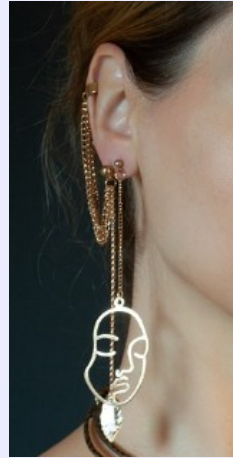
jimicsiga (exercising)

Astaamaha deegaanka (Environmental features)

Astaamaha (features) kee baa lagu helay qaab nololeedka (lifestyle) ama deegaanka (environment) qofka?



nabar
(scar)



daloolin (piercing)



midabka indhaha (eye
colour)



Si fiican u fiiri sawirkan geed yaanyo (tomato plant).

Ku calaamadee astaamaha (features) laga yaabo inay sababeen deegaanka (environment).

2. Soo jeedi sababta ay uga yaabaan inay soo baxeen (appeared).



Calaamadee astaamaha ay sababi karto deegaanku oo sheeg sababta ay u soo bixi karaan.



Caleemo engegaya (wilting)
- biyo (water) la'aan

Dhaawaca jirrida (Damage to stem)
- oo ka yimid qaniinyada cayayaanka
(from insect bites)

Midabka yaanyada (Colour of tomatoes)
- kala duwanaanshaha iftiinka
qorraxda (difference in sunlight)

Dhibco madow oo caleen ku yaal
- caabuq (infection) awgeed

Dhibco jaalle ah oo caleen ku yaal
- nafaqo (nutrients) la'aan

Dhaxalka (heredity) iyo hidaha (genetic material)



Astaamaha deegaanka (environmental features)



Hidaha (genetic material) iyo dhaxalka (heredity)



Dhaxalka (heredity) iyo deegaanka

Hidaha (genetic material) iyo dhaxalka (heredity)

Dhaxalka (heredity) waa gudbinta astaamaha labada waalid ilaa ubadkooda.

Astaamahani waxay ka yimaadaan tilmaamo ku jira hidaha (genetic material) ee noolaha (organism).

Hidaha (genetic material) ee waalid kasta waxaa loo gudbiyaa ubadka iyada oo loo marayo taranka (reproduction).

Nooluhu (organism) wuxuu dhaxlaa kala badh hidhihiisa (genetic material) waalid kasta.



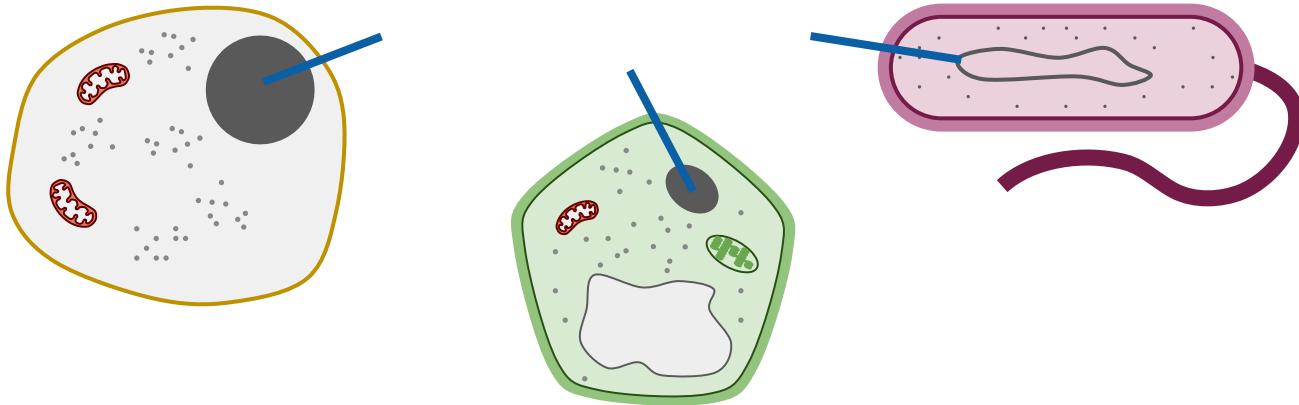
ey iyo yar (dog and puppy)



libaax, libaaxad iyo curad (lion, lioness and cub)

Hidaha (genetic material) waa kiimiko (chemical substance).

Waxaa laga helaa unugyada (cells) ee noolaha (organism) oo dhan ka kooban yahay.



Qalabka hidaha (genetic material) wuxuu sidoo kale ka kooban yahay tilmaamaha hababka nolosha sida koritaanka (growth) iyo neefsiga (respiration).

Kaliya sifooyinka ka dhasha tilmaamaha qalabka hidaha (genetic material) ee noolaha (organism) ayaa la dhaxli karaa.

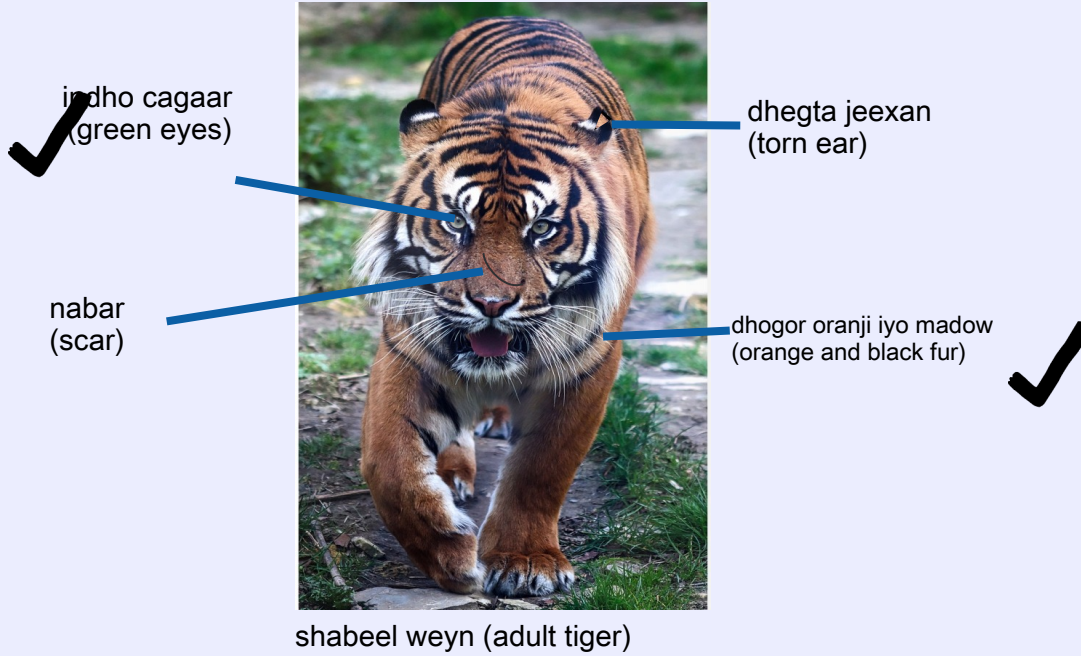


Midabka ubaxa iyo midabka isha waa la dhaxlaa sababtoo ah waxay ka dhashaan tilmaamaha qalabka hidaha (genetic material).



Dhaawaca lama dhaxlo sababtoo ah wuxuu ka dhashaa deegaanka (ama qaab nololeedka).

Sifooyinka calaamadeysan ee shabeelka weyn (adult tiger) kee baa loo gudbin karaa dhashiisa (cub)?



Layla, Caasha iyo Yacquub waxay ka wada hadlayaan dhaxalka (heredity).



Layla

Dhammaan sifooyinka jireed waxaa laga gudbiyaa waaliddiinta carruurtooda qalabka hidaha (genetic material).

Tilmaamaha hababka sida koritaanka (growth) waxaa laga gudbiyaa waaliddiinta carruurtooda qalabka hidaha (genetic material).

Qalabka hidaha (genetic material) wuxuu uun kakooban yahay tilmaamo astaamaha jirka qaarkood, kuwa kalena waxaa keena deegaanka (environment) ama hab-nololeedka (lifestyle).



Caasha



Yacquub

Dhammaan ardaydu waxay leeyihiin fikrado qaar oo sax ah.

1. Dooro qofka aad u maleyneysaa inuu fahankiisu ka fiican yahay.
2. Qor sharaxaad ka fiican oo faahfaahsan oo ku saabsan qalabka hidaha (genetic material) iyo dhaxalka (heredity) adigoo isticmaalaya fikradaha ardayda.

1. Dooro qofka aad u maleyneysaa inuu fahankiisu ka fiican yahay.
2. Qor sharaxaad ka fiican oo faahfaahsan oo ku saabsan qalabka hidaha (genetic material) iyo dhaxalka (heredity) adigoo isticmaalaya fikradaha ardayda.

1. Caasha iyo Yacquub waxay muujiyeen faham ka fiican kan Layla.
2. Dhaxalka (heredity) waa gudbinta qalabka hidaha (genetic material) jiil ilaa jiil.

Qalabka hidaha (genetic material) waxaa dhaxla ubadka labada waalidba.

Qalabka hidaha (genetic material) wuxuu sidaa tilmaamo hababka sida koritaanka (growth).

Qalabka hidaha (genetic material) wuxuu sidaa tilmaamo astaamaha jirka qaarkood.

Astaamaha jirka qaarkood iyo hababka waxaa sidoo kale saameeya hab-nololeedka (lifestyle) iyo deegaanka (environment).

Qaabka casharka

Dhaxalka (heredity) iyo qalabka hidaha (genetic material)



Astaamaha deegaanka (environmental features)



Qalabka hidaha (genetic material) iyo dhaxalka (heredity)



Dhaxalka (heredity) iyo deegaanka (environment)

Astaamaha deegaanka (environmental) iyo kuwa la dhaxlo (inherited) mar walba ma aha kuwo la arki karo.

Isku darka dhaxalka (heredity), hab-nololeedka (lifestyle) iyo deegaanka (environment) ayaa ku lug leh habab badan.

Nidaamyadani waxaa ka mid ah dheefshiidka (digestion) xayawaanka iyo biqilka (germination) dhirta.



Dhaxalka (Heredity) iyo deegaanka (environment)

Qaar ka mid ah sifooyinka waxaa go'aamiya oo keliya tilmaamaha ku jira hiddo-wadaha (genetic material) la dhaxlo oo aan lagu beddeli karin deegaanka (environment) ama qaab nololeedka (lifestyle).



Xataa haddii aad xidhato muraayad indho oo midab leh (coloured contact lens), midabka indhahaaga la dhaxlay waa isku mid.

Dhammaan sifooyinka la dhaxlo ma aha kuwa la arki karo.

Nooca dhiigga (blood type) ee bini'aadamka (A, B, AB ama O) waxaa go'aamiya tilmaamaha ku jira hiddo-wadaha (genetic material) la dhaxlo oo aan lagu beddeli karin.

Muuqashada sifooyinka jireed (physical features) inta badan waa isku darka dhaxalka (heredity) iyo deegaanka (environment) ama qaab nololeedka (lifestyle).



Chameleons waxay beddeli karaan midabka maqaarkooda si ay ugu ekaadaan deegaankooda (environment).

Waxay dhaxlaan tilmaamo u oggolaanaya inay sidaan sameeyaan.



Midabka timahaaga dabiiciga ah waa natiijada tilmaamaha la dhaxlay.

Laakiin waxaa laga yaabaa in lagu beddelo doorashooyinka qaab nololeedka (lifestyle).

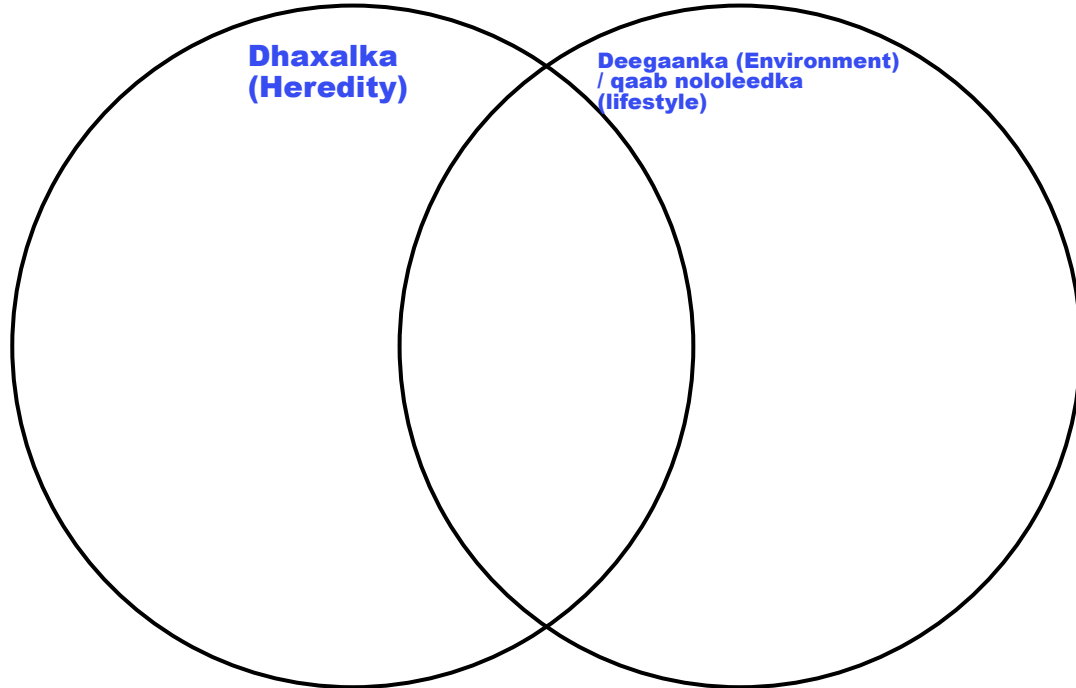
Dhaxalka (Heredity) iyo deegaanka (environment)

Sifooyinkaas oo ay saameeyaan isku darka dhaxalka (heredity) iyo qaab nololeedka (lifestyle) ama deegaanka (environment) waa kuwee?

- a** midabka maqaarka (skin colour) ✓
- b** midabka indhaha (eye colour)
- c** qaabka sankaa (nose shape) ✓
- d** dhererka (height) ✓

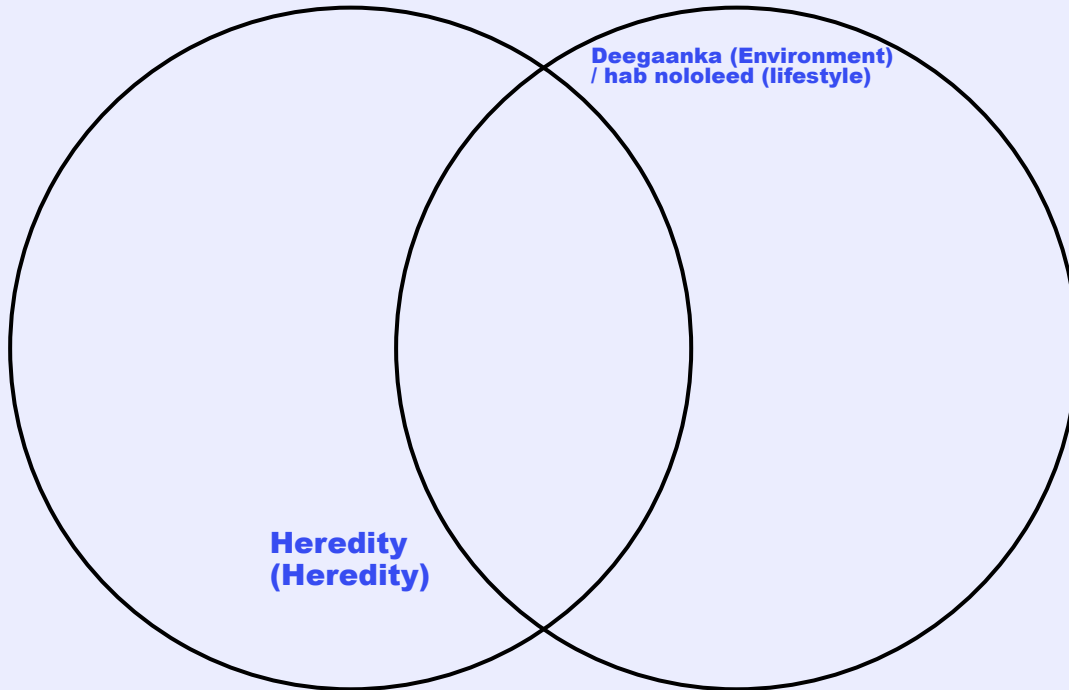
Dhig sifooyinka bini'aadamka ee liiska ku qoran meesha saxda ah ee jaantuska Venn (Venn diagram) haddii ay saameeyaan dhaxalka (heredity), deegaanka (environment)/qaab nololeedka (lifestyle) ama labadaba.

- midabka indhaha (eye colour)
- dhererka (height)
- midabka timaha (hair colour)
- cufnaanta jirka (body mass)
- tattoos (tattoos)
- dhegaha daloolinta (piercing)
- nabarro (scars)
- luqadda (language)
- nooca dhiigga (blood type)





Dhig sifooyinka aadanaha ee liiska ku qoran meesha ku habboon ee jaantuska Venn ee ah in ay saameeyaan heredity, deegaanka/qaab nololeed ama labadaba.



Jawaabaha:

Astamaha noolaha (Biological features) waxaa laga dhaxli karaa waalidiinta marka qalabka hidaha (genetic material) laga gudbiyo waalidiinta caruurtooda inta lagu jiro taranka (reproduction).

Qalabka hidaha (Genetic material) wuxuu bixiyaa tilmaamo (instructions) koritaanka iyo hababka nolosha kale.

Astamaha lagu sameeyay deegaanka (environment) ama hab nololeedka (lifestyle), tusaale nabarro (scars), lama dhaxli karo caruurto. Kaliya astamaha ka yimaada tilmaamaha qalabka hidaha (genetic material), tusaale midabka isha (eye colour), ayaa la dhaxli karaa.

Astamaha jirka (Physical features) inta badan waa isku darka dhaxalka (heredity) iyo deegaanka (environment) ama hab nololeedka (lifestyle).