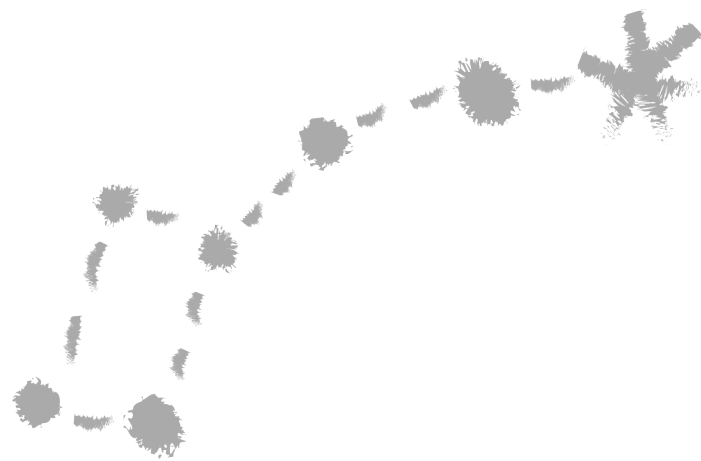




A' Stiùireadh leis na Reultan **Guided by the Stars**

Pasgan airson Sgoiltean
Education Pack for Schools







Pròiseact Dualchas na Mara

Tha am pasgan seo mar phàirt den phròiseact Dualchas na Mara bho Museum nan Eilean. Bheir am pasgan seo beagan fiosrachadh seachad air eachdraidh ionadail a tha a' buntainn ris a' mhuir. Tha 'A' stiùireadh leis na reultan' a' toirt sùil air a' bhàta-iasgach a' Mhuirneag agus na oibseactan a tha anns an taigh-tasgaidh a bhiodh a' cuideachadh na seòladairean bàtaichean a' stiùireadh.

Fhuair a' phròiseact taic bho Bòrd na Gàidhlig agus Museums Galleries Scotland, agus tha Museum nan Eilean taingeil airson an taic sin.

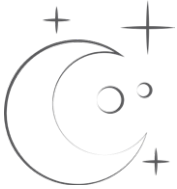
Heritage of the Sea Project

This education pack is part of the Dualchas na Mara / Heritage of the Sea project from Museum nan Eilean. The pack gives an introduction to local maritime history. The 'Guided by the Stars' pack looks at the local fishing boat, the Muirneag, the last sail powered fishing boat to operate from the islands and the objects within the museum collections that are related to navigation for boats.

This project received support from Bòrd na Gàidhlig agus Museums Galleries Scotland, and Museum nan Eilean are grateful for their support.



Stiùireadh airson an Aonad Foghlam air 'A' Stiùireadh leis na Reultan' Ùine = 1 uair



15 mionaidean

Bhideo: A' Mhuirneag

<https://www.youtube.com/watch?v=eP4hLxSx-3E>

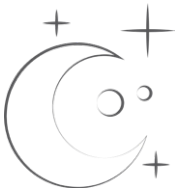
(Dà-chananach)

Tha a' bhideo a' toirt seachad gèarr-iomradh air a' bhàta-iasgach a' Mhuirneag agus tha e cuideachd a' sealltainn an combaist a bh' aca air bòrd.

Tha seo ri fhaighinn mar taisbeanadh cuideachd.

Còmhradh air na bha anns a' bhideo:

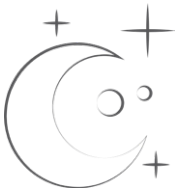
Dè an t-ainm a bh' air a' Chaipitean? Cuin a chaidh a' bhàta a thogail? Dè an aois a bha a' Chaipitean nuair a thoisich e a' sgiobaireachd? Cò mheud iasg a' thilg e bhon bhàta aige? Cò as a thàinig an t-ainm Muirneag?



15 mionaidean

A' stiùireadh leis na reultan – leugh na duilleagan 3-11 (a tha ri fhaighinn anns an dà chànain)

Leugh na paragrafan agus freagair na ceistean.



15 mionaidean

An Seathar/Cathair teth (the Hot Seat) (clas air fad)

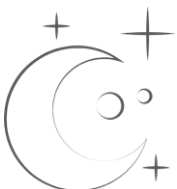
'S urrainn seo a bhith air a dhèanamh anns a' Ghàidhlig neo anns a' Bheurla.

Iarr air cuideigin suidhe air seathar/ cathair (tidsear neo cuideigin eile). Tha iad seo a' dol a' chluich am pàirt aig Caipitean Alasdair MacLeòid.

Tha an còrr den chlas a' dol a dh'fhaighneachd dhaibh ceistean.

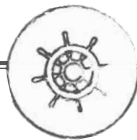
Dè na ceistean a tha thu airson faighneachd dhan Chaipitean?

(Fhaodaidh iad na ceistean gu h-àrd fhaighneachd a-rithist. Dè an t-ainm a th' oirbh? Cò as a thàinig sibh? Dè an t-ainm air a th' air am bàta agaibh mssa.)



15 mionaidean

Cur dath air na buidhinn-reultan a tha air na duilleagan 11-13.



A' Stiùireadh leis na Reultan

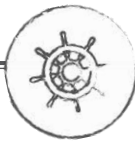
Mus d' thàinig gnothaichean leithid GPS and mapaichean fiùs, bhiodh seòladairean a' cleachdadh na reultan agus dòighean eile airson siubhail mun cuairt an t-saoghal. Cha bhiodh iad a' seòladh ro thrì anns an dorchadas ach nuair a bha, bhiodh iad a' cumail sùil a-mach airson an reul-iùil (guiding star). B' e seo an North star neo Polaris neo Ursa Minor ann an saidheans na reultan. Bha fhios aca air na reul-bhuidhinn (constellations) leithid An Crann (The Plough) agus Crios an t-Sealgair neo an t-Slat (Orion's belt). Nuair a bha na reul-bhuidhinn ri fhaicinn bha fhios aca càite an robh iad, gu h-àraidh an reul-iùil. Bhiodh e comasach cumail gu deas mu bha an reul seo air do chùlaibh agus an t-Slat air do làimh chli neo anns an Ear.

Thàinig an teicneolas air adhart an uairsin le mapaichean, inneal-iùil an sextant agus an combaist. Rinn na rudan seo stiùireadh tòrr nas fhasa. Tha sextant a' measadh an ceàrn eadar dà rud agus tha e a' dèanamh seo le dà sgàthan. Can mu tha solais a' ghrian agad a' deàrrsadh agus chi thu am faire (horizon) tha e comasach obrachadh a-mach an ceàrn (angle) eadar an dà rud. Tha seo feumail an uairsin airson innse air mapa càite a bheil am bàta. Tha an combaist feumail airson stiùireadh nuair nach eil solais bho na reultan mar a' ghrian neo na rionnagan.

Anns na cruinneachan againn, tha trì oibseactan sònraichte a thaobh a' stiùireadh ann. A' chiad oibseact 'se an inneal-iùil, tha leabhar beag Gàidhlig air Gaelic Astronomy le DM Connell agus combaist.



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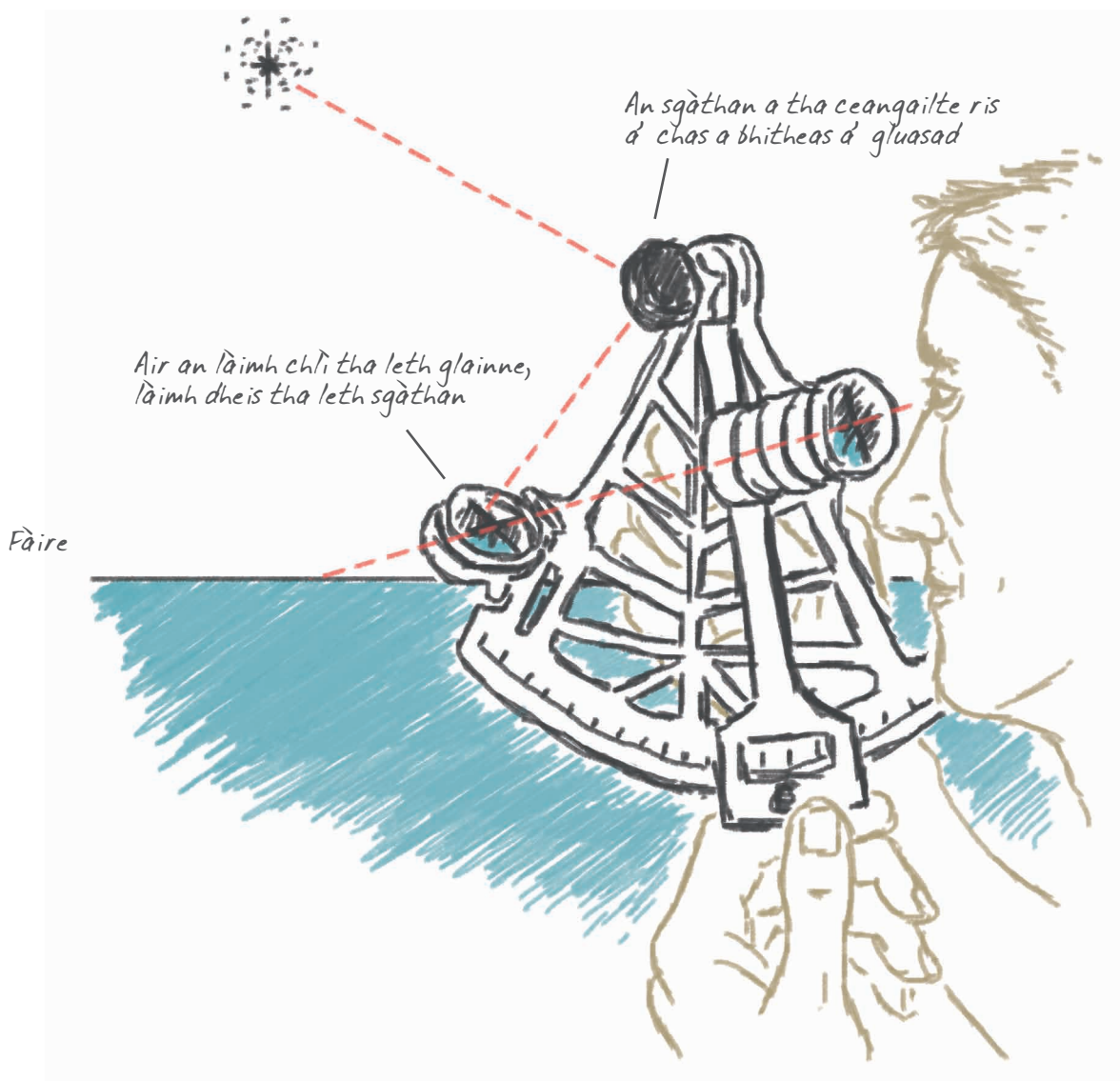
An inneal-iùil – chaidh seo a chruthachadh leis a’ chompanaidh Kelvin & Hughes Ltd, Lunnainn ann an 1958.

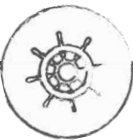
Inneal-iùil - Sextant, 1958 Chaidh an inneal-iùil seo a thoirt seachad gu na Sea Cadets Steornabhagh leis an Cathraiche aig a’ chompanaidh Clan Line Steamers Ltd.



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Reul-iùil





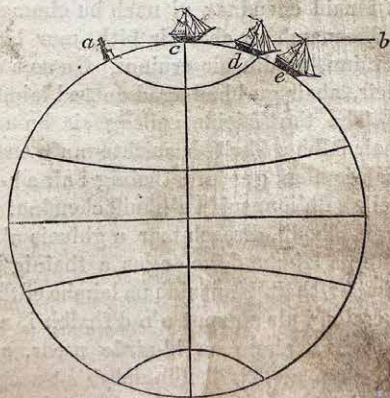
CUMADH AN TALAIMH.

11

a tha a chuid is isle, no "slige na luinge," mar a theirear, a' dol as an t-sealladh. Tha, ceum an deigh ceum, tuilleadh agus tuilleadh dhith a' dol as an radharc air taobh thall na cruinnead, gus fadheoidh a' bheil barr nan seol agus nan crann a' teicheadh as o' shùil, mar neach a' dol as an t-sealladh air cùl cnuic chruinn. A chum so a dheannuh ni's soilleire, faic dealbh 1, a leanas.

Abair gur e 'n cuspair aig a neach 'na sheasamh air toman os ceann a' chladaich. Cha chomasach dha ni air bith fhaicinn fo 'n sgrìob a b, do bhrìgh gu bheil bolg an talaimh a' tighinn eadar iad agus a shùil.

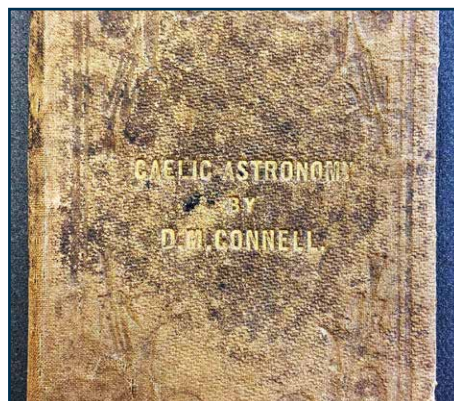
Dealbh 1.



Ann an dealbh so, chì thu 'n long a' seoladh air

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Gaelic Astronomy by D M Connell - Ged a 'se tiotal Beurla a tha air aghaidh an leabhar seo, tha na bhroinn uile ann an Gàidhlig. Tha an sgrìobhadair ag innse mu planaidean agus na reultan ann an Gàidhlig ach tha dealbhan na luib cuideachd mar an fhear seo. Chaidh seo a' sgrìobhadh an toiseach ann an 1856. Bh'ann le Calum MhicLeoid a 17 Gearannan a bha an leabhar seo.



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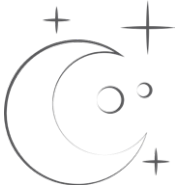


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Combaist – chaidh a' chombaist seo a dhèanamh le John Lilley & Gillie Ltd. Tha a' chompanaidh fhathast a' dol ann an North Shields on a thoiseach iad ann an 1812.

Navigation Activities Running Order

Total time = 1 hr



15 minutes

Video: A' Mhuirneag

<https://www.youtube.com/watch?v=eP4hLxSx-3E>

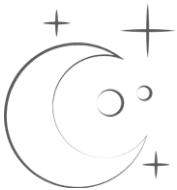
(Bilingual)

Video provides an introduction to the fishing boat the Muirneag and shows the compass that the vessel used for navigation.

Also available as a presentation

Discussion based on the video:

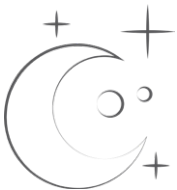
What was the Captain called? When was the boat built? How old was the captain when he first became a captain? How many fish did he throw over the side? What was the Muirneag named after?



15 minutes

Navigation – look at page 3 - 11 (available in both Gaelic & English)

Read the paragraph and answer the questions



15 minutes

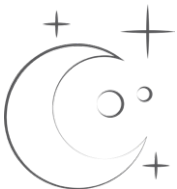
Hot seat activity (whole class) (Can be done in Gaelic or English)

Have someone in the hotseat (could be teacher or pupil) to pretend to be Captain Alexander MacLeod.

What questions would you ask the captain?

Could be similar to the questions above.

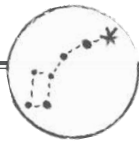
What is his name? Where did he come from? What was the name of his boat?



15 minutes

The Constellations colouring in pages

Colour in the Constellations.



Guided by the Stars

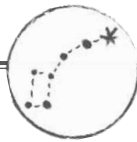
Before such things like GPS and even maps, sailors would navigate the seas by using the planets and constellations to sail around the world. Even though they would avoid sailing as much as possible in the dark, they could still navigate if they could see the stars, Polaris or the North Star especially. It's also known as Ursa Minor in astronomy. Sailors could at least identify the North star, the plough and Orion's belt which would help them figure out where they were. It was possible to navigate South if you kept the North star behind you and Orion's belt to your left or east side.

When technology advanced more accurate maps, the use of sextants and compasses made navigation a lot easier. The sextant measure the angle between two objects and it does this through two mirrors. If you can line up the horizon and the sun in one mirror to reflect in the other until you can see it through the eyepiece, the angle on the scale can tell you where you are by using this latitude on a map. The compass is useful for navigation when there is very little light from either the sun or stars.

There are a few objects connected with navigation within the museum collections. We have a sextant from 1958, a small book on Gaelic Astronomy by D M Connell and a compass. There is more information on each object within the photos.



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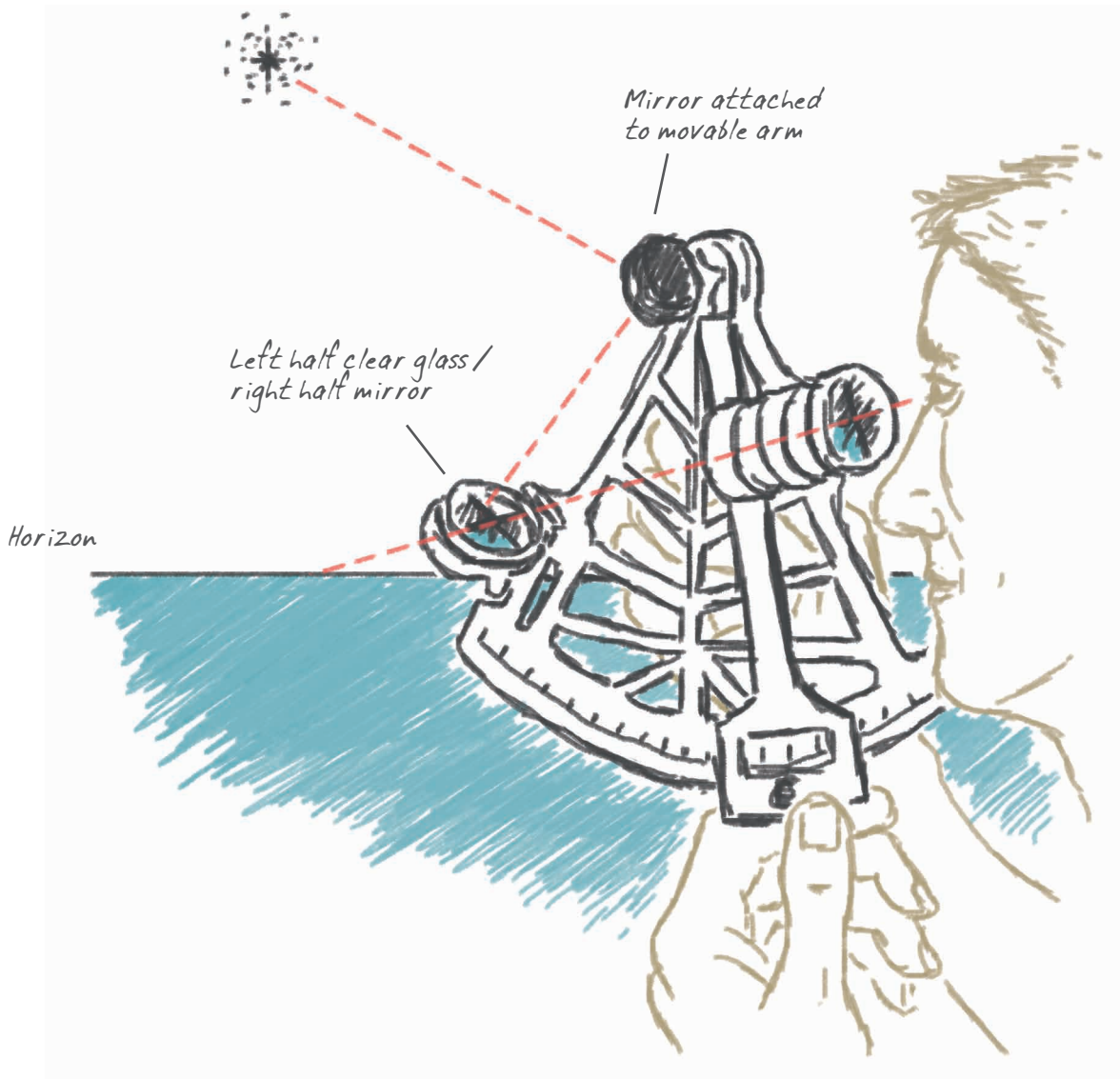
The sextant was made by the company Kelvin and Hughes Ltd, London in 1958

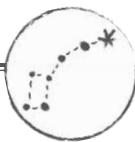
This sextant was presented to the Stornoway Sea Cadets by the chairman of the Clan Line Steamers Ltd on 30th May 1958.



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Polaris / North Star





CUMADH AN TALAIMH. 11

a tha a chuid is isle, no “slige na luinge,” mar a theirear, a’ dol as an t-sealladh. Tha, ceum an deigh ceum, tuilleadh agus tuilleadh dhith a’ dol as an radharc air taobh thall na cruinnead, gus fadheoidh a’ bheil barr nan seol agus nan crann a’ teicheadh as o’ shùil, mar neach a’ dol as an t-sealladh air cùl cnuic chruinn. A chum so a dheannuh ni’s soill-eire, faic dealbh 1, a leanas.

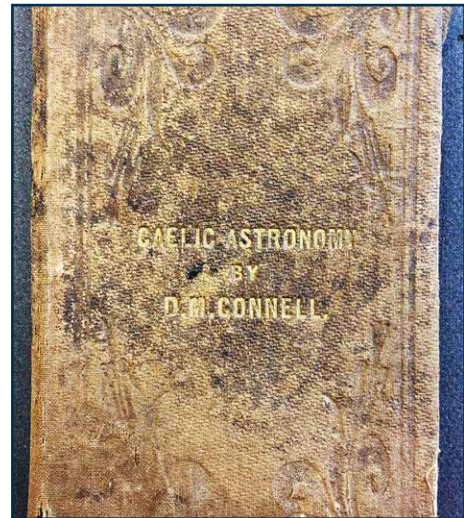
Abair gur e ’n cuspair aig a neach ’na sheasamh air toman os ceann a’ chladaich. Cha chomasach dha ni air bith fhaicinn fo ’n sgrìob *a b*, do bhrìgh gu bheil bolg an talaimh a’ tighinn eadar iad agus a shùil.

Dealbh 1.

Ann an dealbh so, chì thu ’n long a’ seoladh air

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The book on Gaelic Astronomy by D. M Connell. Although the title is in English, the rest of the book is in Gaelic. The writer talks about the planets and the constellations in Gaelic with diagrams. This was first written in 1856 and belonged to Malcolm MacLeod from 17 Garenin.

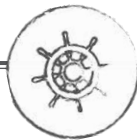


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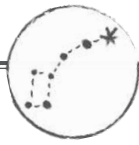
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This compass was made by the company John Lilley & Gillie Ltd in North Shields where they are still making compasses and other maritime equipment since they started back in 1812.



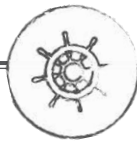
Ceistean

1. Dè an t-ainm Gàidhlig agus na h-ainmean eile a tha th'air an 'guiding star'?
2. Dè a th'ann am reul-bhuidhinn?
3. Ainmiche dà buidhinn-reultan a tha anns an teacsa.
4. Ainmiche na trì oibseactan a tha anns an taigh-tasgaidh a tha a' buntainn ri stiùireadh bhàtaichean.
5. Cò rinn an inneal-iùil?
6. Cò fhuair an inneal-iùil bhon chompanaidh Clan Line Steamers Ltd?
7. Cò aig a bha an leabhar Gaelic Astronomy?
8. Dè bhliadhna an deach an leabhar a' sgrìobhadh?
9. Dè an taobh a bhitheas snàthad a' chombaist a' dol?
10. Càite an deach a' chombaist air a dhèanamh?



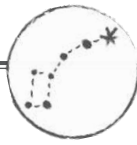
Questions

1. What are the other names for the 'guiding star'?
2. What is a constellation?
3. Name two constellations mentioned in the text.
4. Name the three objects within the museum that are related to navigation.
5. Who made the sextant?
6. Who received the sextant from the company Clan Line Steamers Ltd?
7. Who used to own the Gaelic Astronomy book?
8. Which year was the book written in?
9. In which direction does the needle of the compass point to?
10. Where was the compass made?



Freagairtean airson na ceistean

1. Reul-iùil, Polaris agus North Star.
2. Buidheann de rionnagan.
3. An t-Slat neo Crois an t-Sealgair (Orion's Belt), An Crann (the plough or ursa major).
4. Inneal-iùil, leabhar Gàidhlig air reultan agus an combaist.
5. Kelvin & Hughes Ltd.
6. Fhuair na Sea Cadets Steòrnabhagh an inneal-iùil.
7. 'S ann aig Calum MacLeòid a bha an leabhar.
8. Chaidh an leabhar a' sgrìobhadh ann an 1856.
9. Gu Tuath.
10. North Shields.

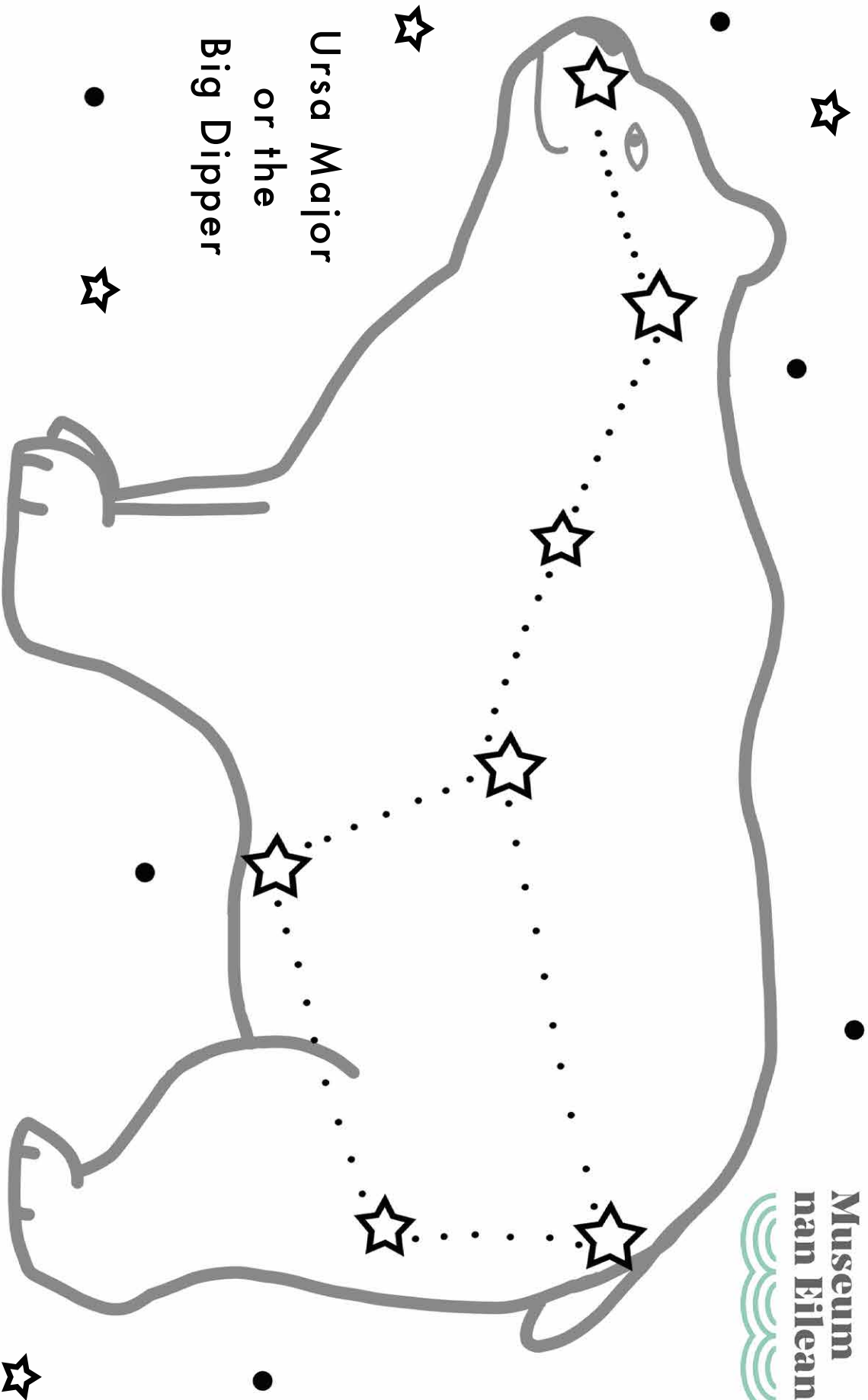


Answer to the questions

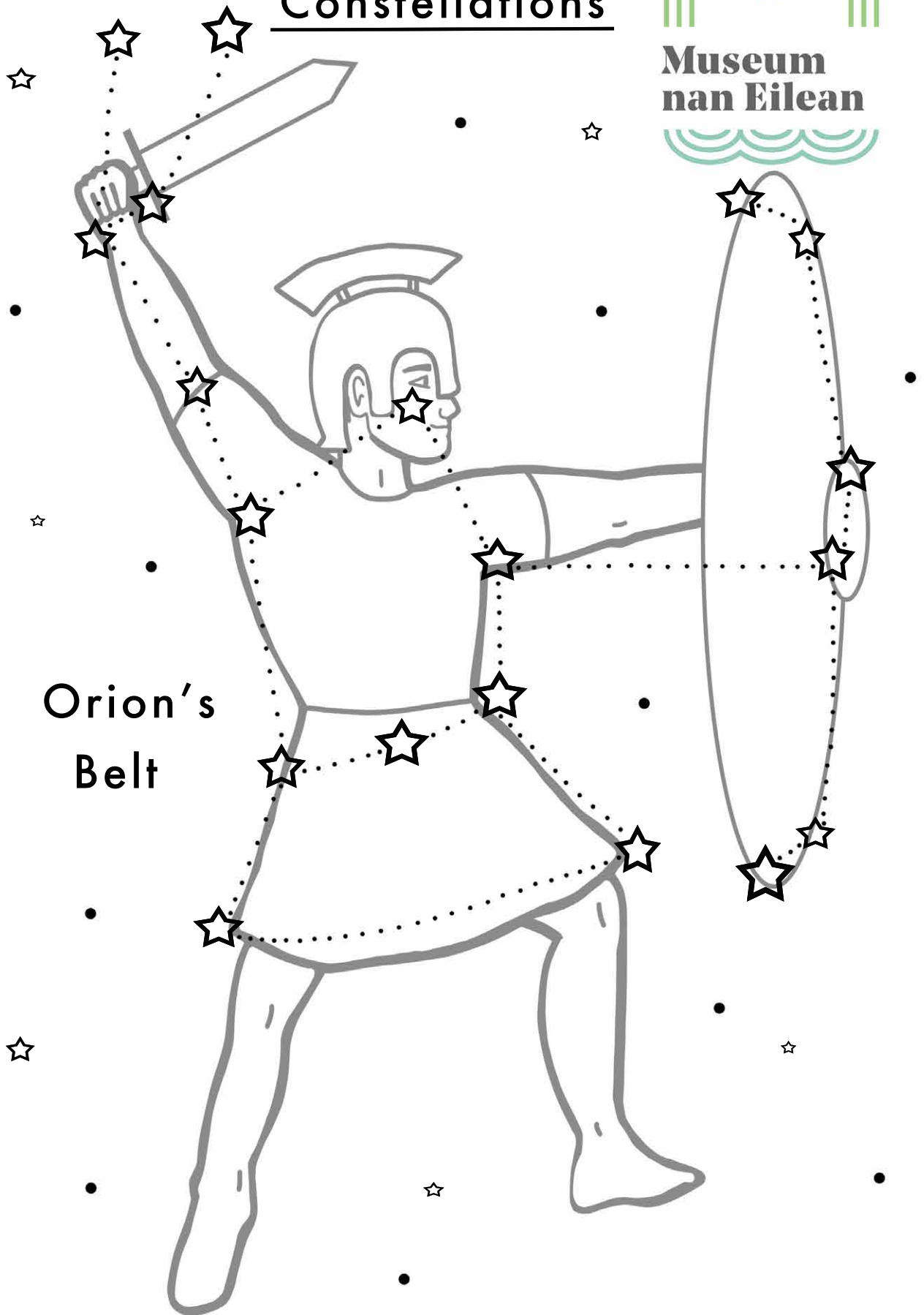
1. Polaris or North Star.
2. A constellation is a group of stars.
3. Orion's Belt or the plough (ursa major).
4. Sextant, Gaelic astronomy book and a compass.
5. Kelvin & Hughes Ltd.
6. The Stornoway Sea Cadets received the sextant.
7. The book belonged to Malcolm MacLeod.
8. The book was written in 1856.
9. The compass points North.
10. North Shields.

Colouring In Pages

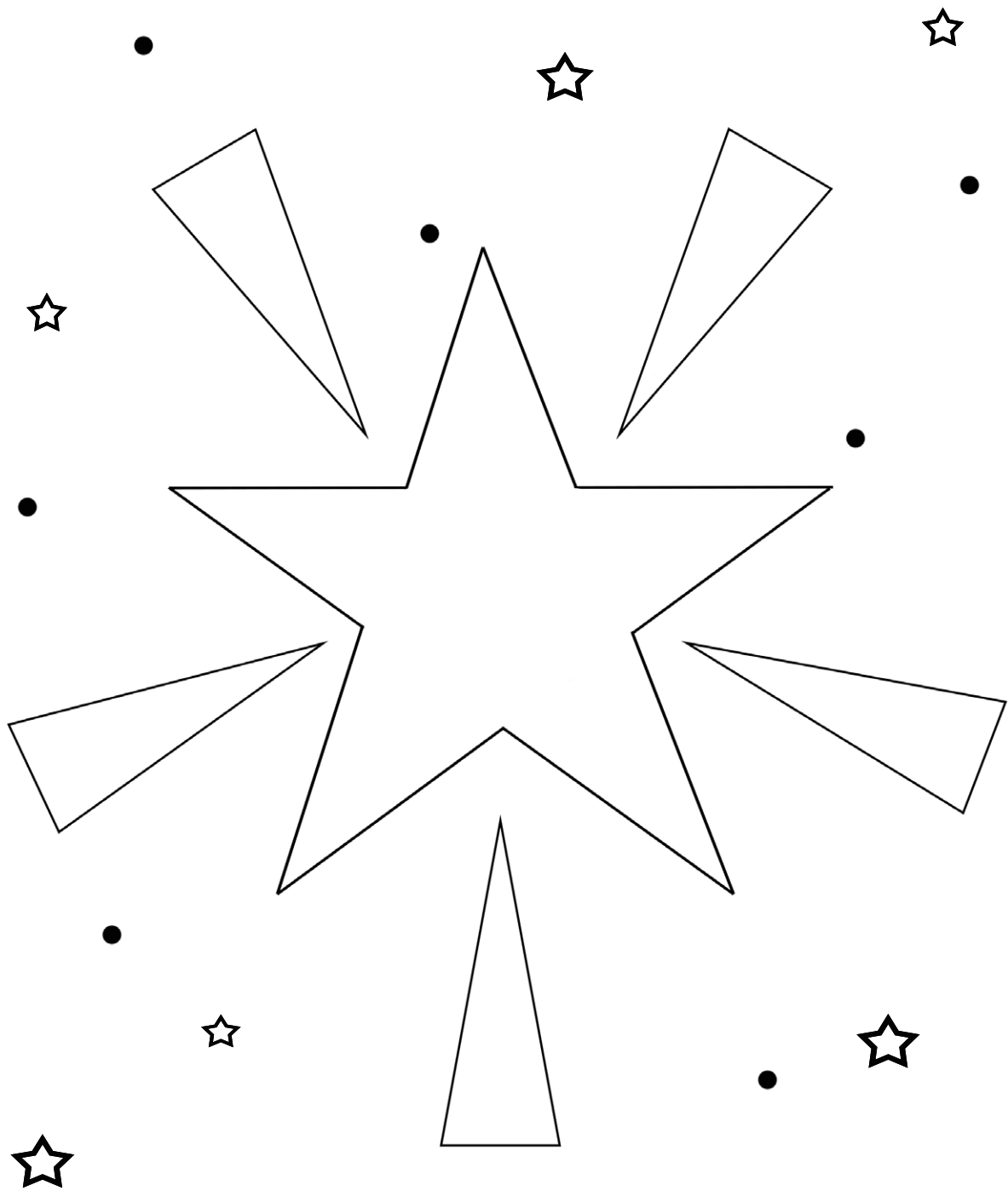
Constellations



Constellations



Orion's
Belt



Polaris
or the
North Star



CO M B A I S T



Tuath

N



W

Siar

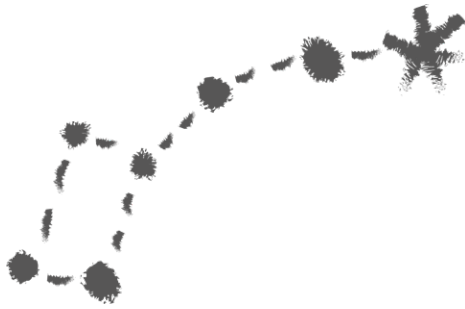
E

Ear

S

Deas

CO M P A S S



A' Stiùireadh leis na Reultan

Guided by the Stars

