

Kanan K'ak'náab Ma' Su'up'il

Ku taasik te'ex



Sargazo

Primary School Edition-Ti'al primaria najil xooko'ob

Maya [yua] Edition for Belize

Aj Ts'íib
Robert C. Thigpen

Ajsut ts'íib ti' Miatsil
Hilario Poot Cahun



TO'ONE' AJKANAN K'AK'NÁABO'ON MA' SU'UP'IL.
¡BEYXAN TE'EX!

Le ka'at'aanil nu'ukulixkoko'oba' jo'osa'abo'ob tumen

Kanan K'ak'náab Ma'su'up'il www.marinefrontiers.org

©2022 Robert C. Thigpen Tuláakal u páajtalilo'ob lí'isa'ano'ob. Le áanalte'a' yéetel u jaatsilo'obe' ma' k'a'abéet u ch'a'abalo'obi', ma' k'a'abéet u ts'áabal ti' mixjump'éel kúuchili', beyxan ma' k'a'abéet u túuxta'al ti' yaanal máak (ti' correo, ts'alju'iun, táabsajil, wa uláak') wa mina'an tech u ju'unil t'áaba'an tumen u ajtsíibil, le je'ela' ts'aja'an ichil u páajtalilo'ob yaan ti' ajts'íibo'ob tu nojlujumil Estados Unidos ti' América.

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Wa a K'áat ka yanak jump'éel le áanalte'ob ichil a na'tsil t'aane', much a'al ti' to'on yo'osal k múul meyaj ti'al ka béeyak. ¡Tuláakal le kajtalilo'ob yéetel le t'aano'ob k'aambe'eno'ob waye'!



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If you would like to have one of these books in your mother tongue, contact us and we will try to work with you to make this happen. All peoples and all languages are welcome here!





Yuridia Anahí Pech Balan juntúul xoknáal ti' 4º ti' primaria najil xook "Andrés Quintana Roo" tu kaajil La esperanza, Quintana Roo, México. Tu yotoch yéetel ken jo'op u báaxal yéetel u etailo'obe' ku t'anik maaya [yua], ba'ale' tuláakal u áanalte'obe' ts'íibta'ano'ob ich español. Je'exbix tuláakal paale', leti'e' ku k'amik ka'ap'éeel xookil. Yaan jump'éeel xookil ku k'amik ichnaj líik'ul ken síijik. Ken ts'o'okoke' ku taal le xookil ku k'amik tu najil xook. Le ka'ap'éeel xookilo'oba' ku k'amik ichil jejeláas t'aano'ob. Lela' ku yúuchul ti' tuláakal le máasewal kajtalilo'obo', le najil xooko'obo' mixtan u jach oksaj óoltiko'ob le kaambal ku taasiko'ob le mejen paalalo'ob ichnajo'.

Ts'o'ok k ba'alitik jump'éeel túumben plan de estudios yo'osal biología ti'al le máasewal kajtalilo'obo'. be'elajake' *Yuri* táan u kanik yo'osal sargazo ti' jump'éeel áanalte' ts'íibta'an ich maaya. Leti'e' kex ku t'anik maayae' mixtan u xokik mix u ts'íibtik. Be'elajake' leti'e' táan u kanik ba'axo'ob yaan tu báak'paach ikil u kanik u xok yéetel u ts'íibt le maayao'. Be'elajake' le ka'ap'éeel xookilo'obo' (ichnaj yéetel najilxook) ts'o'ok u much'ikuba'ob yo'osal beyo' u mu'uk'antal u tuukul.

¡*Yuri* Kanan k'ak'náab ma' Su'up'il, teche' je'el xan u páajtal a táakpajale'!



Yuridia Anahí Pech Balan is a 4th grade student at the *Andrés Quintana Roo Indigenous Primary School* in *La Esperanza, Quintana Roo, México*. In her home and when playing with her friends she speaks Maya [yua], but all of her textbooks are in Spanish. Just like everyone she receives two types of education. There is the education she receives at home that began when she was born. Then there is the education she receives at school. These education systems are in different languages. It is the same in most Indigenous communities and the education at school oftentimes denigrates the education received at home.

We have developed a novel biology curriculum for linguistically diverse education systems and today *Yuri* is learning about Sargassum in a text book written in Maya for her. She has never learned to read and write in Maya. Now she is learning more about the world around her while learning to read and write in her mother tongue. Today her two education systems have been brought together to make these linguistically diverse education systems a place of greater opportunity.

¡*Yuri* is Marine Conservation without Borders and you are too!



TO'ONE' AJKANAN K'AK'NÁABO'ON MA' SU'UP'IL.
¡BEYXAN TE'EX!

Le jaatsil yo'osal "Sargaso" táakpaja'an ichil U Tsooyilo'ob Caribe tumen Kanan K'ak'náab ma' Su'up'il. Meenta'abij yéetel u yáantajo'ob Debbie Bartlett PhD ku meyaj University of Greenwich, *School for Field Studies* de las Islas Turcas y Caicos yéetel proyecto Darwin Plus.



Le oochelo'obo' j-ts'áabo'ob tumen: Ard Vreugdenhill y Julietta Castro (*Nature Connecting*), Andres Bisono Leon (*SOS Carbon*), Paola Díaz (*Ciencias del Mar y Limnología-Universidad de Costa Rica*), Franziska Elmer Ph.D. (*School for Field Studies yéetel el Sargassum Podcast*), Eric Ramos (FINS), Giselle Brady (*Bay Islands Conservation Association*), Ligia Collado-Vides Ph.D. (FIU) yéetel Eduardo Zuñiga.



Le STEM plan de estudios bioculturala' yo'osal Sargazo ts'íibta'ab yéetel sutts'íibta'ab ich maaya tumen Robby Thigpen yéetel Hilario Poot Cahun ku meyajo'ob ti' Kanan K'ak'náab ma' Su'up'il yéetel Sayab Miats AC.



Le STEM plan de estudios bioculturala' yaan u yoksa'al ichil le áanalte' ku k'aba'atik U Tsooyilo'ob Yucatán. Lela' ts'íibta'ab ti'al xoknáalo'ob ti' primaria máasewal najil xooko'ob tu lu'umil Quintana Roo.



Yéetel u yáantaj le Institute of Environment ku taal ti' *Florida International University*, le STEM plan de estudios bioculturala' yaan u ka'ansa'alo'ob tumen xoknáalo'ob ti' *Universidad Intercultural Maya de Quintana Roo*.



WE ARE MARINE CONSERVATION WITHOUT BORDERS
YOU ARE TOO!

This Sargassum chapter is from the Marine without Borders *Treasures of the Caribbean Collection* and was developed using content provided by Debbie Bartlett Ph.D. of the University of Greenwich and the School for Field Studies in the Turks & Caicos and the Darwin Plus Project.



Images provided by Ard Vreugdenhill & Julietta Castro of Nature Connecting, Andres Bisons Leon of SOS Carbon, Paola Díaz of *Ciencias del Mar y Limnología, Universidad de Costa Rica*, Franziska Elmer Ph.D. of the School for Field Studies and the Sargassum Podcast, Eric Ramos of FINS, Giselle Brady of the Bay Islands Conservation Association, Ligia Collado-Vides Ph.D. of FIU and Eduardo Zuñiga



The *Treasures of the Caribbean* biocultural STEM curricula were developed, edited, and ethnotranslated into Maya [yua] by Robby Thigpen and Hilario Poot Cahun of Marine Conservation without Borders and the *Sayab Miats AC*.



This biocultural STEM curriculum will be included in a textbook titled *Treasures of the Yucatán* and was developed for Indigenous primary schools in Maya communities in Quintana Roo for the *Departamento de Educación Indígena de la Secretaría de Educación de Quintana Roo*.



In collaboration with Florida International University's Institute of the Environment, these biocultural STEM curricula will be tested and validated by Maya undergraduate students from *de la Universidad Intercultural Maya de Quintana Roo*.

Sargazo

Xu'uk'il meyaj: Yaan a wojeltik ba'ax le sargazoo', tu'ux u taal yéetel ba'axten jach ku ya'ala'al tu yo'osal ti' le k'iino'oba'.

Yáax jaats

Xookil: Ba'ax le sargazoo'



Le sargazoo' jump'éeel alga, ba'ale' ba'ax le algao'. U jach k'aaba'e' macroalga, lela' jela'an ti' le k'áaxo'ob a k'ajóoltmaj yóok'ol lu'umo'. Le macroalgao' mina'an u moots, ba'ale' ya'ab ti' le je'elo'oba' yaan ti'ob bix u ch'uuyikuba'ob wa u lechikuba'ob ti' tuunich wa uláak' ba'alo'ob. Le macroalga'oba' jach k'a'abéet ti'ob le k'iino' ti'al u ya'abtalo'ob yéetel ma' tuláakalo'ob ya'ax u boonilo'obi', yaan jejeláasil u boonilo'ob (chak, k'an, chakk'an, etc.).

Ya'ab u jejeláasil le sargazoo', ba'ale' chen le ku k'aaba'atiko'ob *Sargassum flutians* yéetel *Sargassum natans* ku kuxtalo'ob yóok'ol le ja'o', mix ti' ba'ax tak'akbalob, chen bey akliko'ob yóok'ol le ja'o' ti' tuláakal u kuxtalo'ob. Beytuno' ya'ab le k'áaxo'ob je'elo'oba' ku ch'iijilo'ob yóok'ol le ja'o' yéetel ku much'ikuba'ob. U boonilo'obe' k'an wa chakk'an. K'ajóolta'ano'ob bey "*selvas tropicales doradas*" tumen ichilo'obe' ku yaantal jejeláas kuxtalo'obi. Ichilo'obe' jach ma'alob kúuchilo'ob ti'al u je' yéetel u yaantal mejen kayo'obi' beyxan jump'éeel kúuchil tu'ux ku yaantal kuxtalo'ob ta'aytak u ch'éejelo'ob.

Meyaj jun

- Joronts'íibt le wooj ka tukúultik ma'alobo'.

1. Ba'ax le sargazoo'

a) Jump'éeel k'áax	b) Jump'éeel alga	ch) Jump'éeel macroalga
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2. Le je'ela' mina'an u moots, ba'ale' ya'ab ti' le je'elo'oba' yaan ti'ob bix u ch'uuyikuba'ob wa u lechikuba'ob ti' tuunich wa uláak' ba'alo'ob.

a) Macroalga	b) K'áax	ch) Alga
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3. Ba'ax jach k'a'abéet ti' le macroalga'ob ti'al u ya'abtalo'obo'.

a) Ja'	b) K'iin	ch) Lu'um
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4. Bix u boonil le sargazoo'.

a) Box	b) Sak	ch) Chak, k'an, chakk'an, etc.
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5. Tu'ux ku yaantal le sargazoo'.

a) Ichil le k'ak'náabo'.	b) Ichkool	ch) Parcelaa.
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Meyaj ka'a

- Cha'ant le táabsaj: "*Sargazo*"¹ ken ts'o'okoke' ka meentik jump'éeel boonil yo'osal bix u taal ta pool ken a tukultej le sargazo yóok'ol le ja'o'.

¹ https://www.youtube.com/watch?v=YK6DC_MdB3U

Ka'a jaats

Xookil: Tu'ux u taal le saragazoo' yéetel ba'ax ba'alche'ob ku yaantalo'obi'

Le sargazoo' ku taal ti' jump'éeel kuuchil ku k'aaba'atik "Mar de los Sargazos", le je'ela ku p'áatal Oceano Atlántico. Le kúuchil je'ela' jach nojoch, k'ajóolta'an je'ex u asab nojoch kúuchil tu'ux yaan jump'éeelili' k'áax way yóok'ol kaabe'. Tuláakal u ja'il le k'ak'náabo' ch'óoch', ba'ale' te' kúuchila' asab ch'óoch' tumen jach chokoj le chúuchilo', jach ya'ab u yooxoltal le ja'o', beyxan tumen mixtan u nupikubaj yéetel ch'ujuk ja'ob ku taalo'ob ti' chichan k'ak'náabo'ob wa yóok'ja'ob. Le Mar de los



Sargazoso' jump'éeel kúuchil jach ch'eench'enkil, tumen ba'apachta'an tumen *corrientales*, tuláakal le ba'axo'oba' yéetel le jach u sáasil le k'iino' ku meentik u yaantal fotosíntesis, beytuno' ku meentik u ya'abtal le sargazoo'.

Le ya'abkach sargazo ku ch'íijil yóok'ol le ja'o', jump'éeel ma'alob kúuchil ti' ya'abkach ja'il ba'alche'ob tumen ku ts'áik tu'ux u yaantalo'ob yéetel u janalo'ob. Yaan kayo'ob ku k'uchulo'ob u ts'ajo'ob u je'ob te'elo'. Le táankelem kayo'obo' jach ma'alob u yiliko'ob le sargazoo' ti'al u kanáantikubao'ob. Yaan xane' ma'alob u yiliko'ob

ti'al u bin u tséentuba'ob je'ex tiburono'ob marlino'ob yéetel atuno'ob. Le anguila'ob ku taalo'ob América yéetel Europao' ku yaantalo'ob ti' ch'ujuk ja'ob, ba'ale' ku bino'ob te' Mar de los Sargazos ti'al u ts'áik u mejenilo'ob. Ya'ab ch'íicho'ob migratorias, ku máano'ob te' Mar de los Sargazos ti'al u je'elsikuba'ob ikil u bino'ob táanxel tu'ux. Kamp'éeel je'eláas áako'ob ku k'a'abéetkúunsiko'ob le sargazoo' ti'al u ch'íijil u yaalo'ob.

Meyaj jun

- Yéey jaaj wa tuusil ti' le chuka'an tuukulo'ob ku ts'áabal ti' techa'.

Chuka'an tuukul	Jaaj	Tuusil
1. Le sargazoo' ku taal ti' jump'éeel kúuchil ku k'aaba'atik "Mar de los sargazos"		
2. Le "Mar de los sargazos" jump'éeel kúuchil ma' nojochi'.		
3. Le ja' tu'ux yaan le sargazoo' jach táaj ch'óoch' tumen jach chokoj le k'iin te'elo'.		
4. Le sargazoo' ku ya'abtal tumen jach yaan lu'um te' kúuchilo'.		

Meyaj ka'a

- Ti' ba'ax ku k'a'abéetal le sargazoo' ti' le ja'il ba'alche'oba'. Nup le chuka'an tuukulo'obo'.

- | | |
|---------------------------------------|----------------------------------------------------------------------------------------------------|
| 1. Kayo'ob () | a) Ku bino'ob te' sargazoo' ti'al u ts'áik u mejenilo'ob. |
| 2. Táankelem kayo'ob () | b) Ku k'a'abéetkúunsiko'ob le sargazoo' ti'al u ch'íijil u yaalo'ob. |
| 3. Tiburono'ob yéetel atuno'ob () | ch) Ku k'uchulo'ob u ts'ajo'ob u je'ob te' sargazoo'. |
| 4. Anguila'ob () | ch') Jach ma'alob u yiliko'ob le sargazoo' ti'al u kanáantikubao'ob. |
| 5. Ch'íicho'ob migratorias () | e) Uts u yiliko'ob le sargazoo' ti'al u bin u tséentuba'ob. |
| 6. Ja'il áako'ob () | i) Ku máano'ob te' Mar de los Sargazos ti'al u je'elsikuba'ob ikil u bino'ob táanxel tu'ux. |

Óox jaats

Xookil: Ba'ax ts'o'ok u yúuchul te' kúuchil tu'ux ku yaantal le sargazoo'

Tu ja'abil 2011ake' le máaxo'ob ku yaantalo'ob jáal le ja'o' tu yilajo'ob u k'uchul ya'ab sargazo. 2010ake' jump'éel ja'ab tu'ux ya'abchaj chak ik'alo'ob, tu tukultajo'obe' ya'ab alga'ob joka'abo'ob tumen le chak ik'alo'obo', leti' tun le k'ucho'ob te' jáal ja'o'. Ba'ale' ma' beyo', le alga j-k'uch tu jáal le ja'o' leti' le *S. Natas* yéetel *S. Fluitans*, u k'áat u ya'ale' leti' le ku kuxtalo'ob yóok'ol le ja'o'. Tu



tukultajo'ob tune' leti' u seen lu'ubsa'al che'ob tu nojk'áaxil Amazonase', tuláakal le lu'umo' ku bin te' yóok'ja'obo' ku ts'o'okole' ku k'uchul te' k'ak'náabo' beytuno' leti' meentik u ya'abtal le sargazoo', yéetel ku kaxtik tu'ux u bin. Bey tun u k'uchul te' jáalja'obo'.

Be'elajake' ku tukulta'ale' ya'ab ba'ax meentik u k'uchul ya'ab sargazo tu jáal le ja'o'. Yaan u yila' yéetel u k'expajal le iik'o', beyxan u na'akal wa u yéemel le marea'obo'. Ku ya'ala'al

xane' leti' u yach chokotal le ja'o' yéetel u yach ya'abtal CO₂. Tuláakal le je'elo'oba' ts'o'ok u meentiko'ob u yach ya'abtal le sargazoo'. U chowakil tuláakal le ya'ab sargazo yóok'ol le ja'o' k'ajóolta'an je'exbix "Gran cinturón de sargazo del Atlántico". Jach táaj ya'ab sargazo be'elajak k'iine'. Tu ja'abil 2011 ka káaj u tukulta'al ba'ax kun meentbil tumen jach ya'ab u k'uchul le *alga* je'ela' tu jáal u ja'ilo'ob le Caribeo'. Le je'elo'oba' ku pakta'alo'ob yéetel satelite'ob yo'osal u yila'al bix u bin u péeko'ob yéetel tu'ux jáal ja'il kun k'uchulo'ob.

Meyaj jun.

- Ba'ax meentik u k'uchul le sargazo tu jáal le ja'o'. Nup le k'áatchi'oba'.

Ba'ax meentik u k'uchul le sargazo tu jáal le ja'o' yéetel ma' u p'áatal te' Mar de los Sargazos.

U k'expajal le iik'o'.

U na'akal wa u yéemel le mareao'

U ya'abtal áako'ob te' kúuchilo'

Tumen ku pak'a'al tumen wíinik

U yach ya'abtal CO₂

U yach chokotal le ja'o'

Kan jaats

Xookil: Talamilo'ob ku taasil le sargazo te' jáal ja'o'

Le ken k'uchuk le sargazo tu jáal le ja'o' ku tijil yéetel ku káajal u tu'utal u book. Ikil u bin u tijile' ku k'a'abéetal bey kúuchil ti'al u yaantal le xma'baakel ik'elo'obo'. U ya'abtal le sargazo jáal le ja'o'



jump'éeel ba'ax ma' ma'alob ti' le wíiniko'ob taak u báabo'obo'. Le turismoo' ku máansik talamil tumen ya'ab máak ku ch'éenel u taal xíimbal ken u yojelto'ob ya'ab sargazo jáal le ja'o'. Yaan k'iine' le jxiímbalo'obo' ku p'u'ujulo'ob tumen ke k'uchuko'obe' k'aas u yiliko'ob éek' u jáal le ja'o'. Leti'obe' ku ya'aliko'obe' ma' bey u chíikpajal le jáal ja' te' oochelo'ob ku yiliko'ob ti' folletos wa ti' internet.

Le su'ukil ja'o' ku kuxtalo'ob yáanal kaabal ja'. Lela' tumen u juul le k'iino' ma'alo'b u k'uchul te' kúuchilo'. Le su'ukil ja'o' ku ts'áik otoch yéetel janal ti' kuxtalilo'ob je'ex le úuricho' yéetel le k'ixel chakay ku kuxtal

Caribeo'. Wa ya'ab sargazo te' yóok'ol le ja' tu'ux yaan le su'ukil ja'o' mixtan u cha'ik u máan u juul le k'iino', beytuno' ku meenttik u mina'antal le su'uko', wa ku xáantal yanik le sargazo te' kúuchilo' ku meenttik u láaj líimil le su'ukil ja'o'. Uláak' ba'ax bisik talamile' leti' le chukte'obo', tumen ken k'uchuk le sargazo te' kúuchilo'oba', le je'ela' ku pixik le kúuchil tu'ux ku yaantal le kayo'obo' yéetel ku kupik u yiik'o'ob u le mootso'obo'. wa ka xáanak le sargazo ichil le chukte'obo' jujump'ítitil kun bin u ch'ééjsik.

Meyaj jun

- Ba'ax talamilo'ob ku taasik le sargazo ken k'uchuk te' jáal ja'o'. Ts'áaj yáanal le oochelo'obo' le chuka'an tuukul k'a'abéeto'.

Talamil ti'al báab – Talamil ti' su'ukil ja' – Talamil ti' turismo – Ku tu'utal u book – Talamil ti' chukte'ob



Jo' jaats

Xookil: Ba'ax ku meenta'al ti'al u jáawal le taalamilo'oba'

Le talamilo'obo' ku káajalo'ob le ken k'uchuk ya'abkach sargazo tu jáal le ja'o'. Jach talam ka páajchajak u meenta'al ma' u k'uchul le ya'abkach sargazoo'. Ya'ab ba'alo'ob ts'o'ok u meenta'al ti'al



ma' u k'uchul, je'ex u t'i'inil barrera'ob tu beelo'ob, ba'ale' le je'ela' ko'oj ku ts'o'okole' ma' tuláakal tu'ux je'el u páajtal u meenta'ale'. Asab ma'alo'b wa ka meenta'ak jump'éeel barrera ma' jach ko'oje' yéetel bey ka béeychajak u lu'usa'al ken p'áatak mina'an sargazo. Chen ba'ale' le ken ya'abak iik'e' yaan u péeksa'al le nu'ukula' beytuno' le sargazoo' ku máan yáanal. Uti'al u ma'alobtale' k'a'abéet u ts'áabal je'ex redes yáanal, ba'ale' le je'ela mixtan u bin u cha' u máan le áako'ob ti'al ka jóok'oko'ob u ts'áaj u je'ob. U tsela'al jujump'íitil le sargazoo' leti' le u asab ma'alobilo'.

Le sargazo ch'uulo' jach aal. Ts'o'ok u meenta'al barco'ob ti'al u mola'al. Ba'ale' ku tukulta'al le ba'alche'ob ku yaantalo'ob ichilo', lela' ku meenta'al yéetel ya'abkach táan óolal. Le ken k'uchuk tu xuul le ja'o' u lu'usa'al tuláakale' leti' le ba'ax jach k'a'abéet u meenta'alo'. Tractoro'ob yéetel remolque'ob ku k'a'abéetkunsa'al ti'al u séebtal u lu'usa'al. Yaan nukuch rastrillo'ob ku k'a'abéetkunsa'alo'ob ti'al u mo'olol, ba'ale' lela' ku molik xan le arenao'. Je'exbix ka meenta'ake, ma' chen ch'a'abili'. U tse'eel chen tumen wíinike' jach xaan. U k'a'abéetkunsa'al maquina'obe' asab séeb ba'ale' ko'oj, yéetel ku k'askúuntik le kúuchilo' wa ku yach'ik u k'u'ub ja'il áako'ob yano'ob te'elo'.

Meyaj jun

- Ts'íibt óoxp'éeel ba'ax ku meenta'al ti'al ma' u náats'al le sargazo te' jáal ja'o'.

1. _____ 2. _____ 3. _____

Meyaj ka'a

- Teche' bix a tukultik je'el u páajtal u meenta'al ma' u k'uchul le sargazo te' jáal ja'o'. ts'íibtej yéetel bonej.

Bix je'el u meenta'al ma' u k'uchul le sargazo te' jáal ja'o': _____

Wak jaats

Xookil: Tu'ux ku bin le sargazo ku mola'alo'

Le sargazoo' jach ya'ab yéetel jach aal, leebetike' ken mola'ake' ma' náach tu'ux ku bisa'ali', yaan k'iine' chen tu paach le k'ak'náabo' wa ti' jump'éeel solar naats' te' tu'ux ku mola'alo'. U mola'ale' jach ku bisik taak'in. U kaxta'al ba'ax u meenta'al yéetele' ya'ab tuukulio'ob ts'o'ok u taasik, je'exbix u k'a'abéetkuunsa'al ti'al u meenta'al *block* ti'al otoch, beyxan je'exbix yo'och aalak'o'ob, yaan k'iine' ku k'a'abéetal je'ex fertilizantee, etc. Ya'ab máaxo'ob ts'o'ok u kaxtiko'ob ba'ax u meentiko'ob yéetel le sargazoo', ba'ale' u kaxta'al jump'éeel ba'ax bey jach ka u meent u xu'ulul le talamilo' ma' béeyaki'.



U jaajile' ka'abéet u kaxta'al ba'ax meentbil yéetel le sargazoo', kex chen u ti'al ka jóok'ok u tojol ku xupa'al ti'al u mo'olol. Wa ma'e' k'a'abéet u yila'al uláak' bix je'el u kaxta'al taak'in ti'al le je'ela'. Jump'eeel bix u yaantal taak'ine' leti' u ko'ojkiinsa'al u tojol le turismoo', ba'ale' le je'ela' ma' xaane' ka u meent u xu'ulul u taal turista'ob, wa ka úuchuk lelo' yaan u biin k'aasil ti' le turismoo'.

Meyaj jun

- Joronts'íib le ba'axo'ob je'el u páajtal u meenta'al yéetel le sargazo ku mola'al tu jáal le ja'o'.
- Ku k'a'abéetal ti'al u meenta'al báaxal.
- Ku k'a'abéetal ti'al u meenta'al *block* ti'al otoch.
- Ku k'a'abéetal ti'al u meenta'al suum.
- Ku k'a'abéetal ti'al u meenta'al u yo'och ba'alche'ob.
- Ku k'a'abéetal ti'al u meenta'al nook'.
- Ku k'a'abéetal je'ex *fertilizantee*'.

Meyaj ka'a

- Teche' ba'ax je'el a meentik yéetel le sargazo tikino'. Ts'íibtej wa bonej

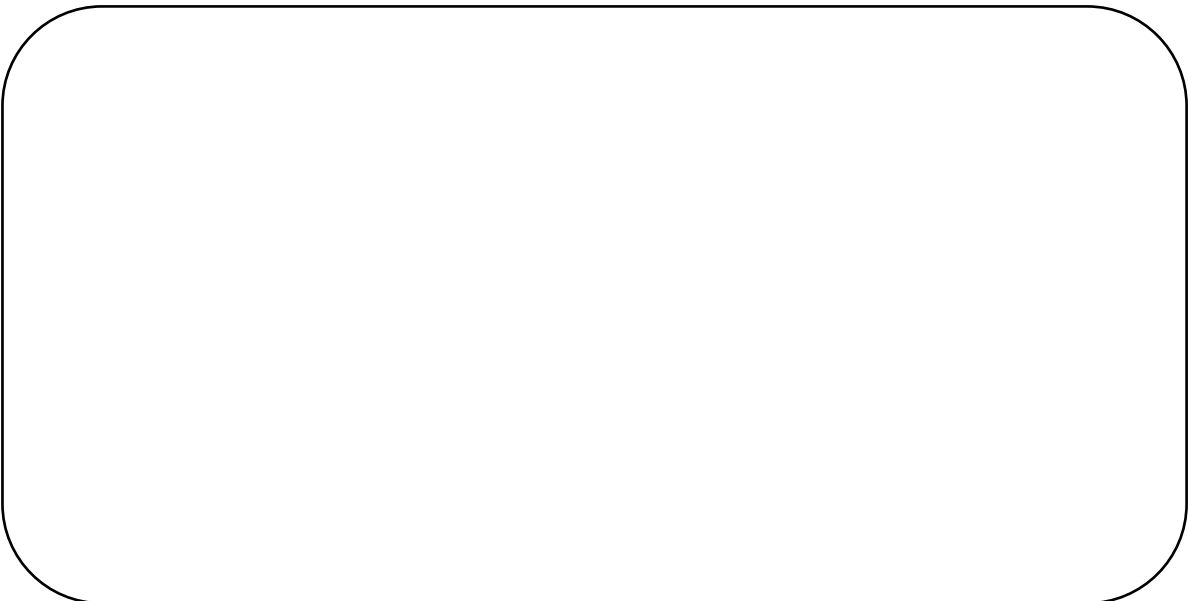
Uk jaats

P'iskaambal

- Nup le chuka'an tuukulo'oba'

1. Ba'ax le sargazoo' ()
a) K'a'abéet tumen ku ts'áik otoch yéetel janal ti' ja'il ba'alche'ob.
2. Tu'ux u taal le sargazoo' ()
b) Ku k'a'abéetal ti' u meenta'al block ti'al otoch, ti'al u janal ba'alche'ob, ti'al fertilizante, etc.
3. Ba'axten k'a'abéet le sargazoo' ()
ch) Jump'éel macroalga ku yaantal yóok'ol ja'.
4. Ba'ax ku yúuchul ken k'uchuk le sargazo tu jáal le ja'o'. ()
ch') Ku taal ti' jump'éel kúuchil ku k'aaba'atik "Mar de los Sargazos"
5. Ba'axo'ob ku meenta'al ti'al ma' u k'uchul le sargazo tu jáal le ja'o'. ()
e) Ku taasik talamil ti' turismo, ti' chukte'ob, ti' su'ukil ja', etc.
6. Ba'ax ku meenta'al yéetel le tikin sargazo ku mola'al tu jáal le ja'o'. ()
i) Ku ts'áabal barrera'ob, ku ts'áabal redes, ku mola'alo'ob yéetel barco'ob, etc.

Je'ex bix a wiliko' le sargazoo' ma'alob yanik yóok'ol le k'ak'náabo', ba'ale' ku taasik jejeláas talamilo'ob ken k'uchuk te' jáal ja'o'. Naats' wáak ka yaantal tu'ux yaan sargazoo', wa ma'e' a'al ti' to'ob ba'ax talamil ku máansik a kaajal. Ts'íibtej wa bonej.







TO'ONE' AJKANAN K'AK'NÁBO'ON MA' SU'UP'IL.
¡BEYXAN TE'EX!



Sayab Miats



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