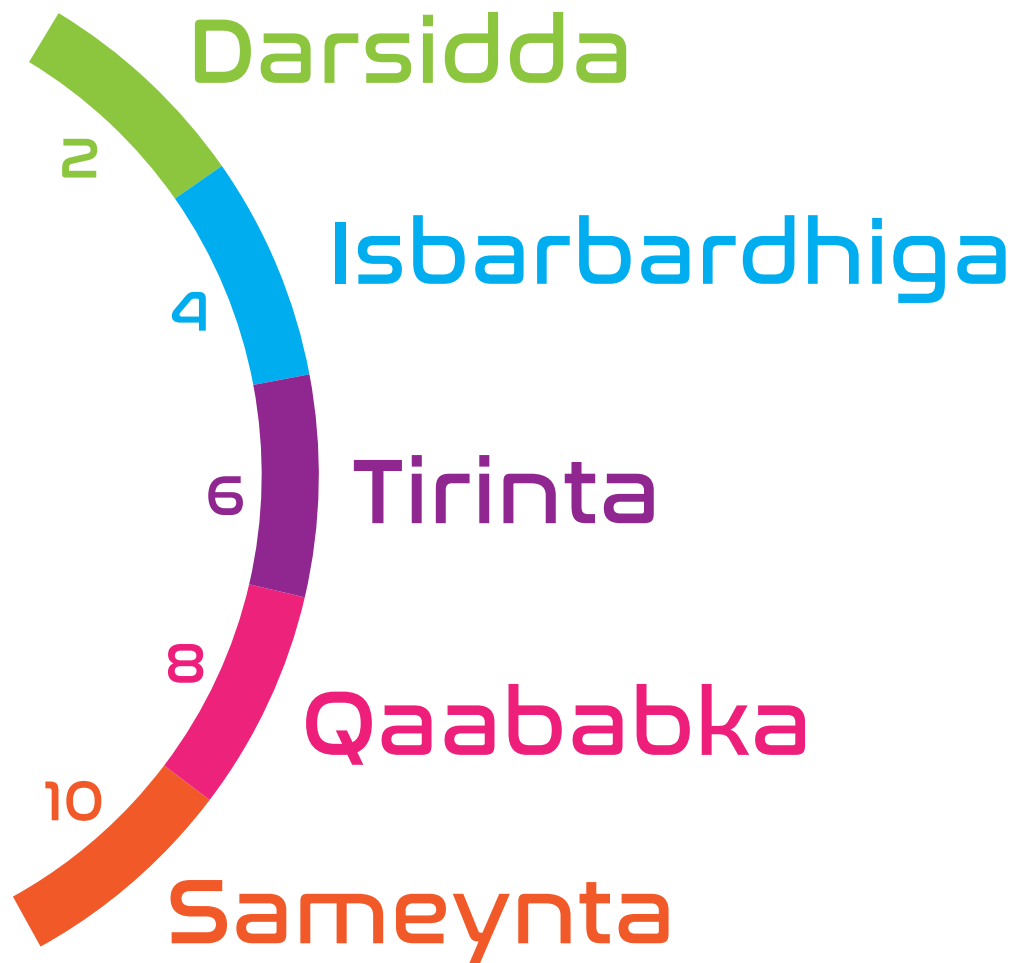


XIRMADA STEM

BUUGGA HAGAHA WAALIDKA



Tusmada Qoraalka



Barashada ku aadan Xirmada waxbarashada Hore ee STEM

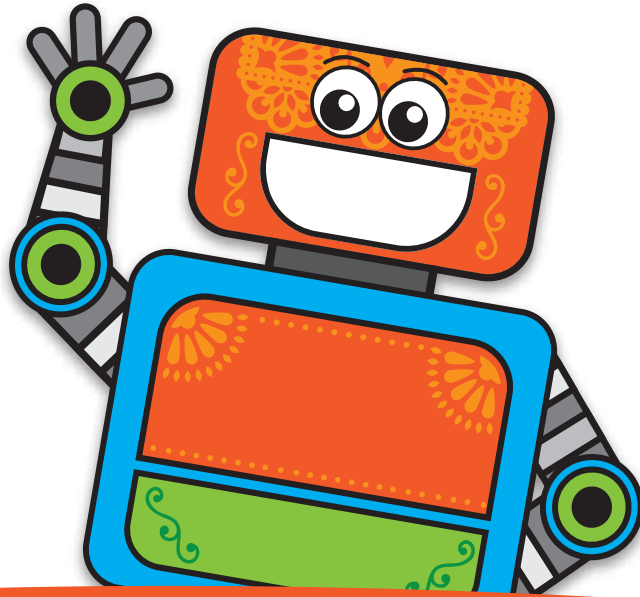
Farriin loogu talagalay Waalidiinta iyo Daryeel bixiyayaasha

Waxaa laga yaabaa in aad maqashay muhiimada wax barida iyo waxbarashada ee STEM si carruurteenu ugu diyaar garoobaan mustaqbalka. STEM waxay u taagan tahay Sayniska, Tiknoolajiyada, Injineernimada iyo Xisaabta. Waxaa laga yaabaa in aadan ogayn, balse isla hadaba maalin kasta waad isticmaasha STEM. Waa mid dhammaanteen inagu wareegsan!

STEM waa hab lagu eego adduunka, su'aalo la isku weydiyo, loo isticmaalo qalabka, wax loo dhiso, isla markaana loo xalliyo dhibaatooyinka. Uma baahnid in aad noqoto saynisyahan, injineer ama xisaab yaqaan si aad u xiiseyso STEM. Waxaad u baahan tahay **in aad ogaato**, sida carruurta yar yar ay dabiiciyan yihiin!

Sidee baad ugu dhaqmi kartaa habka fekerka STEM adiga oo la yeelanaya ilmahaaga? Isku day in aad adduunka indho cusub ku eegto, sida ilmahaagu sameeyo. Tusaale, marka xiga ee aad si wadajir ah u socotaan, qaado dhowr daqiiqo oo dheeraad ah isla markaana joogso inta aad wadada ku jirtaan si aad u eegtaan dhirta, xayawaanka iyo waxyaabaha aad adiga iyo ilmahaagu xiiseynaysaan.

Iska waran



Darsidda

Maxay muhiim u tahay in wax la darso?

Carruurta waxay adduunka ku xeeran ku bartaan iyaga oo adeegsanaya shantooda dareen: aragga, taabashada, maqalka, urin iyo dhadhanka.


Hoosta, waxaad ka heli doontaa fikrado loogu talagalay sida loola bilaabo wax darsidda. Waxaad hawlaha u bedeli kartaa hadba sida u fiican qoyskaaga iyo ilmahaaga.


Waxa aad sameyn kartid...

Samee barafka jajabka ah 'ice cubes'.

→ Weydii ilmahaaga: Maxaad isleedahay wey dhici doonaan marka aan biyahan gelino qaboojiyaha?

→ Ka dib marka ay wakhti ka soo wareegto, fiiri saxanka barafka jajabka ah ku jiro.

 **0-2:** U sheeg ilmahaaga waxa aad aragto.

 **3-5:** Weydii ilmahaaga in uu kuu sheego wuxuu arko.

→ Waa kuwan tijaabooyin qaarkood oo kale oo aad ku dayi barafka jajabka ah:

Maxaa ku dhacaya barafka jajabka ah marka aad dibedda u soo saarto?


Maxaa ku dhaca barafka jajabka ah marka aad ku tuurto biyaha dhexdooda?


Sidee kale ayaad barafka uga dhigi kartaa mid dhalaala?

Miyuu degi 'sink' doonaa mise wuu sabayn 'float' doonaa?

Waqti kasta oo aad ku dhowdahay biyaha, waad tijaabin kartaa waxyaabaha si aad u aragto haddii ay degi doonaan ama ay biyaha dul sabayn karaan.

→ Inta lagu jiro wakhtiga qubayska, waxaad ilmahaaga siisaa [weelasha balaastikada ah iyo koobab, shanlooyin, waxyaabo wax lagu dhiso, qaadooyin bir ah, iyo isbuunyada], ama wax kasta oo kale oo ilmahaagu doorto in uu darso.

 **0-2:** Ilmahaaga hadal waxa dhacaya marka uu shay ku tuurto biyaha dhexdooda.

 **3-5:** Weydii ilmahaaga: Maxaa dhici doona marka aad tani ku tuurto biyaha dhexdooda? Miyay degi doontaa? Mise way dul sabayn doontaa biyaha?

• Isku day in aad koob maran ku tuurto biyaha dhexdooda, ka dibna ka buuxi biyo oo mar labaad ku tuur biyaha dhexdooda si aad u aragto waxa dhacaya. Waa maxay tijaabooyinka kale ee aad isku dayi karto?

→ Jikada dhexdeeda, ilmahaaga sii baaquli si uu kaaga caawiyo in aad ku dhaqdo miraha.

• Weydii ilmahaaga: Maxaa dhici doona marka aad tani ku tuurto biyaha dhexdooda? Miyay degi doontaa? Mise way dul sabayn doontaa biyaha?

• Isku day in diirka ka saarto miraha aad isticmaalayso. Weydii: Maxaad isleedahay wey dhici doonaan marka aad diirka ku tuurto biyaha dhexdooda? Hadda isku day. Maxaa dhacay?

Darsidda

Baaritaan ku samee isla markaana ka hadal siyaabo uu shaygu u dhaqaaqi karo.

→ Marka xigta ee aad ilmahaaga la lugeynayso, ha dhaqdhaqaajiyo jirkiisa si uu ugu daydo waxyaabaha dhaqdhaqaaqaya ee ay arkaan. Tusaale: isku rux sida geed dabayl ruxayso, dhaqaaji "baalashooda" sida shimbirta isla markaana sida baska oo kale u joogso.

😊 **0-2:** U sheeg ilmahaaga: "Aanu iska yeel yeelno in aanu noqono___!" Ka hadal waxa dhacaya idinka oo si wadajir ah ugu wada socda qaabab kala duwan.

😊 **3-5:** Ciyaara ciyaarta wax la qiyaaso 'guessing game'. Ilmahaagu wuxuu u dhaqdhaqaaqi karaa sida waxa uu arko, waana in aad qiyaastaa waxa uu yahay!

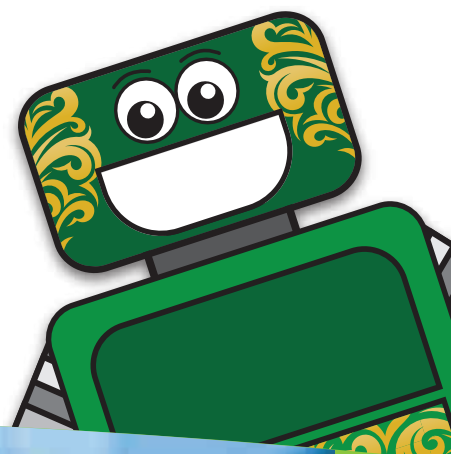
→ Adiga oo isticmaalaya buugaag iyo gabal yar oo baakad ah (fiiri sawirka), samee kaabad. Dooro waxyaabo aad hoos ugu soo taraarixiso kaabada. Tusaalooyinka waxay noqon karaan dhagax yar, miraha 'acorn', kubad, gaariga carruurta ku ciyaarto, iniinyaha 'pinecone', ama wax kale oo ilmahaagu doorto in uu isku dayo.

😊 **0-2:** Ilmahaaga kala hadal waxay aad is leedahay way dhaci doonaan ee xiga.

😊 **3-5:** Weydii ilmahaaga: Maxaa dhici doona marka aad sii deyso? Miyuu isrogrugi doonaa, mise wuu sibibixan doonaa, mise meel isku mid ah ayuu joogi doonaa? Maxaad ugu maleynaysaa in ay sidaas tahay?



Maxaa dhici doona marka aad sii deyso?



Ma ogayd?

Ma ka war qabtay Sada Mire? Waa qof ku takhasustay cilmiga quruumihii hore 'archaeologist', ama qof daraasad ku samaysa sida ay dadku u noolaayeen wakhtiyadii la soo dhaafay iyada oo raadinaysa waxyaalaha laga yaabo in ay isticmaali jireen. Sada Mire waxay rumeysan tahay in aad mihiim ugu tahay in dadku ay xiriir la lahaadaan waqtiyadii ay soo dhaafeen. Waxay sahamisay Somalia si ay uga raadiso waxyaabo muhiim ah una ilaaliso.

Waxaad isku dayi kartaa in aad raadiso waxyaabaha muhiim u ah qoyskaaga. Maxaad ka baran karnaa?



Isbarbardhiga

Maxay muhiim u tahay in wax la isbarbardhigo?


Isbarbardhiga, sharaxaadda iyo waxyaabo laga dhigayo qaybo waxay carruurta ka caawisaa in ay macno u yeelaan adduunka isla markaana horumariyaan xirfadaha dhanka luqada, xisaabta iyo sayniska.


Hoosta, waxaad ka heli doontaa fikrado si aad u bilowdo wax isbarbardhiga. Waxaad hawlaha u bedeli kartaa hadba sida u fiican qoyskaaga iyo ilmahaaga.

Waxa aad sameyn kartid...

Isku laablaab isla markaana si wadajir ah isku barbardhig dharka la dhaqo.


→ Ilmahaagu wuxuu magacaabi karaa isla markaana caawimaad ka geysan karaa in uu dhammaan waxyaabaha isku mid ah is kor saaro (shaatiyada, surwaalada, iwm.) iyo sidoo kale isku aadiyo sharabaadyada iyo gacmo gashiyada. Waxaad u kala saari kartaa midab ahaan, baaxad ahaan, muuqaal ahaan, iyo kuwo kale oo dheeraad ah.


 **0-2:** Waxaad carruurtaada kala hadli kartaa sida aad dharka la dhaqo u dhigayso meelo kala duwan iyaga oo is kor saaran. Tusaale, “Dharkan ayaan si wadajir ah u dhigayaa maxaa yeelay dhammaantood waa shaatiyo. Kuwani way wada socdaan maxaa yeelay dhammaantood waa surwaalo.”

 **3-5:** Isku day su'aalaha sida “Ma heli kartaa sharabaad isku cabbir yihiin kani?” ama “waxaan ogaaday in shaatigaani uu weyn yahay isla markaana kani uu yar tahay. Qofkuu ayuu shaatigiisu yahay ka weyn? Sidee baan u sheegi karnaa?”

Isbarbardhiga weelasha.

→ Soo ururi qaar ka mid ah weelasha cuntada oo maran, isla markaana isbarbardhig inta biyo ah ee ay qaadi karaan. Tani waa ciyaar wanaagsan in la ciyaaro marka lagu jiro qubeyska!

 **0-2:** Ku tababaro in aad biyo ka soo shubto hal weel oo aad ku shubto mid kale adiga oo ilmahaaga la sameynaya. Tani waa wakhti fiican oo ay ku tababartaan xirfadahooda dhanka dhaqdhaqaaqa!


 **3-5:** Waxaad weydiin kartaa ilmahaaga in uu qiyaaso ka uu yahay weelka qaadi doona biyo badan. Haddii ilmahaagu sameeyo qiyaas aan u muuqan mid sax ah, weydii in uu tijaabiyo isaga oo biyo ka soo shubaya weel oo ku shubaya weel kale, isla markaana arag waxa dhaca!




Isbarbardhiga

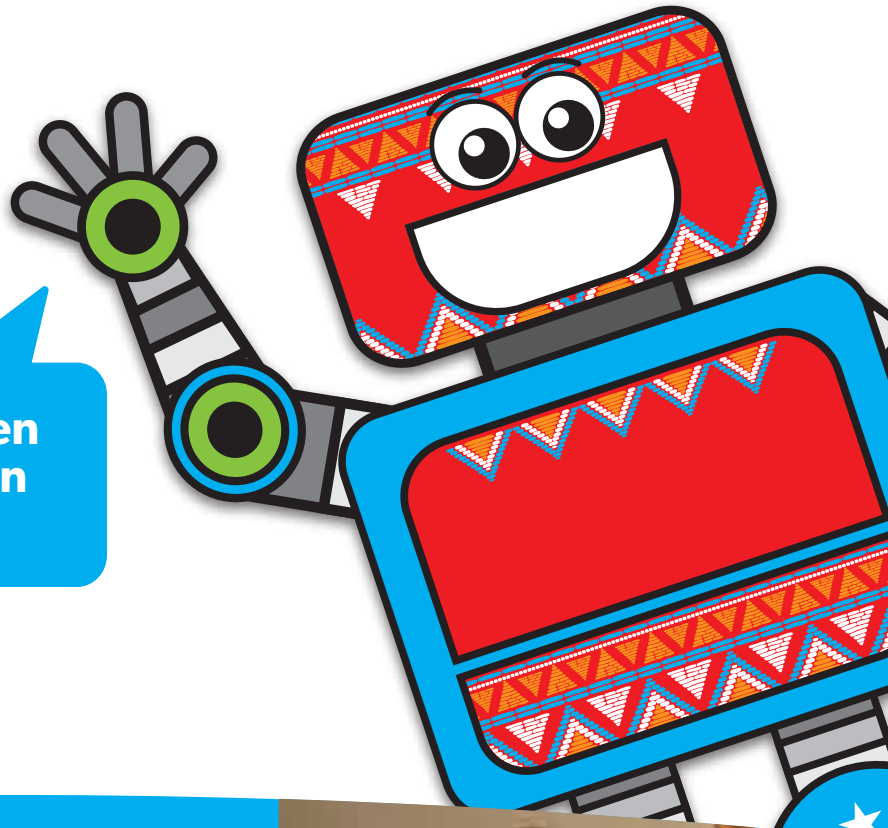
Ciyaar “Waan haystaa, miyaad aragtaa?”

→ Soo qaad wax kuu dhow kaasi oo ah hal shay oo kuwo badan ka kooban, waxaanad tustaa ilmahaaga. Sheeg waxa aad haysato, oo weydii in uu tilmaamo shay kale oo la mid ah.

 **0-2:** Carruurta tus laba shay oo isku hal ah ama isku mid ah una sheeg sida ay iskugu midka u yihiin. Tusaale “Fargeetooyinkani waxay la socdaan fargeetooyinka kale ee ku jira khaanada qaadada/fargeetada. Waan garanayaa kani sababta oo ah dhammaantoodna waxay afar dhibcood ku leeyihiin dhinaca dambe.”

 **3-5:** Waxaad carruurtaada u sheegi kartaa: “Waxa aan haystaa wax jilicsan. Ma dareemeyaa wax kale oo jilicsan?” “Waxaan haystaa caleen ka soo qaloocsan geesaha. Ma aragtaa caleen ka soo qaloocsan geesaha?”

Ma aragtaa caleen
ka soo qaloocsan
geesha?



Ma ogayd?

Ma ka war qabtay ax ma ka ogeyd Mumin Warfa? Wa khabiiir dhirta ku takhasusay, kaasi oo ah saynisyahan darsa dhirta. Ahmed Mumin Warfa wuxuu isticmaalaa xirfadda wax la isku barbardhigayo si loo sharaxo noocyada kala duwan ee dhirta ee muhiimka u ah dadka Soomaaliyeed. Wuxuu bartay dhirta Soomaaliya looga isticmaalo daawo ahaan, wuxuuna xataa helay nooc cusub oo dhir.

Wakhti ku bixii in aad fiiriso dhir kala duwan.
Sidee bay isku mid u yihiin? Sidee bay u kala duwan yihiin?



Tirinta

Maxay muhiim u tahay in wax la tiriyo?

Barida carruurteena sida wax loo tiriyo waxay ka caawin doontaa in ay macno u yeelaan adduunka ku xeeran. Tusaale, carruurta waxay bartaan in ay isbarbardhigaan cadadka waxayna horumar ka gaaraan fikirkooda lambarrada. Xirfada dhanka waxyaabaha la tirinayo, iyo ugu dambeyntii isku xirka cadadka lambarada qoran, waxay siin doontaa carruurta aasaas adag oo xisaabeed oo ay isticmaali doonaan marka ay gelaan dugsiga.


Waxaad ku tababaran kartaa habab kala duwan si aad u tiriso cadadka saxda ah, sida waxyaabaha ka soo dhacaya 'sliding' waxyaalo is kor saaran "oo aan la tirin" adiga oo u eegaya waxyaalo is kor saaran "oo la tiriya" iyada oo cod dheer lagu dhahayo lambarrada.


Hoosta, waxaad ka heli doontaa fikrado si aad u bilowdo wax tirinta. Waxaad hawlaha u bedeli kartaa hadba sida u fiican qoyskaaga iyo ilmahaaga.

Waxaad sameyn kartid...

Socodka bay'ada.


→ Soco ama dibadda uga yara bax gurigaaga oo waxaad tirisaa tirada wax kasta oo aad aragtid, 1-10. Waxaad tirin kartaa geedaha, shimbiraha, caleemaha, xiddigaha, ama gawaarida ku dhinac socda. Adduunka waxaa ka buuxa waxyaabo midab leh oo la tiriyo!


 **0-2:** Waad tilmaami kartaa oo tirin kartaa inta uu ilmahaagu fiirsanayo isla markaana dhageysanayo. "Waxaan arkaa hal, laba cayayaanka xuunka oo saaran geedkan!"

 **3-5:** Weydii ilmahaaga in uu kaa caawiyo in aad tiriso. Weydii: "Immisa guri ayaa ku yaala dhismahan? Aan si wadajir ah u tirino!"

Ciyaarta wax nadiifinta.

→ Hawl ka soo dhex dooro waxa la qabanayo! Tiri waxyaabaha marka aad meel la dhigeysa ilmahaaga. Waxyaabo wax lagu dhiso, sharabaadyada iyo waxyaabaha carruurta ku ciyaarto waa in dhammaantood meel la dhigaa waana la tirin karaa marka aad hawsha wadaan. Ku raaxeysta!

 **0-2:** Isku daya in aad cod dheer u tirsaan idinka oo si wadajir ah u nadiifnaya waxyaabaha carruurta ku ciyaarto.

 **3-5:** Waxaad isku dayi kartaan in aad gadaal gadaal u tirsaan idinka oo waxyaabaha carruurta ku ciyaarto meel dhigaya. Tusaale, "Waxaanu halkan ku haysanayaa lix waxyaabood oo carruurta ku ciyaarto. Mid gooni u dhig, hadda waxaa soo haray shan! Immisa ayaa halkaasi ku soo hari doona marka aan mid dheeraad ah meel gooni ah dhigo?"





Tirinta

Cuntada waxbarasho ahaan.

Qof kastaa waa in uu cunaa, sidaa darteed miyayna ahayn in laga dhigo hawlo waxbarasho?


→ Waxaad tirisaa fargeetooyinka miiska saaran. Waxaad tirisaa cuntada marka aad kor saarayso saxanka ilmahaaga. Immisa ayuu qof kastaa helay marka la isku daro?

 **0-2:** Waxaad tirin kartaa tirada qaniinyada marka aad quudinayso ilmahaaga. “Hal qaniinyo oo bariis ah. Labo qaniinyo oo bariis ah.”

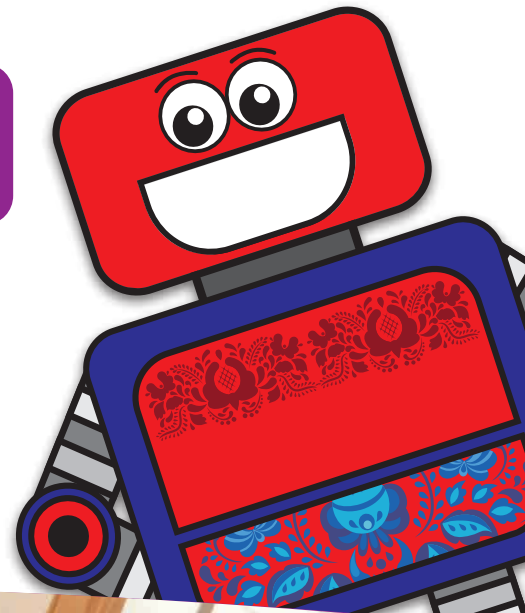
 **3-5:** Weydii ilmahaaga in uu tiriyo inta xabbadood ee cunto ah ee ay haystaan guud ahaan cuntada. Waxay bilaabi doonaan in ay ogaadaan in saxankoodu cuntadu hadba sidii hore ka sii yaraaneyo – tani waa ku tababarashada hore ee wax kala jarida!

→ Marka la joogo dukaanka laga soo adeegto. Ilmahaaga kala hadal waxa waxa loo baahan yahay toddobaadka.

 **0-2:** Waxaad tirisaa inta waxyaabood ee aad ku rido gaariga lagu adeegto ‘cart’ isaga oo ilmahaagu dhageysanayo.

 **3-5:** Weydii ilmahaaga: “Immisa maalmood oo qado ah ayaan u baahanahay in aan sameyno? Immisa xabbadood oo rooti ah ayaanu u baahan doonaa si aanu ka sameyno qadadeena? Immisa xabbadood oo miro ah?”

Immisa xabbadood ayaanu u baahanahay?



Ma ogayd?

Ma ka war qabtay Jama Musse Jama? Waa qof yaqaan xisaab- dhaqameedka ‘ethnomathematician’, ama qof darsa sida dadku ay dhaqan ahaan xisaabta ugu isticmaalaan nolol maalmeedkooda. Jama Musse Jama wuxuu aqoontiisa u isticmaalaa tirinta iyo xirfadaha kale xisaabeed, iyada oo ay weheliyaan aqoontiisa uu u leeyahay dhaqanka Soomaalida, si la iskula wadaago fikradaha ku saabsan sida carruurta Soomaaliyeed looga caawin lahaa in ay wax bartaan.

Sidee buu qoyskaaga u isticmaalaan xirfadda tirinta maalin kasta?



Qaababka

Maxay muhiim u yihiin in la ogaado qaababku?

Ku dhiirigelinta ilmahaaga in uu aqoonsado isla markaana sheego magaca qaababka waa hal jid oo ka caawinaya in uu fahmo adduunka ku xeeran. Ogaanshaha sida loo aqoonsado qaababku waxay ilmahaaga ka caawin doontaa isbarbardhiga waxyaabo kala duwan iyo in uu sharaxaad ka bixiyo iyaga. Aqoonta qaababku waxay xataa ilmahaaga ka caawin doontaa in uu aqoonsado xarfaha iyo tirooyinka marka ay bartaan wax akhriska!


Hoosta, waxaad ka heli doontaa fikrado si aad u bilowdo barashada ku saabsan qaababka. Waxaad hawlaha u bedeli kartaa hadba sida u fiican qoyskaaga iyo ilmahaaga.


Waxa aad sameyn kartid...

U soco qaab.

Adiga oo soc soconaya, (goobada/wareegyada, leydiga, afar geesoodka iyo saddex-xagalka) u tilmaan carruurtaada isla markaana weydii qaababka ay arkaan.

→ Isku day in aad qaab ka sameysid warqad ama baakad ah oo aad qaadatid. Waxaad qaababka barbardhigi kartaa waxa aad hesho marka aad socotaan.


 **0-2:** Ka hadal qaababka aad aragto inta aad la socoto ilmahaaga.


 **3-5:** Weydii ilmahaaga, “Ma aragtaa waxan goobada ah? Ma heli kartaa shay kale oo goobo ah oo inagu wareegsan? Isku day in aad ciyaarto Waan basaasayaa ‘I Spy’: “Waxaan basaasayaa shay goobo ah.”

Samee qaab farshaxan.


Waxaad ilmahaaga kala hadli kartaa waxa qaababka ka dhiga in uu midba midka kale ka duwanaado.


→ Qaabab sawir adiga oo la sawiraya ilmahaaga isla markaana magacaw qaababka aad sawirto. Waxaad isticmaali kartaa in aad wax iska sawirto, qalin aad warqad wax ku sawirto ama jeeso ‘chalk’ aad wax ku sawirto waddada lagu lugeeyo ‘sidewalk’.

 **0-2:** Ilmahaagu ha kula daawado marka aad sawirayso qaababka. Wuxuu tababar ku qaadan karaa sida wax la iskaga qor qoro isla markaana gacanta loogu qabto qalinka khadka leh ama qalin qoriga.


 **3-5:** Ilmahaaga ka caawi in uu ku tababarto qaababkiisa gaarka ah.


→ Ilmahaaga ka caawi in uu midabeeyo isla markaana qaabab kala duwan uu warqada uga soo jaro.

 **0-2:** Qaababka si wadajir ah hadba dhinac ugu dhaqaaji si aad u sameyso sawirro cusub.

 **3-5:** Weydii ilmahaaga: Ma sameyn kartaa xayawaan? Bal ka waran qof? Maxay kale ayaad ka sameyn kartaa qaabab? Ku dhaji qaababkaaga warqad cusub si aad u abuurto farshaxankaaga.

→ Istimaal jeeso si aad qaabab ugu sawirto waddada lagu lugeeyo ‘sidewalk’.

 **0-2:** Tababar ku qaata in aad ku dul socotaan qaab kasta idinka oo si wadajir ah u sheegaya magaca.


 **3-5:** Ma ka heli kartaa waxyaabo ka baxsan oo isku qaab leh sida qaababka jeeso?


Qaababka

Dareemida qaababka.

Caadi ahaan waxaanu ka fikirnaa isticmaalka dareenkeena aragga si aan wax uga barano qaababka, laakiin dareenkeena dhanka taabashadu wax badan ayuu inooga sheegi karaa iyaga, sidoo kale!

→ Raadi qaababka ay leeyihiin waxyaabaha guriga yaala ee aad maalin kasta isticmaasho.

 **0-2:** Isku soo ururi waxyaabo qaabab kala duwan leh oo guriga yaala, sida kubad, waxyaabo wax lagu dhiso, tuubada ku jirta warqada lagu tirtiro, oo u dhiib ilmahaaga si uu gacanta ugu hayo. (Xaqiiji in aad isku soo ururiso waxyaaba badbaado u leh ilmahaaga in uu afkiisa geliyo.) Weydii: “Sidee ayuu dareenku yahay?” Sidee ayay dareen kala duwan u leeyihiin? Waxaad ilmahaaga kala hadli kartaa qaabka inta ay baranayaan.

 **3-5:** Waxyaabo kala duwan ku rid shay warqad ka sameysan. Ilmahaagu ha gaaro shayga wax lagu riday (ma aha inuu fiiriyo!) isla markaana ha isku dayo in uu qiyaaso waxa qaabka leh ee uu taabanayo. Weydii ilmahaaga, “Sidee ayuu dareenku yahay?”

**Waa maxay
qaababka
aad heli karto?**

**Maxaad ka sameyn
kartaa qaababka?**

**Sidee ayay qaabkani dareen
isku mid ah u leeyihiin? Sidee
ayay dareen kala duwan u
leeyihiin?**



Ma ogayd?

Ma ka war qabtay AQAL Soomaali? Dadka dhaqan ahaan sida caadiga ah kolba meel u guura, aqoonta sida loo dhiso AQAL Soomaali, ama aqal/mundul, waxay ahayd mid muhiimad weyn u leh. Haweenka Soomaaliyeed way garanayaan sida loo dhiso aqaladaan/mundulooyinkaan, iyo meesha laga helo alaabta. Aqalada/mundulooyinka waxaa laga sameeyaa geedka acacia si loo sameeyo qaabka uu leeyahay, iyo rarada ‘mats’ si loo helo hoy. Qaabka ay leeyihin aqaladu/mundulooyinka waxay hoyga ka ilaaliyaan qoraxda iyo roobabka dabaylaha wata, iyada oo naqshadu u sahasho in ay kolba meel u guuraan.

Maxaad ka dhisi kartaa qaababka?



Sameynta

Maxay muhiim u tahay in wax la sameeyo?

Sameynta waxyaabo waxay carruurtaada ka caawisaa inay ogaadaan sida wax loo kala furfuro, iyo sida wax la iskugu rakibo. Inta ilmahaagu uu wax sameynayo, wuxuu horumar ka sameynayaa xirfadda dhaqdhaqaaqa muruqyada iyo xalinta dhibaatooyinka. Waxay sidoo kale horseedi kartaa su'aalo dheeraad ah. Sameynta waxyaabo waa tallaabada u horeysa ee muhiimka ah ee ku aadan injineernimada.


Injineeradu waa dadka dejiya xal u helida dhibaatooyinka. Waxkasta oo aanu la macaamilno oo dad dhisay waxaa naqshadeeyay injineer waxaana dhisay dad ama mishiino. Tan waxaa ka mid ah kuraasta aanu ku fariisano, muraayadaha qoraxda iyo qallimada "crayons", iyo sidoo kale kambiyuutarada, gawaarida iyo telefoonada casriga ah. Dunida mustaqbalku waxay u baahan doontaa injineero badan si ay u dejiyaan xalka dhibaatooyinka aynaan xataa weli ka fikirin!


Hoosta, waxaad ka heli doontaa fikrado si aad u bilowdo wax sameynta. Waxaad hawlaha u bedeli kartaa hadba sida u fiican qoyskaaga iyo ilmahaaga. Haddii wax uu ilmahaaga isku dayo uu shaqeyn waayo, weydii, "Mi jiraa hab kale oo aan iskugu dayi karno?"

Waxa aad sameyn kartid...

Waxaad dhistaa dhisme dheer.


→ Isticmaal weelashada cuntada ee caaga ah, sanduuqyo ama waxyaabo wax lagu dhiso si aad u dhisto dhisme dheer.


 **0-2:** Waxaad ilmahaaga u dhisi kartaa dhisme dheer si uu u dumiyoo! Marka uu ilmahaagu koro, wuxuu baran doonaa in uu dhiso kiisa gaarka ah.

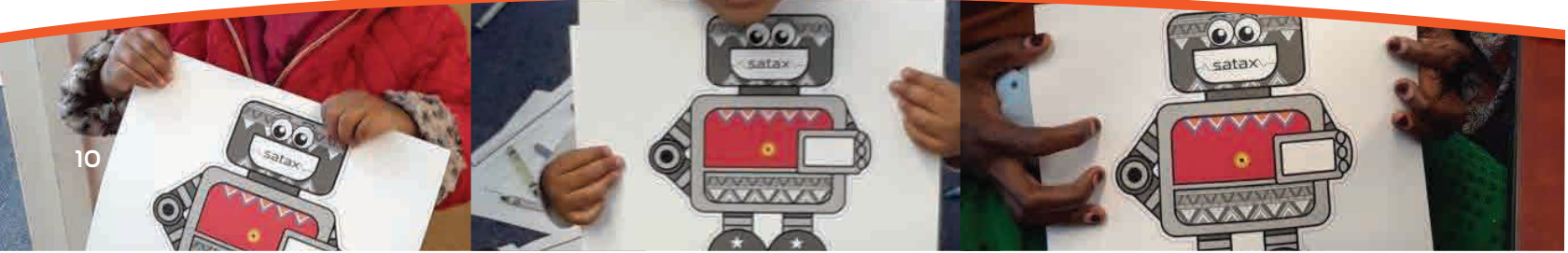
 **3-5:** Weydii ilmahaaga: Joog intee le'eg ayaad sameyn kartaa dhismahaaga dheer? Dhismahaaga dheeri miyuu dushiisa ku hayn karaa shayga carruurta ku ciyaarto? Isku day loolan kala duwan. Kala daadi oo mar kale dhis!

Samee meel lagu dhuunto.

→ Isku day in aad isticmaasho kuraas, bustayaal, sanduuqyo waaweyn, barkimooyin, miisas, iyo/ama alaaabta guriga oo kale. Haddii aad leedahay beerta nasashada 'park' oo kuu dhow, waxaad isticmaali kartaa laamaha iyo ulaha si aad u dhisto meel bannaanka ku taala oo lagu dhuunto.

 **0-2:** Waxaad dhistaa meel dhuumasho oo loogu talagalay in ilmahaagu ku ciyaaro. Inta aad dhisayo, waxaad ilmahaaga wax uga sheegi kartaa waxa aad sameynayso iyo sababta.


 **3-5:** Weydii ilmahaagu in uu dhiso meel dhuumasho oo u gaar ah. Waxaad weydiin kartaa: Ilaa intee oo yar ayaad ka dhigi kartaa goobtaa dhuumashada? Sidee ayuu u weyn yahay? Sidee ayuu mugdi u yahay Maxaad ku sameyn doontaa meeshaada dhuumashada?




Sameynta

Muusik ku ciyaar dhalooyin.

→ Cadad kala duwan oo biyo ah ku shub dhalooyin ama dhalooyinka cuntada oo maran.

 **0-2:** Ilmahaaga tus sida dhinacyada dhalooyinka si tartiiba loogu garaaco shay bir ah. Weydii: Ma sameyn kartaa dhawaaqyo kala duwan?

 **3-5:** Weydii ilmahaaga: Maxaa dhacaya marka aad bedesho cadadka biyaha? Maxaa dhacaya marka aad isticmaasho shay kale oo aad ku ciyaarto? Ma ciyaari kartaa hees?

Joog intee le'eg ayaad
ka sameyn kartaa
dhismahaaga dheer?

Sidee baad u dhisi kartaa
qalcad 'fort'?

Maxaad sameyn kartaa?

Sidee ayaad u sameyn kartaa
dhawaaqyo kala duwan?



Ma ogayd?

Dr. Hawa Abdi waa dhakhtarad Soomaaliyeed isla markaana hawlaha bani'aadamnimada ka shaqeysa. Waxay aragtay baahiyaha ay bulshadeedu u qabto daryeelka caafimaad, biyo nadiif ah iyo cunto. Dr. Abdi waxay abuurta isbitaal si ay daryeel caafimaad ugu keento bulshadeeda, iyo sidoo kale xalinta dhibaatooyinka cuntada iyo biyaha iyada oo lagu qodayo ceel isla markaana beerayo dalagyo.

**Waa maxay dhibaatooyinka aad ka aragto xaafadaada?
Maxaad qaban kartaa si aad u caawimaad uga geysato xalintooda?**



Want to keep exploring STEM with your family?

Check out these resources!

1. Open the camera on your phone or tablet
2. Point the camera at the QR codes below
3. The website will automatically open on your devices!



The Fab Lab: <https://www.youtube.com/user/CrazyAuntLindsey>

Have you met Crazy Aunt Lindsey yet? This fun, dynamic Portlander takes kids on science, engineering and technology adventures in her fun videos. These videos are best suited for older children. English only.



Sesame Street STEM: <https://www.sesamestreet.org/toolkits/stem>

Sesame Street's STEM toolkit is full of fun videos that explain many STEM concepts in preschool friendly language. A parent guide is also available. English only.



US Department of Education

This document from the US Department of Education has ideas for STEM activities with preschool-aged children and links to many other resources. English only.



Too Small to Fail: <https://www.toosmall.org/lets-talk-about-math>

This website is full of videos designed to help parents and caregivers teach their children about STEM. Some videos show activities found in this kit. Resources are available in English and Spanish.

- **Math Booklets:**

- English: <http://toosmall.org/body/Highlights-TSTF-early-math-guide.pdf>

- Spanish: <http://toosmall.org/body/Highlights-TSTF-early-math-guide-SP.pdf>

- **Everyday Fun with Science:**

- <http://toosmall.org/resources/Everyday-Fun-With-Science.pdf>

- **Let's Talk About the World poster:**

- <http://toosmall.org/community/body/Lets-Talk-about-the-World.pdf>



PBS Kids: <http://www.pbs.org/parents/education/science/games/preschooler-kindergarten/>

This website includes links to watch shows like Sid the Science Kid, as well as STEM resources and games for young children. English only.

Portland Resources

Portland Parks and Rec:



Ladybug Walks (ages 2-6): <https://www.portlandoregon.gov/parks/64625>

Ladybug Walks happen on Thursday and Friday mornings in parks all over Portland. Parents/caregivers attend with their child. The cost to attend is \$3-8 per child, on a sliding scale.



Lil Nature Kids (ages 3-5): <https://www.portlandoregon.gov/parks/article/458866>

Lil Nature Kids is a weekly drop-off class at Mt. Tabor Park. Scholarships are available.



True Nature (ages 4-12): <https://www.portlandoregon.gov/parks/article/650275>

True Nature is a class for children and their parents at Mt. Tabor Park. Scholarships are available.

- Nature-based play areas are playgrounds designed with natural materials to encourage exploration. Portland currently has three nature-based play areas:

- Westmoreland Park:** <https://www.portlandoregon.gov/parks/57822>

- Gateway Green:** <http://www.gatewaygreenpdx.org/activities/natureplay>

- K^unamokwst Park:** <https://www.portlandoregon.gov/parks/61985>



- Water play (interactive fountains and splash pads) is another way for young children to explore and interact with their environment. Learn more about water play opportunities in Portland:

- <https://www.portlandoregon.gov/parks/article/578662>

- Portland has many parks that are large enough to include hiking trails. These large parks can provide a total nature experience inside of the city: **Powell Butte, Mt. Tabor, and Forest Park**

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Portland Resources

Museums and Zoos:



OMSI: <https://omsi.edu/showing/2-days-at-omsi>

The Oregon Museum of Science and Industry (OMSI) has exhibits that are fun for all ages, and play areas specifically designed for young children. To find out when OMSI will host \$2 days, visit their website.



The Oregon Zoo: <https://www.oregonzoo.org/events/category/discount-days>

The Oregon Zoo is a great environment for children to learn about different kinds of animals. To learn about Oregon Zoo discount days, visit their website.



The Portland Children's Museum: <https://www.portlandcm.org/join/family-access-program>

The Portland Children's Museum includes a makerspace, or space for tinkering and engineering, and a nature play area. To learn more about the Portland Children's Museum Family Access Program, visit their website.

Waxaad sameysaa cajiinta lagu cayaaro 'play dough' oo kuu gaar ah (waxaa lagula talineyaa da'aha 2+).

Isticmaal tilmaamahan si aad u samayso cajiinta lagu cayaaro 'play dough'. Ilmahaagu wuxuu ku tababaran karaa xirfadaha dhanka xisaabta isaga oo kaa caawinaya in aad qiyaasto waxyaabaha uu ka samaysan yahay!

Tilmaamuhu 'recipe' waxay ka socdaan

<https://www.familyeducation.com/fun/playdough/play-doh-recipes>

Waxyaabaha ay ka kooban tahay

- 1 koob oo biyo ah
- 1 qaado oo ah saliida khudrada ka sameysan
- 1/2 koob oo cusbo ah
- 1 qaado oo labeenta 'cream' tartar-ka ah (tani waxay ka caawinaysaa in ay cajiinta lagu cayaaro 'play dough' ka ilaaliso in ay xumaato)
- Cunto midabeeyaha (waajib maaha)
- Digsiga suugada
- 1 koob oo bur ah

Tilmaamaha la raacayo

1. Isku dar biyo, saliid, cusbo, labeenta 'cream' tartar-ka iyo cunto midabeeyaha oo ku jira digsga suugada isla markaana kuleyli ilaa uu diirimaad ka noqonayo.
2. Ka soo saar kuleylka kuna dar bur.
3. Isku walaaq, ka dibna xash 'knead' ilaa si siman ka noqonayo. Labeenta 'cream' tartar-ka waxay cajiinta ka dhigtaa in ay gaarto 6 bilood ama in ka dheer, sidaa darteed u adkeyso rabitaankiisa oo iska dhaaf waxyaabahna uu ka samaysan yahay 'ingredient' haddii aadan gacanta ku haysan.
4. Cajiintan ka keydi weel aan hawadu gali karin ama bacda qaboojiyaha ee Ziploc. Maxaad ka sameyn kartaa cajiintaada lagu cayaaro 'play dough'? Isku day in aad sameyso shay aad ka arki karto bannaanka gurigaaga, sida xayawaan ama guri. Waxaad sawirtaa sawir aad ka sameyso waxa aad sameysay.



EARLY LEARNING
MULTNOMAH

