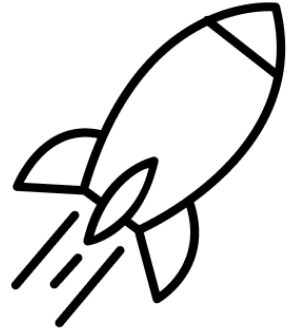


Nafaqada dhirta (Plant nutrition)



Sayniska

Cutub: Nafaqada dhirta iyo sawir-qaadista (Plant nutrition and photosynthesis)

Natiijo

Waxaan qeexi karaa waxa dhirta uga baahan tahay agagaarkooda si ay u noolaadaan oo ay u koraan, iyo sida ay cunto u helaan.

macdanta (minerals)

cuntada (food)

soosaaraha (producer)

kaarboohaydrayt (carbohydrate)

Nafaqada dhirta (Plant nutrition)



Waxa dhirta u baahan tahay si ay u noolaato



Sida dhirta cunto u hesho



Waxa cuntada dhirta tahay iyo sida loo isticmaalo

Geedaha, ubaxyada, haramaha iyo khudaarta dhamaantood waa tusaalooyin dhirta ah.

Dhirta waa noole (organism) nool.



Maxay dhirta sameeyaan oo muujinaya inay yihiin noole (organism) nool?



Waxa dhirta u baahan tahay si ay u noolaato

Dhirta waxay u baahan tahay inay ka qaadatao waxyaabo agagaarkeeda si ay u noolaato, u caafimaado oo u koraan.

Dhamaan dhirta waxay u baahan yihiin inay qaataan biyo (water).



Dhirtaan waxay lahayd biyo (water) badan.

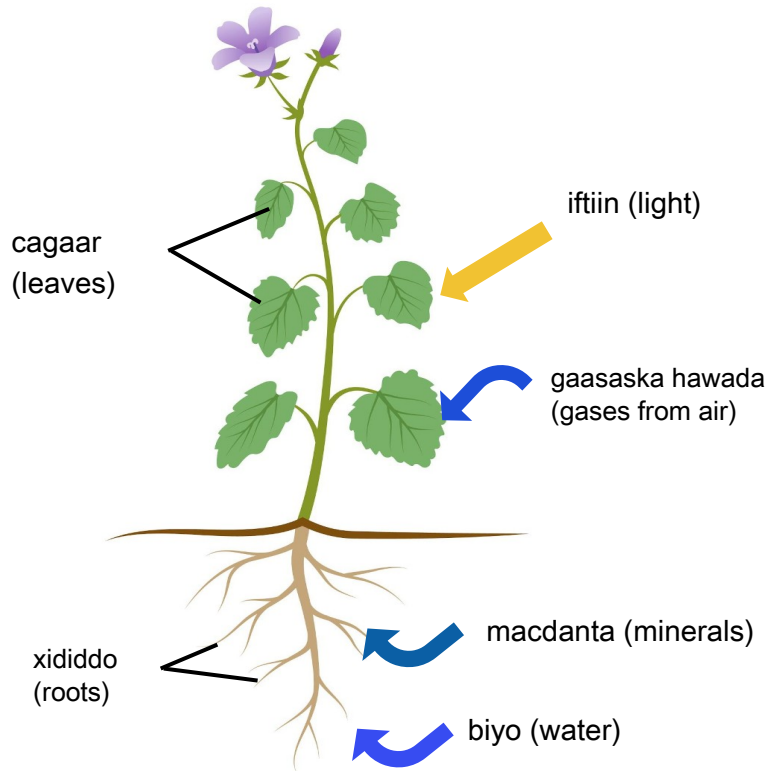


Dhirtaan waxay u baahan tahay biyo (water) badan!

Dhamaan dhirta waxay u baahan yihiin iftiin si ay u noolaadaan, u caafimaadaan oo u koraan.



Si ay u noolaato, u caafimaad qabto oo u koraan, dhirta waxay u baahan tahay:



Maxay dhirta ku qaadaan xididdada?

A iftiin (light)

B macdanta (minerals) ✓

C carro (soil)

D biyo (water) ✓

Maxay dhirta ku qaadaan cagaarkooda?

A gaasaska hawada (gases from air)

B iftiin (light)

C macdanta (minerals)

D biyo (water)

Task1

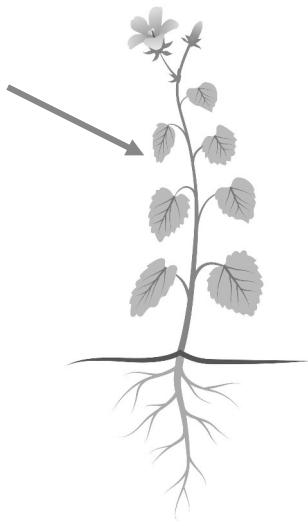
Waxa dhirta u baahan tahay si ay u noolaato



Dhirta waxay u baahan tahay inay ka qaaddo afarta shey ee ku xeeran si ay u noolaato oo u koraan.

Ku dar fallaaro (arrows) iyo calaamado (labels) jaantuska si aad u muujiso halka afarta shey ay dhirta ka qaaddo. Iftiin (light) ayaa lagu sameeyay.

ifitiin (light) waxaa lagu
qaataa caleemaha

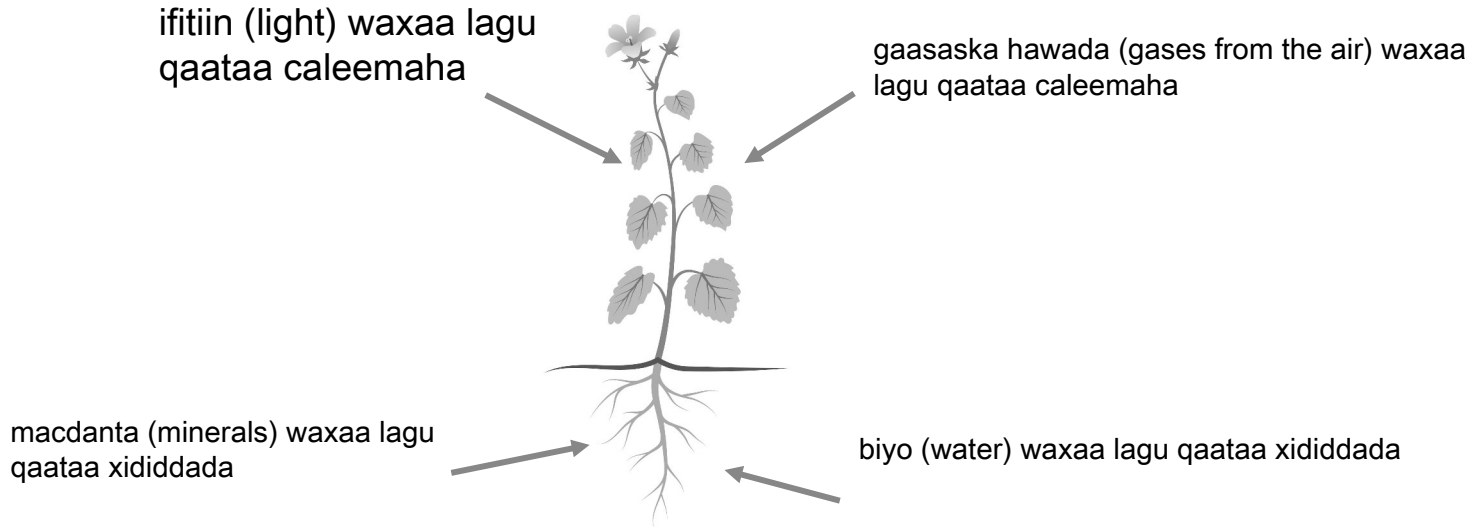


Task1

Waxa dhirta u baahan si ay u noolaato

Dhirta waxay u baahan tahay inay ka qaaddo afarta shey ee ku xeeran si ay u noolaato oo u koraan.

Ku dar fallaaro (arrows) iyo calaamado (labels) jaantuska si aad u muujiso halka afarta shey ay dhirta ka qaaddo. Iftiin (light) ayaa lagu sameeyay.



Nafaqada dhirta (Plant nutrition)



Waxa dhirta u baahan si ay u noolaato



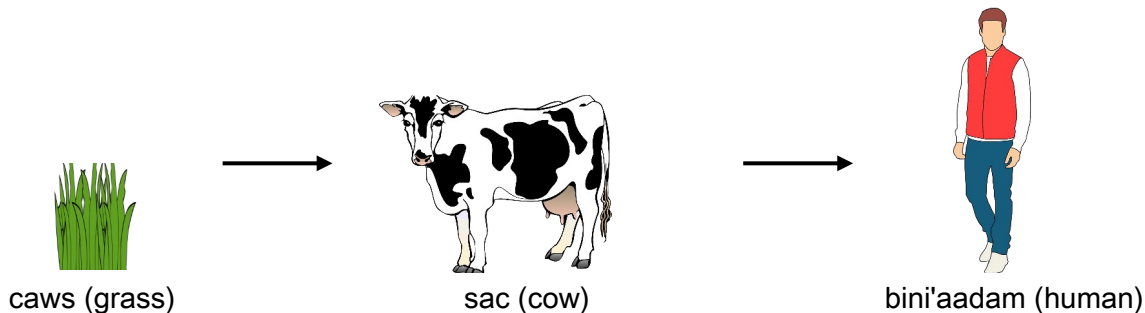
Sida dhirta cunto uga hesho



Waxa cuntada dhirta tahay iyo sida loo isticmaalo

Dhirta, xayawaanka iyo dhammaan noolayaasha (organisms) kale waxay u baahan yihiin cunto si ay u noolaadaan, u caafimaad qabaan, oo u koraan.

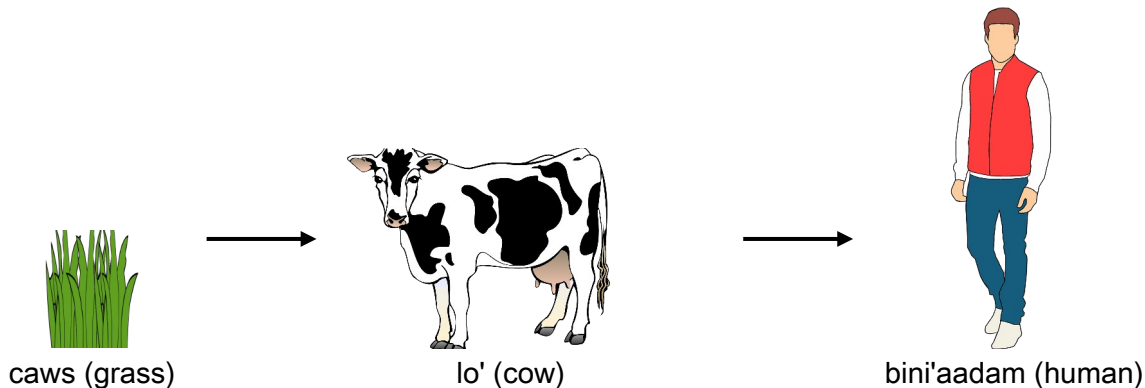
Xayawaanka, oo ay ku jiraan bini'aadamku, waa kuwa cuna (consumers). Waxay cuntadooda ka helaan cunista noolayaasha (organisms) kale.



Dhirta waa soosaarayaal (producers).

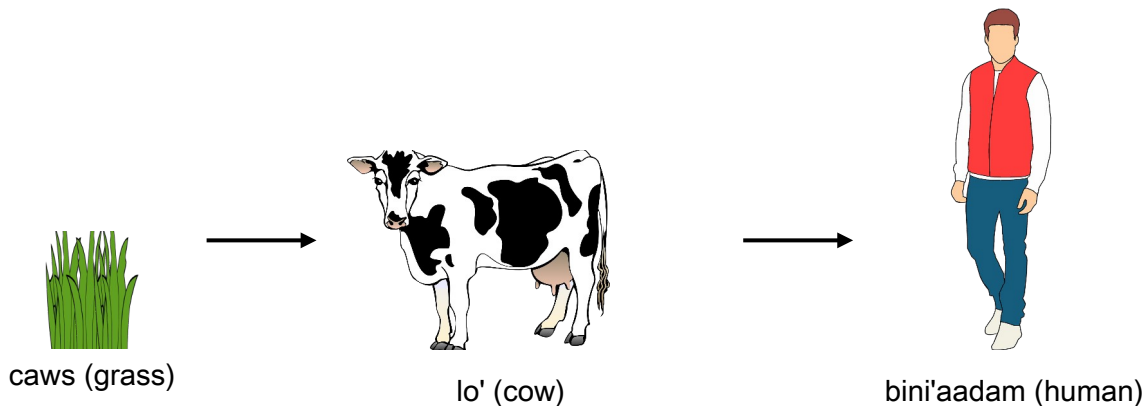
Waxay samaystaan cuntadooda.

Taasi waa sababta soosaarayaasha (producers) ugu horreeyaan silsiladda cuntada (food chain).



Silsilad kasta oo cunto (food chain) oo dhulka ah waxay ku bilaabataa soosaare (producer).

Cuntada oo dhan ee silsilad kasta oo cunto (food chain) ah waxaa sameeya dhirta iyo soosaarayaasha (producers) kale.



Xayawaan kasta, oo ay ku jiraan bini'aadam (human) kasta, wuxuu ku tiirsan yahay soosaarayaasha (producers) si ay u sameeyaan cuntada aan cunno si aan u noolaano.

Run mise been?

Dhirta waa kuwa cuna (consumers).



Run



Been



Sabab u sheeg jawaabtaada



Dhirta waxay sameysataa cuntadeeda.



Dhirta waxay cuntada ku qaadataa xididdadeeda.

Sida dhirta u helaan cunto

Run mise been?

Dhirta waa soosaarayaal (producers).



Run



Been

Sabab u sheeg jawaabtaada



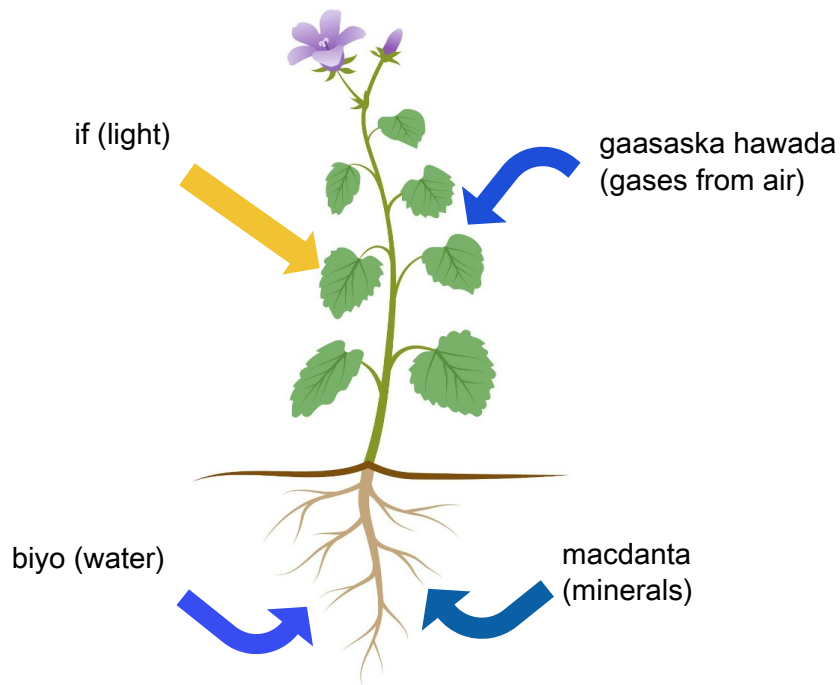
Dhirta waxay soo saartaa miro iyo khudaar.



Dhirta waxay sameysataa cuntadeeda.



Dhirta waxay ka qaadataa waxyaabaha ku xeeran (surroundings):



Waxyaabahani ma aha cunto!

Nolosha maalinlaha ah, waxyaabo badan ayaan ugu yeernaa 'cunto'.

Sayniska, ereyga 'cunto' macneheedu waa wax noole (organism) u isticmaalo sida ...

labadaba

- ilaha maaddooyinka koritaanka iyo dayactirka (source of materials for growth and repair)

iyo

- ilaha tamarta (source of energy).



Tusaalooyinka cuntada

Waxyaabaha dhirta ka qaaddo agagaarkeeda ma aha cunto.

Sababtoo ah dhirta wax kasta oo ay isticmaasho waxay u isticmaashaa sida ...

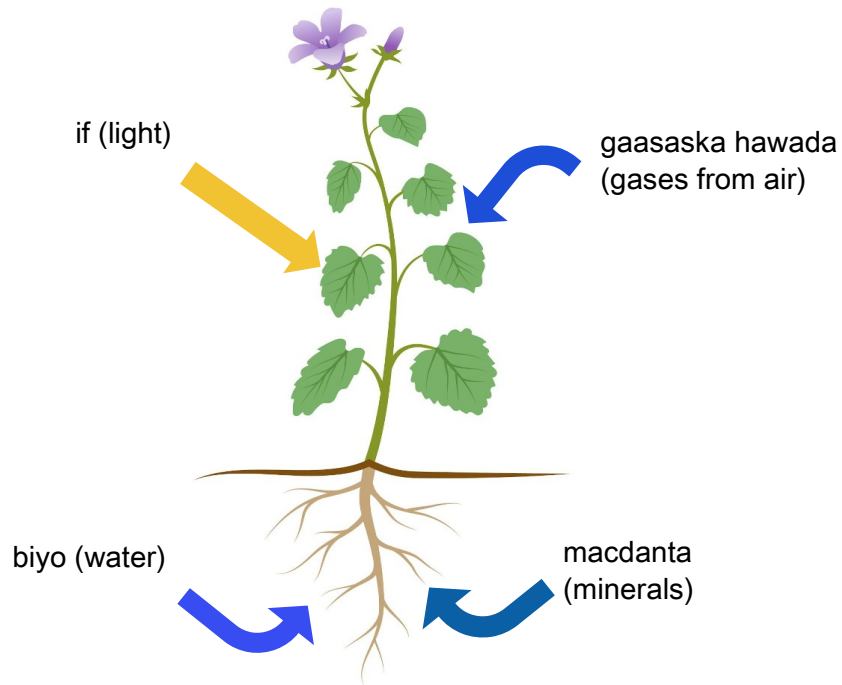
ama (either)

- ilaha maaddooyinka koritaanka iyo dayactirka
(source of materials for growth and repair)

ama

- ilaha tamarta (source of energy)

... laakiin ma aha labadaba.



Sayniska, erayga 'cunto' waxaa loola jeedaa wax noole (organism) ...

- A** u baahan yahay inuu noolaado
- B** ka qaata agagaarkiisa
- C** u isticmaala ilo qalab ah si uu u koro oo u hagaajiyo
- D** u isticmaala ilo tamar ah



Run mise been?

Dhirtu waxay u isticmaashaa biyo (water), gaasaska hawada (gases from air), macdanta (minerals) iyo iftiinka cunto ahaan.



Run



Been



Sabab u sheeg jawaabtaada



Dhirtu waxay kaliya u isticmaashaa gaasaska, macdanta (minerals) iyo biyo (water) ilo qalab ah si ay u koraan oo u hagaajiyaan, waxayna kaliya u isticmaashaa iftiinka ilo tamar ah.



Dhirtu waxay u isticmaashaa waxyaalahaas oo dhan ilo qalab ah si ay u koraan oo u hagaajiyaan iyo ilo tamar ah.

Qor saddex sababood oo ah sababta Axmed uu khalad yahay.



Axmed

Sababaha Axmed uu khalad yahay waxaa ka mid ah:

Dhirtu waxay samaysataa cuntadeeda.

Dhirtu kama qaadata cunto agagaarkeeda.

Dhirtu waxay kaliya ka nuugtaa biyo (water) iyo macdanta (minerals) ciidda.

Biyo (water) ma aha cunto sababtoo ah ma aha ilo tamar.

Macdanta (minerals) ma aha cunto sababtoo ah ma aha ilo tamar.



Axmed

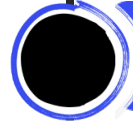
Nafaqada dhirta (Plant nutrition)



Waxa dhirta u baahan tahay si ay u noolaato



Sida dhirta cuntada u helaan



Waxa cuntada dhirta tahay iyo sida loo isticmaalo

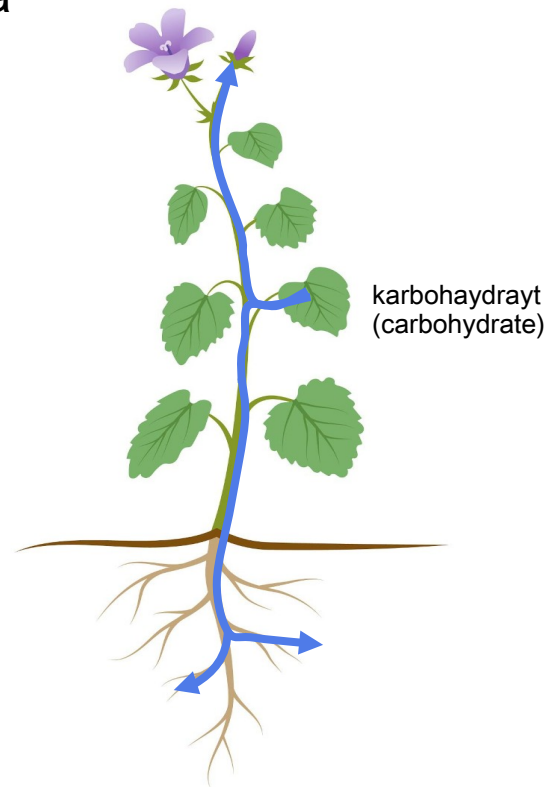
Dhirta cuntadooda waxay ku sameeyaan caleentooda iyo qaybaha kale ee dhirta ee ka sarreeya dhulka.



Caleen geed maple ah

Cuntada ay dhirta ku sameeyaan caleentooda waa karbohaydrayt (carbohydrate).

Cuntada karbohaydraytka ah waxaa loo qaadaa qaybaha dhirta oo dhan si ay u noolaato.



Karbohaydryatka (carbohydrate) laga sameeyay caleenta ayaa ah cuntada dhan ee dhirta u baahan tahay.

Sababta oo ah:

1) Waa ilo tamar.

- Waxaa loo isticmaalaa shidaal (fuel) ahaan neefsashada unugyada (cellular respiration).
- Neefsashada unugyada (cellular respiration) waxay siisaa tamarta loo baahan yahay dhammaan hab-nololeedyada kale ee dhirta.



Iyo ...

2) Waxay sidoo kale tahay ilo (source) ah qalab (materials) loogu talagalay koritaanka (growth) iyo dayactirka (repair).

- Carbohydrate wuxuu ka samaysan yahay curiyeyaasha (elements) carbon, hydrogen iyo oxygen.
- Curiyeyaashan waxaa lagu daraa kuwa kale (sida nitrogen) oo ka yimaada macdanta (minerals) si loo sameeyo borotiinno (proteins) iyo dufan (fats).
- Carbohydrate-ga, borotiinnada iyo dufanka waxaa loo isticmaalaa in lagu sameeyo dhammaan unugyada (cells) iyo nudaha (tissues) dhirta.



Noocee cunto (food) ah ayay dhirta isu sameeyaan?

A carbohydrate



B dufan (fat)

C borotiin (protein)

Sidee bay dhirta u isticmaashaa cuntada (food) carbohydrate-ga ah ee ay sameeyaan?

A

Kaliya ilo (source) tamar (energy) ah.

B

Kaliya ilo (source) ah qalab (materials) koritaanka (growth) iyo dayactirka (repair).

C

Ilo (source) ah tamar (energy) iyo qalab (materials) koritaanka (growth) iyo dayactirka (repair) labadaba.



Task3

Waa maxay cuntada (food) dhirta iyo sida loo isticmaalo



Kyle ayaa ku dhamaaday 'Cuntada Dhirta' (Plant Food).

Wuxuu ka walwalayaa in dhirta uu dhiman doonto haddii uusan siin wax 'Cuntada Dhirta' (Plant Food) ah.

Qor talo (advice) ah oo caawinaysa Cabdi (Kyle) inuu fahmo:

Haddii dhirta u baahan tahay in la siiyo cunto (food) si ay u noolaato.

Sida dhirta u helaan cuntada (food) ay u baahan yihiin si ay u noolaadaan.

Haddii Cabdi (Kyle) uu iibsado dhalo kale oo 'Cuntada Dhirta' (Plant Food) ah.



Qor talo ka caawinaysa Kyle inuu fahmo:

- a) In dhirta loo baahan yahay in la siiyo cunto si ay u noolaato.
- b) Sida dhirta ugu helaan cuntada ay u baahan yihiin si ay u noolaadaan.
- c) In Kyle uu iibsado dhalo kale oo 'Cuntada Dhirta' ah.

Talo loogu talagalay Kyle:

Dhirta uma baahna in bini'aadanku siiyaan cunto.

Dhirta waa soosaarayaal (producers) oo samaysta cuntadooda (carbohydrate).

'Cuntada Dhirta' waxay ka kooban tahay macdano (minerals), kuwaas oo dhab ahaan aan cunto u ahayn dhirta! Laakiin dhirta waxay u baahan tahay macdano (minerals) si ay u noolaato, u caafimaad qabto, oo u koraan. Dhirtu waxay isku darsaa carbohydrate iyo walxo (elements) sida nitrogen oo ka yimaada macdanta (minerals) si ay u samayso borotiin (proteins) iyo dufan (fats).



- Dhirta waa noole (organism) nool oo u baahan iftiin (light), biyo (water), macdano (minerals) iyo gaasaska hawada si ay u noolaato oo u koraan.
- Dhirta waxay ku qaadataa iftiin (light) iyo gaasaska hawada caleemaheeda, waxayna ku qaadataa biyo (water) iyo macdano (minerals) xididdadeeda.
- Dhirta sidoo kale waxay u baahan tahay cunto si ay u noolaato oo u koraan.
- Dhirta kama qaadata cunto agagaarkeeda. Iyagu waa soosaarayaal (producers) oo samaysta cuntadooda.
- Cuntada dhirta samayso waa carbohydrate, taas oo u isticmaasho koritaanka iyo ilo tamar (energy).