



吉娃斯愛科學繪本

第04集
水芋田宇宙

卡那卡那富族語

翻譯 / 配音
Pani Kanapaniana
(孔岳中)

吉娃斯愛科學

第04集 水芋田宇宙

卡那卡那富族語



族語全文朗讀



華語全文朗讀



英語全文朗讀



吉娃斯

Na'u

飛弁

Pa'u

乃奈

Ngukau

里昂

Ri'ang



canaa tanukɯ tamna vangvang kakangca



水芋田宇宙



The Universe of the Taro Paddy

慢

原







vo'orua pupunga kakakangca ararakau cu.



新的太空艙來了。



The new space capsule has arrived.

慢

原







tamu'iaru Pa'u pakaraceni mapupuca vo'orua pupunga kakakangca. masii pupunga kakakangca mataa 'aravang kakakangca “apatunu kakakangca.”



飛卉認真地遠端操作著新的太空艙，讓太空艙與太空站進行「太空會合」。



Behuy works hard to operate the remote docking of the new space capsule, so that the space capsule performs a “space rendezvous” with the space station.

慢

原







matirupangu 'apatunu!



會合成功!



The rendezvous is a success!

慢

原







ka'anu cu pakisapatu Pa'u tia cumacu'ura vo'orua pupunga kakakangca tamna capai.



飛奔等不及看看新的太空艙的樣貌。



Behuy can' t wait to see what the new space capsule looks like.

慢

原







sua vo'orua pupunga kakakangca ia, ucani ma'avu 'aravang kakakangca. tūni mumūkū natūngū. tūni pa na kakakangca kinkiu makananu karukarua aracūvūngū.



新的太空艙是一間太空溫室，可以種植蔬菜，也可以進行植物在太空中生長的研究。



The new space capsule is a space greenhouse where they can grow vegetables and conduct research on plant growth in space.

慢

原







'esi na 'aravang kakakangca sika'icunu, karanana mataa 'unai mari. imua sua sinmung cau ia, 'urupaca “makai kuncu rapatu” masii canumu ia, kipapa kuncu rapatu pupunga aravari, ka'anu mupupangu aravari.



太空站裡的重力與地球上不同，所以專家們利用「毛細現象」讓水分沿毛細管方向移動，不會亂跑。



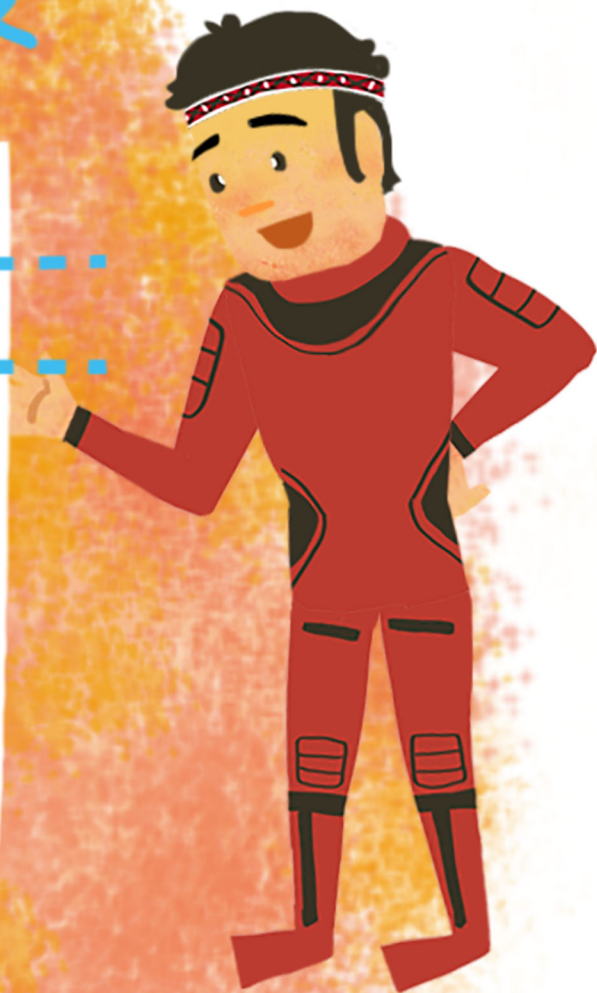
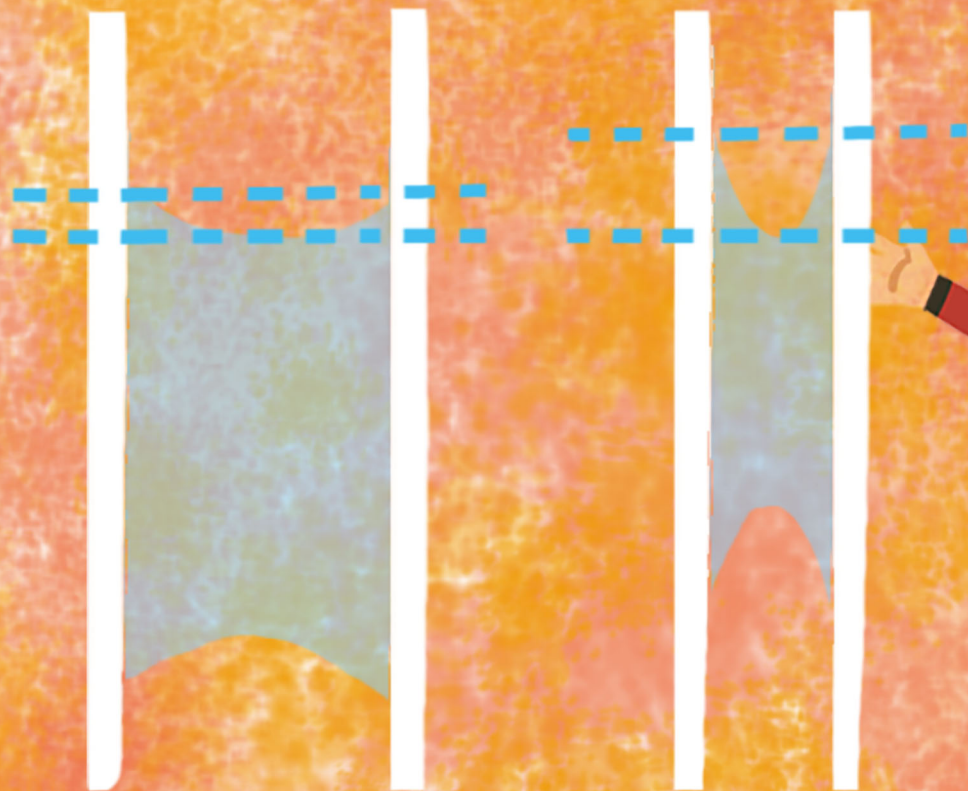
Gravity within the space station is different from that on earth, so scientists make use of the “capillary phenomenon” so that moisture moves along the direction of capillaries and doesn't fly everywhere.

慢

原



毛細現象





canumu fun-cu mataa nakuvu fun-cu 'una nguani sipanukucu. 'intasu siaricucu noo tatia niaranai na 'intasu fun-cu siarikupu niaripiningia 'intasu puruvaku. sua canumu ia, tani aratakunu tukunu 'unai siarisu'uru macara aravari. sua makasia capai ia “makai kuncu rapatu” kisun.



水分子和物體分子間具有附著力，如果這個吸力大於分子間內聚力所產生表面張力，可以讓水克服地心引力而往上方移動，這種現象稱為「毛細現象」。



There is an adhesive force between water molecules and the molecules of objects. If the absorption force is greater than the surface tension generated by the cohesion between molecules, then water can overcome the force of gravity to move upward. This is called the “capillary phenomenon.”

慢

原







makai cirupu pana'un musu'u na canumu, sua koo musikaru na canumu mana'u ia aramuruu kangvang. sua makasia ia nguai sua makai kuncu rapatu.



例如把毛巾放一半到水裡，沒有進入水裡的部分也會變濕，就是因為毛細現象。

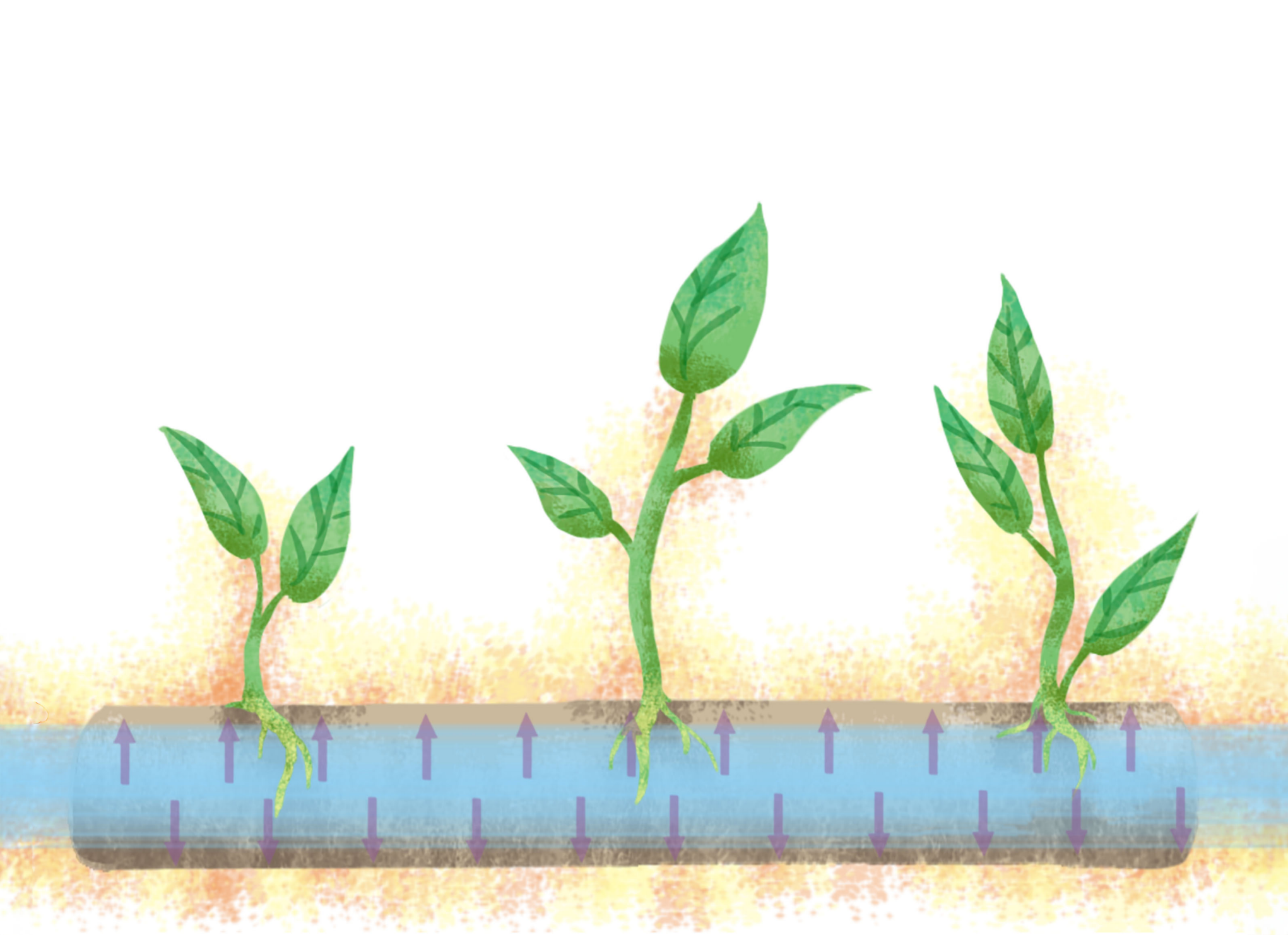


For example, if we put half of a towel in water, even the part not in the water will get wet. This is because of the capillary phenomenon.

慢

原







kakakangca ma'avu 'aravang “unū karukarua” tamna tūtan, 'una 'itumuru ti'i'ingai tarako. masii canumu ia, tūni maica na tarako isua, pusutavvū karukarua tamna ramisi.



太空溫室「植物枕」的水管有無數細微的孔洞，讓水分可以藉由小孔洞滋潤植物的根部。

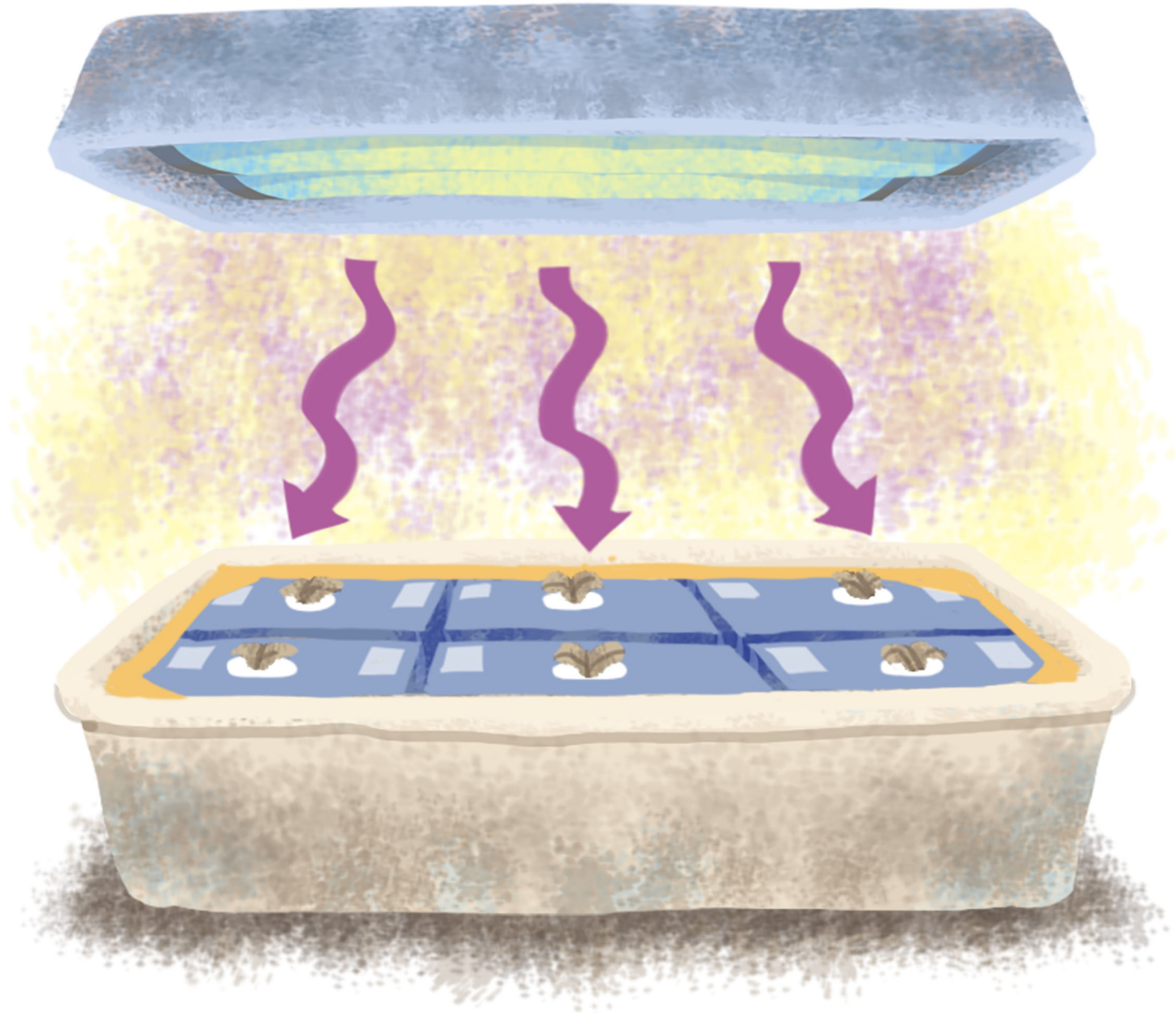


In the space greenhouse the water pipes within “plant pillows” have many tiny holes through which the water can moisten plants’ roots.

慢

原







cucumeni kakakangca ma'avu 'aravang t̄ni pa vanai karukarua parasinang̃
tuvacuku sinang̃ mataa masinang sinang̃, murañ karukarua arac̃v̄n̄r̃.



另外太空溫室也會為植物照射有益的藍光與紅光幫助植物生長。



In addition, the space greenhouse also provides the plants with beneficial blue light and red light to help them grow.

慢

原







koo pacupungu Pa'u, 'esi na 'aravang kakakangca, tuni pa tuisua cau ka'uma!



飛奔想不到，在太空站裡，竟然還可以當農夫呢！



Behuy never thought that he would become a farmer in the space station!







takananga masini. Na'u matatua 'esi na Ivatas tuisua cau ka'uma!



這個時候，吉娃斯在 Ivatas 也正在當農夫呢！



At the same time, Giwas is working as a farmer on Ivatas!

慢

原







paŋapiciɿɿ cu tanɿkɿ. 'uringi in maɸui'i cɿkɿcɿkɿɿ na sanaa. tɿni
aɸasɿvɿɸ vo'oua tanɿkɿ.



割下水芋後，把莖插回田裡，就能長出新的水芋。

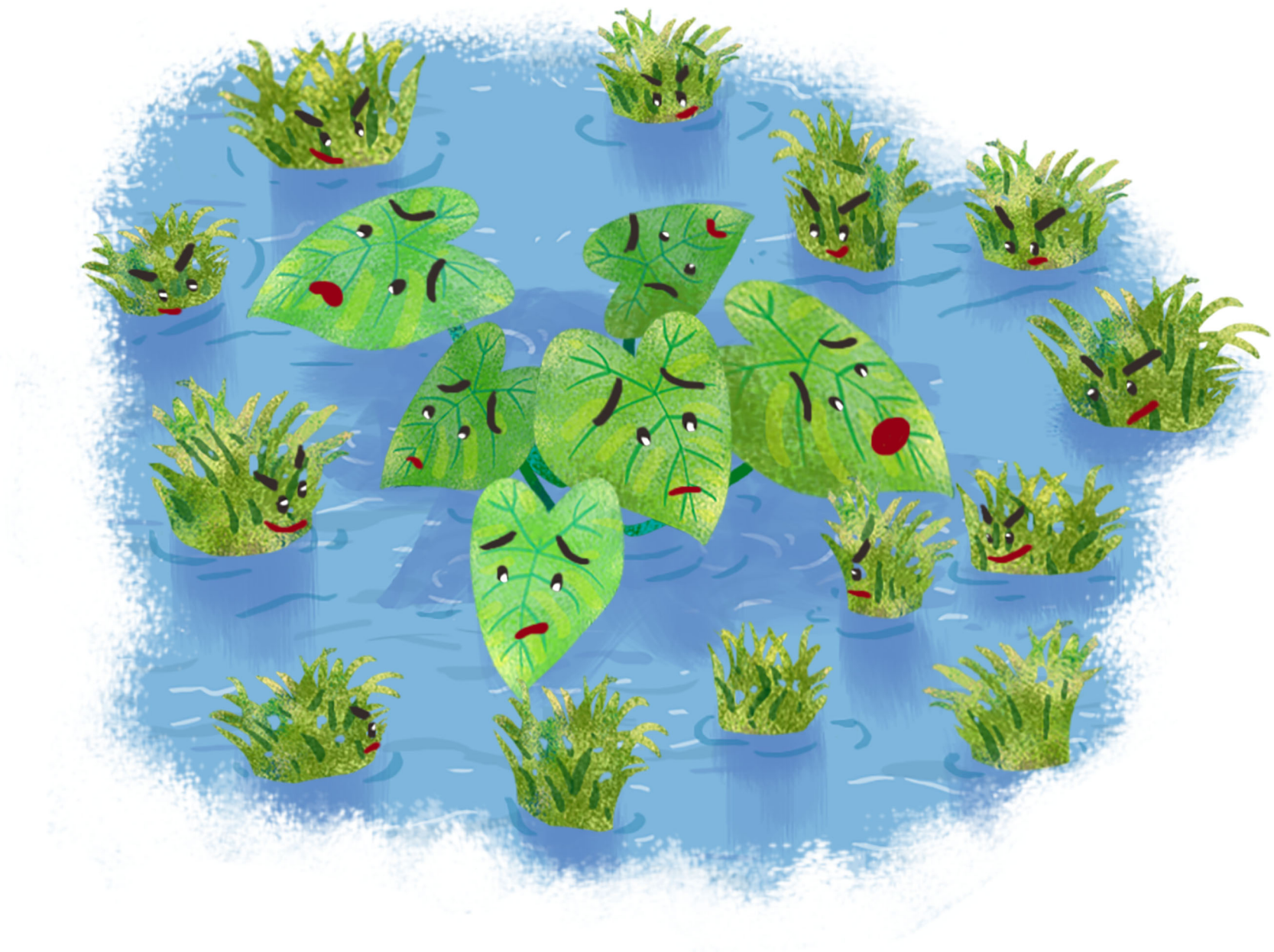


After cutting off the taro, they place the stems back into the paddy so that
it will grow a new taro root.

慢

原







taniara avara'e tia pa tamu'iaru tumatakutaku pupu'u senu. muranu tanuku arasuvuru.



平時也要勤奮去除多餘的雜草，幫助水芋生長。



While the taro grows, they have to diligently weed the paddy to help it grow.

慢

原







makasi cau Tao, naravaru nanaku tamna tanuku, cancani mingane.
tamu'iaru nanaku tamna tanuku, cancani mavura.



達悟族人都說，懶惰的女人芋頭個個飛，勤勞的女人芋頭個個肥。



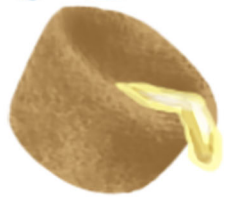
Tao people say, a lazy woman's taro diminishes by the day, but a
hardworking woman's taro gets bigger all the way!

慢

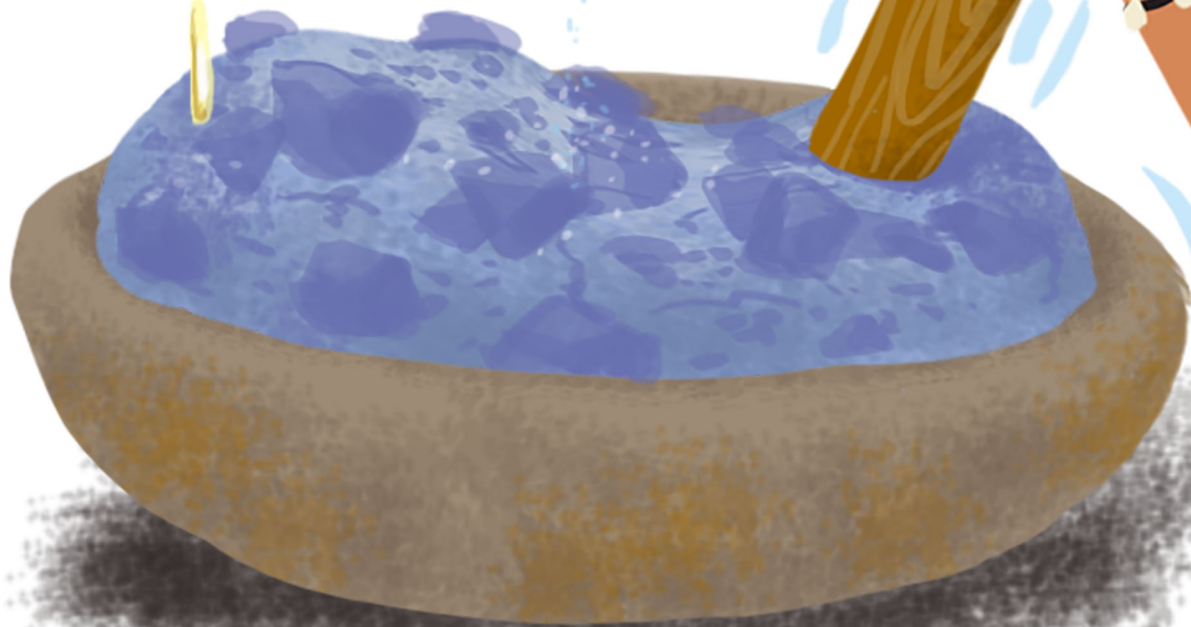
原



油



鹽





pociriꞤn tanꞤkꞤ macuru cu. arikꞤrꞤn makai cunuku. usꞤ'Ꞥn ti'ingi cinapa
'aramꞤ 'urai mataa ti'ingi ma'ain.



水芋蒸熟後，搗成泥狀，加上烤肉油汁和一點鹽。



After steaming the taro, they pound it into a paste and add some oil from
roasted meat and a bit of salt.

慢

原







makasua sa'o'o tanukx cupuku muruvunx cu!



美味的芋頭糕誕生了！



The delicious mashed taro is done!







Na'u natia cu marivici tanuku cunuku mataa maringuna vutukuru mingane na 'aravang kakakangca, nakai surumu maroka sua tamua vatu!



就在吉娃斯想要把芋頭糕和飛魚乾帶到太空站時，聖石竟然不見了！



Just as Giwas wanted to bring some mashed taro and dried flying fish back to the space station, the Pinsbkan magic stone disappeared!

慢

原







nguaiava ucani 'unai 'apasu mari'arating tamua vatu isua mucanu!



原來是一隻陸蟹把聖石夾走了！



It was taken by a terrestrial crab!

慢

原







cau Tao mastaan mintasꞰ pari'apasꞰ si Mazngang tia cu arapiningi!



達悟族最強捉陸蟹高手 si Mazngang 要出動了!



The greatest crab catcher of the Tao people, si Mazngang is on the case!

慢

原







ɯnai 'apasɯ mitɯvɯngu na rasɯsɯnɯa tamna ravuku. tia matɯa nguani tamna tarako, masii tɯni cu koruɯn.



陸蟹躲在草叢的沙土裡。找到牠出沒的洞口，才能把牠挖出來。



The terrestrial crab is hiding in the sand among the grass. They have to find the hole it burrows into in order to dig it out.

慢

原







macuvungu nguani matisa'ʘ 'itumuru 'ʘnai 'apasʘ, nakai ka'anʘ
niati'arating tamua vatu isua.



一連抓了好幾隻陸蟹，都不是夾走聖石的那一隻。



They catch several crabs, but none of them are the one that took the
Pinsbkan.

慢

原







marivivini vangvang nguani rumaripi matisa'ң. mai'i cu mara tamua vatu isua.



最後在大家的圍捕下，終於拿回了聖石。



Finally, after everyone helps to surround the crab, they get the Pinsbkan back.







'apucanən Na'u nima'arating tamua vatu 'ənai 'apasu isua.



吉娃斯放走了那隻夾走聖石的陸蟹。



Giwas let the crab that took the Pinsbkan go

慢

原







vanai sii niatisa'ua nguani 'unai 'apasu 'itumuru curu.



因為大家捉到的陸蟹已經夠多了。



because they already caught enough crabs.

慢

原







si Masagaz kipapa Na'u iavatu na 'aravang kakakangca.



si Masagaz 跟著吉娃斯來到了太空站。



si Masagaz arrives at the space station with Giwas.







cumacu'ura Pa'u kuratumuru na pupunga kakakangca ma'acunu mingane.
cucuru macangcangaru!



飛卉看著滿滿的食物漂浮在太空艙，真是太開心了！



Behuy is so happy to see all the food they brought floating in the space station!





si Masagaz aranai na tasinɨvɨ cumɨcɨ'ura 'ɨnai mari. makasi, nuari tia kani kangvang tuisua cau kakakangca.



si Masagaz 看著觀景窗外的地球, 他說以後也要當一個太空人。

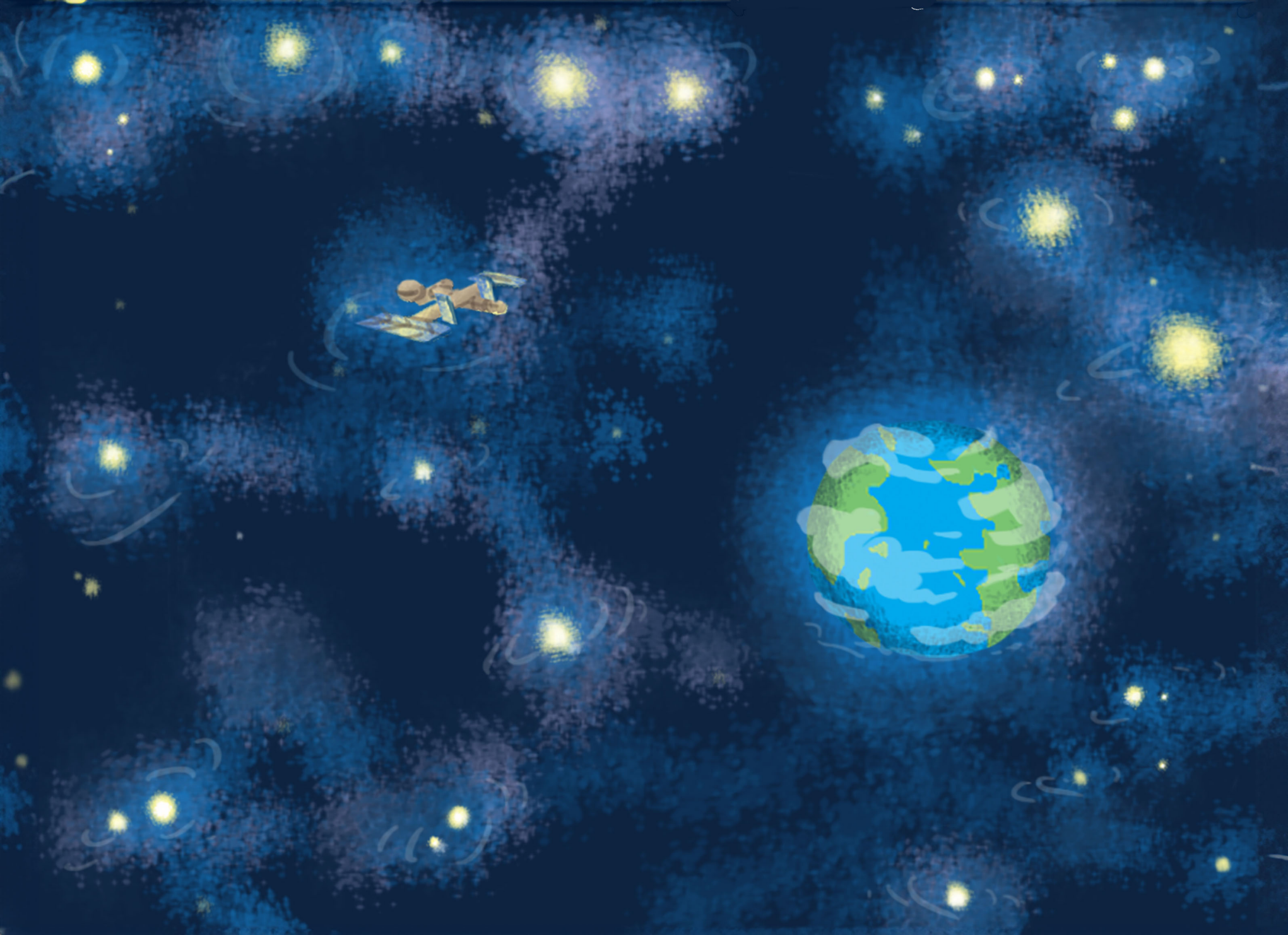


si Masagaz looks at the view of the earth from the window and says he wants to be an astronaut one day too,

慢

原







vanai sii vangvang kakangca ia, 'unai mari tamna 'u'umi.



因為宇宙就是地球的海洋。



because the universe is like the earth' s ocean.

慢

原







sua ikim ia 'u'umi cuku. pacupungu si Masagaz tia tu'avangu na vangvang kakangca pupui'i.

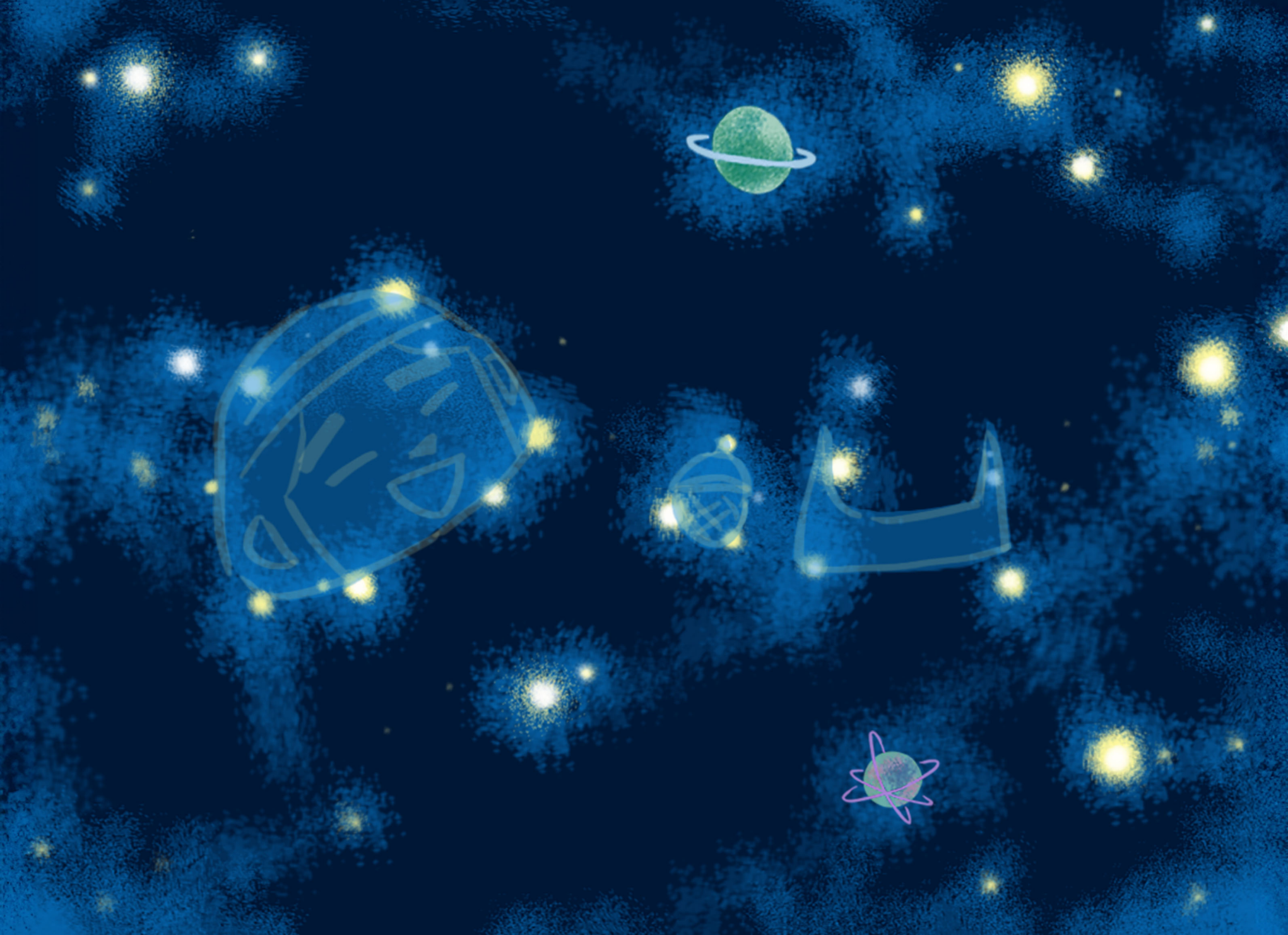


身為海洋民族，si Masagaz 要乘著拼板舟，在宇宙航行。



The Tao are a people of the ocean, so si Masagaz wants to sail the universe in a tatala boat!







si Masagaz hakiri tia musutua.



si Masagaz 一定會成功的。



si Masagaz will surely realize his dream.

慢

原



一般單詞

中文	詞性	族語
遠的	形容詞	pakaraceni
蔬菜	名詞	natungu
生長	動詞	aracuvuru
研究	名詞	kinkiu
幫助	動詞	muranu
去除	動詞	tumatakutaku
多餘的	形容詞	puvu'u
雜草	名詞	cunu
懶惰的	形容詞	naravaru
飛	動詞	mingane
誕生	動詞	muruvunu
出動	動詞	arapiningi
躲	動詞	mituvungu
洞口	名詞	tarako
抓	動詞	matisa'u

中文	詞性	族語
會合	動詞	'apatunu
溫室	名詞	ma'avu 'aravang
重力	名詞	sika'icunu
毛細管	名詞	kuncu rapatu pupunga
毛細現象	名詞	makai kuncu rapatu
水分子	名詞	canumu fun-cu
地心引力	名詞	tukunu 'unai siarisu'uru
吸附力	名詞	'intasu siaricucu
分子間內聚力	名詞	'intasu fun-cu siarikupu
藍光	名詞	tuvacuku sinangu
紅光	名詞	masinang sinangu
宇宙	名詞	vangvang kakangca

科學單詞

吉娃斯愛科學 卡那卡那富族語

第04集 水芋田宇宙

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計畫名稱 「發現天生科學家：原住民族文化科學學習實踐與發展十年計畫」（第二階段第二年）

補助單位二 國家科學及技術委員會（繪本繪圖製作）
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