

# Armchair Treasure Hunt 2017

## Answers from the Pathfinders

### Hunt themes and approach

The hunt PDF document is entitled '7,4,4' - a crossword-style clue for 'Another fine mess' \*. This is a first clue to the theme of the hunt: **Mess**. Or rather the themes of the hunt, which are all based around words/names beginning with **Mess**. The five most obvious are clued by the ATH Scoreboard i.e.

- Olivier **Messiaen**
- Lionel **Messi**
- Mr **Messy**
- The battle of **Messines**
- Charles **Messier**

The River **Mess** in Luxembourg also plays an important role, and there are other less prominent Mess connections, including **Messalina** (with her connections to Roman Britain and the treasure location), **Messerschmitt** and **Messel**.

All of this points to the treasure location in **Messing**, Essex. Both literally, and also through the need to fix mess in order to find it. The (Mr.) Messy theme yields nothing of real use; we can only locate the box by sorting out this mess using the other main themes.

(\* At a stretch, **Oliver** Hardy's "Another fine **mess**" might also be a link to **Olivier Messiaen**)

### The route to the box

The Mess theme and other clues (such as Inworth village sign, the Messing coat-of-arms armorial leftovers, and the re-translated Blechbläser), hint at the village of Messing in Essex, as the treasure location. This is confirmed by the "Night Sky" solution which begins:

**FIND AN ESSEX PLACE AMID EVERY EIGHTH BOX IN SYRIA**

This is MESSING (found from every 8<sup>th</sup> hexagon in Messi's Syrian journey.) The directions continue:

**GO W FROM CH TURN L**

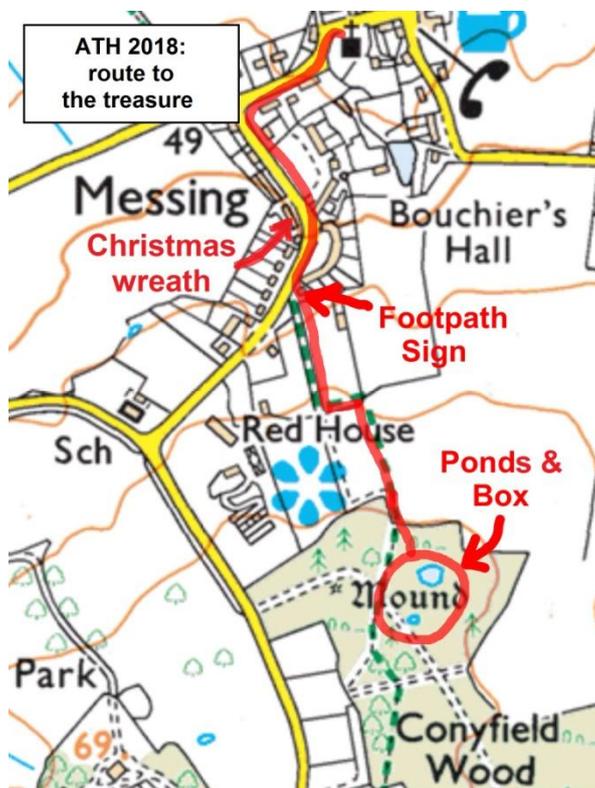
From Messing Church, go west along Kelvedon Road and turn left down School Road. Then we...

**PICK UP MESS**

This means we should metaphorically pick up the River Mess, following its towns downstream. Taken literally it is an instruction pick up the directions on the blue bordered images, passing the Christmas wagon-wheel wreath near Messing Green, then turning onto the public footpath at the [sign](#). The footpath heads into Conyfield wood where we then follow the pictorial clues – broken stile, Y-shaped tree and blue post – to the smaller of the two ponds.

The 'add sender to stamp' bird code then tell us that the treasure is IN FALLEN TREE, and the Astronomical code pinpoints it as being IN A TREE CLEFT.

The route looks like this:



## Story of the hunt

Our hunt began, as often is the case, with printing it out and spreading the pages all over the kitchen table, in order to find the 'Messy' order. We made steady progress on the more straightforward codes; by Christmas we even suspected the treasure might be in Conyfield Wood, based on clues to Messing, the public footpath sign, and an internet photo of a similar blue post. This was confirmed just before New Year when we got the River Mess connection, and were able to sequence the pictures. Solving the postcard fronts gave us Aldebaran, which was in turn enough to understand the Night Sky / Tea Stain code (the hunt has been crying out for a decent astronomy code – this was a great one) which allowed us to decode the final direction to the box, but we were still missing the preceding "Add Sender to Stamp" direction.

Determining the postcard senders was one of the hardest elements of this year's hunt – they were expertly disguised, and their subjects were obscure. (We look forward to finding out why they were chosen – was Bayezid II selected because he's needed for some unsolved code/connection, or because the setters were forced into using OTTOMAN from the heraldry and needed the 'B' and 'I', or just to make it damn hard?!) We also weren't convinced that a simple addition of the sender & stamp initials would work, nor that the letters would be in page order. However the presence of 'REE' at the end made us suspect TREE and so, with a possible direction of 'POST THEN TREE', Mitch and his wife made the trip up to Messing on New Year's Day.

The pictorial directions worked perfectly – starting with the strange wagonwheel/wreath decoration that had eluded us on Google Earth. (The owner said Mitch was the fourth person she'd seen photographing it!). However at the pond, POST THEN TREE, didn't make sense, and the trail went cold. After a discussion with Matt (at that point staying with friends on the outskirts of Paris – sadly no visit to Saint Chapelle, Musee de Cluny or Sainte Trinite this time!) we decided that TH could be LL, meaning it could say something like BY FALLEN TREE. There was indeed a prominent fallen tree, but despite extensive searching, and without the confidence in this clue, we came away empty-handed, convinced there must be additional directions hidden in the remaining codes.

With a week to go we were a little stuck. Most of the main codes (or at least, those we were aware of!) had fallen, but we'd made no progress on the Syria map nor the Messines letter grid. We tried lots of false leads, such as arranging the hexagons without their sides matching, or applying interverson to the letter grid. However, when we solved some of the remaining postcard senders (such as Bharata, who we'd thought of as a woman, JR Smith, who we'd thought of as Iron Man, and Roo, who we'd thought of as an actual polar explorer) we realised that we needed to drop all our pre-conceptions and assumptions, and revisit the remaining codes with fresh eyes.

For the hexagon code, we decided the solution needed all sides matching on colour. Anything else just wouldn't look right in the solution! To help solve this, we wrote a ropey VBA program. Our skills are not up to tessellating 65 hexagons into the irregular outline of Syria – so we looked for the largest regular shape that would fill as much space as possible, leaving a simple manual task for the rest. This shape proved to be a tilted rectangle of width 7 hexagons and depth 6 hexagons (in the finished layout, its corners are at Azophi, Turunga Leela, Swan & Treasure Chest.) However VBA is not renowned for its speed, nor was our algorithm in any way efficient - so while it happily pumped out all possible 3x3, 4x4 and 5x5 arrangements, beyond that it slowed down markedly. The 7x6 would probably have not finished by the hunt deadline (I'd be interested to see the more-efficient algorithms for tiling Syria that the teams came up with!) However it did manage to generate the dozen or so 5x6 combinations, and it was relatively simple to find the two that would join together into one 7x6 matrix. This fit perfectly into Syria – with Messi and the Goal in the right places (perhaps in retrospect this constraint should have been included in the code to speed things up – but we weren't certain about the start point because of the isolated hexagon top-right) and the remaining pieces were easy to fit into the outlying corners.

The 'step back' required for the Messines letter grid was to realise that Jeanne Loriod had absolutely no connection to Messines, and that it was the Messier number of the hexagon we needed. Even then, the Trifid code did not fall that easily – there are some dodgy free implementations on the web, which led us to think the period might not be the usual 5 – so we setup a spreadsheet to decrypt Trifid, allowing both the key and period to be varied. Somewhat annoyingly, the resulting key and period was exactly what we'd originally thought – the only other wrinkle being to remove GEOGRAPHY from the ciphertext before decoding.

When none of these remaining codes yielded further directions, we knew that we must have been in the right spot all along. Rather than traipse back to Messing, we settled for a virtual find, to add ourselves to the finders list.

This has been a very enjoyable hunt, with interesting themes, and some superb codes that made us go 'wow!' Although there are a few things we haven't quite understood – like the use of all the different Mess themes in the hexagon answers – we were able to solve much of the hunt just before the deadline – so the level of difficulty was, for us at least, about right. All of the challenges were logical and 'fair', with some yielding clues to help tackle others – always good! Particularly impressive were the anagrams at the heart of the hexagon letters and the France map. Quite how you managed to come up with these, we don't know. And then to get a near third anagram out of Messi's route! The hunt was also very strong visually – the poster, the night sky map and the assembled hexagons, soundtracked by Messiaen's ethereal music, gave the hunt an appropriately mystical feel.

Thanks to your whole team for the considerable effort you must have put in – far from being a 'mess', this was a classic, tightly-constructed treasure hunt that will live long in the memory!

Matt Hulbert (captain)  
The Pathfinders  
January 2018



## Mr Messy and his thread

Mr Messy is holding a messy thread. This can be used to assemble the 12 page like this (taken on the very first Saturday of the hunt!):



The resulting single thread runs from Mr Messy on to the treasure chest on p4 (indicating that, to find the treasure, we have to fix his mess - rather as Mr Messy becomes neat & tidy in his story.) Each of the hexagonal images relates to one of the “Mess” themes of the hunt – see ‘The hexagonal images’ at the end of this document for details. The first significant letter of each answer, taken in Mr Messy order, yields the following message:

**HAPPY XMAS. EPIC NEW YEAR SORTIE FIXING MESS. LUCK AND LOVE FROM BRUCE HINDSIGHT.**

As well as being the traditional ATH Christmas message, it identifies our mission as being to fix mess, in order to solve the hunt. In keeping with its ‘messy’ origins it doesn’t give us much else, though does help to identify the more difficult images (through their starting letter and mess connection.)

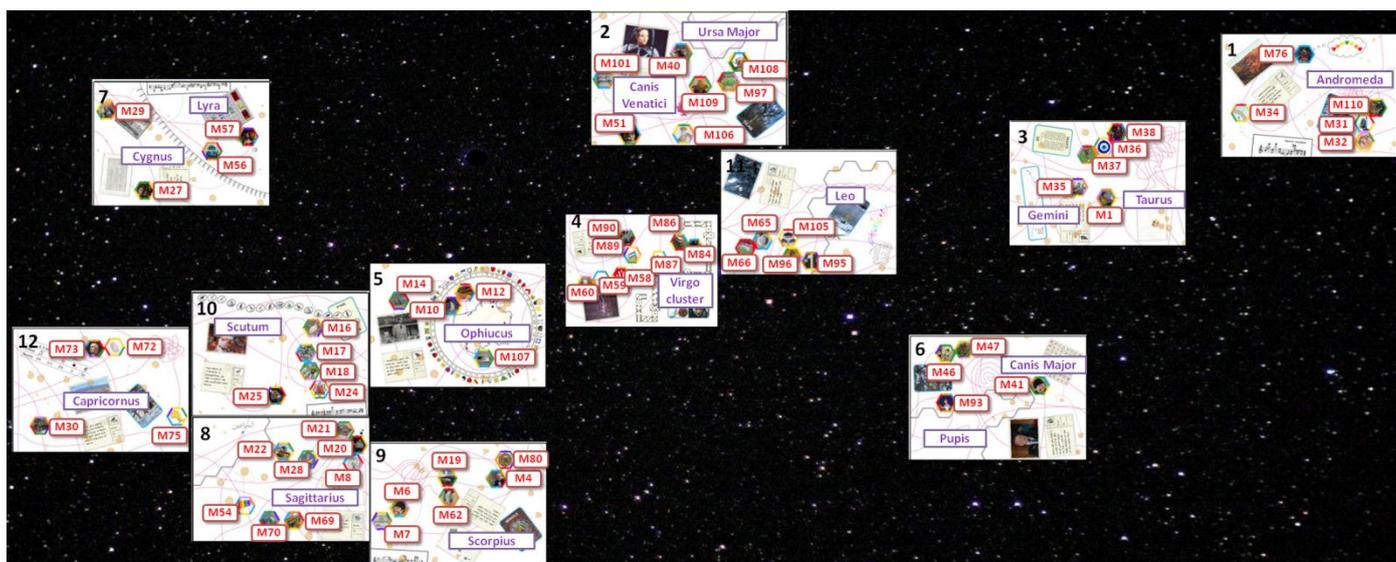
# Charles Messier and the Night Sky code

## The Sky at Night

The tea stains on each page represent stars; their size/shape roughly indicating their magnitude. Their purpose is to help locate & identify Messier objects, which are represented by the 65 hexagons.

[For example, the four large-ish stains below Messi in the centre of page 1 represent large-ish stars in the Andromeda constellation: clockwise from top they are Nembus (51 Andromedae), Phi Andromedae, Upsilon Andromedae and Almach (Gamma Andromedae - which even has a smaller 'stain' within it, representing Gamma 2, which is itself a triple star!) This helps identify the Messi hexagon as M76 - the Little Dumbbell Nebula - further confirmed by Phi Persei which is so close to M76 that it appears on Messi's shirt, since the hexagons are not to scale!) The 3 adjacent hexagons (touching indicates objects that are overlapping or very close together) are M110, M31 (Andromeda Galaxy) and M32 - again confirmed by the proximity of mu and nu Andromedae. And so on.]

The result looks roughly like this (Note: only the main constellations on each page are named, and the page positions give only approximate relative locations – not to scale!)



(As can be seen, not all Messier numbers are used. This is probably because only 65 were needed for the code, and because in most areas of the sky - e.g. Hercules and Orion, with their famous Messier objects – they are too sparsely populated to give a decent page-full of hexagons.)

The Messier numbers assigned to each hexagon (see Hexagonal Images at the end of this document) allow the significant letters to be sorted on Messier number order (instead of Messy order). This results in a clever, second interpretation of all those letters (what an anagram!)

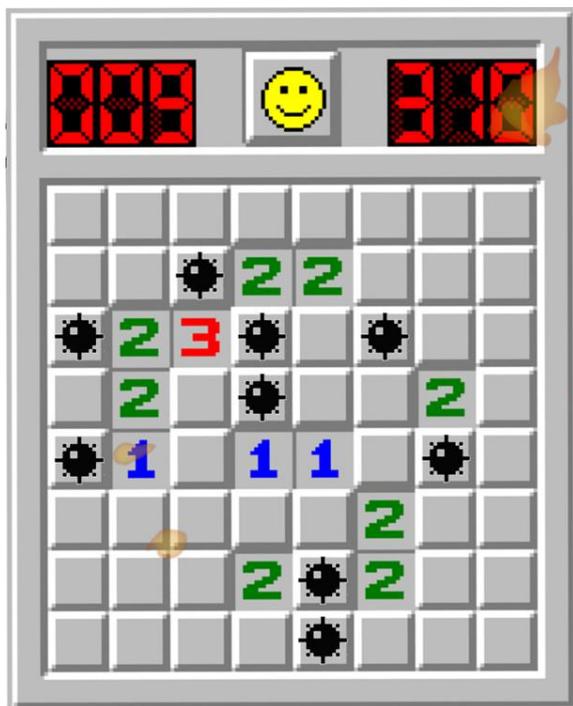
**FIND AN ESSEX PLACE AMID EVERY EIGHTH BOX IN SYRIA. GO W FROM CH. TURN L. PICK UP MESS.**

See 'The Route to the Box' above for the interpretation of these directions.

## Messines and the Trifid code

### Minesweeper

Page 3 has a minesweeper game. This is a reference to the 19 [mines](#) detonated at the beginning of the battle of Messines, devastating the German defences. The (only) solution to this game is shown below. This is used to extract the Trifid cipher key, see next section.



### M20 'Trifid Nebula' hexagon

The hexagon on p8 featuring Jeanne Loriod (which represents Messier 20 – the Trifid Nebula – in the Night Sky code) has a dotted-line connection to the letter grid on p6. The connection is annotated with a key in the shape of a minesweeper mine. This tells us 2 things:

- The Wordsearch should be treated as a [Trifid cipher](#)
- The key to this cipher can be found using the minesweeper solution

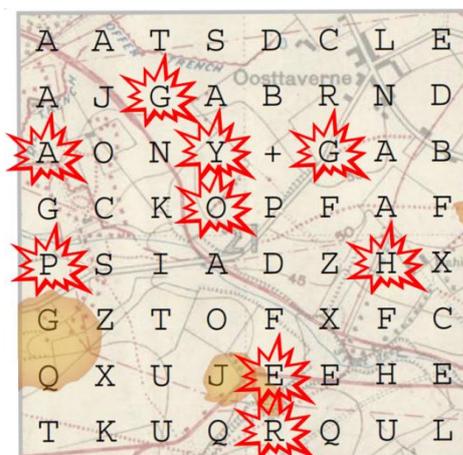
### Trifid cipher key

The letter grid on p6 has a background of one of the grid squares (no. 21) of a Messines trench map from just before the Messines battle in 1917. This is a clue to the need place the minesweeper solution over the grid (also obvious because they're both 8x8). The position of the mines yields **GAY GOPHER** which is the key to the trifid cipher.

This key was chosen because of this quote made by General Sir Charles Harington (or by General Sir Herbert Plumer according to some sources – there are also many slight variations on the quote):

*“Gentlemen, we may not make history tomorrow, but at any rate we shall change geography”*

If you change GEOGRAPHY you get GAY GOPHER.



It's quite interesting to observe that the subsequent trench map of this area, made just a few months later, shows no trenches at all!

## Trifid cipher decode

Messines didn't just change geography; it destroyed a fair bit of it. So we annihilate the GAY GOPHER letters from the letter grid, leaving 55 letters of cipher text. These can be deciphered using the Trifid cipher technique with a standard period of 5 and a key of GAY GOPHER. (The Excel worksheet we used to do this can be downloaded [here](#). Note the + sign is replaced with a more Excel-friendly full-stop.)

The result is:

**ORDER CARDS BY MOVEMENT. APPLY RECIPIENTS TO SENDERS. RE-TRANSLATE.**

This tells us to order the postcards by the movements clued on their fronts, so that the recipient initials spell INTERVERSION. This technique can then be applied to the sender initials to spell BLECH BLAESER, which "re-translated" (translated to English then back to German then back to English) clues **MESSING** – see the next sections for details. So this is another clue to the treasure village.

## Olivier Messiaen, France and the postcards

### Messiaen's musical codes

The anagram of the composer on p1 unscrambles to Olivier Messiaen. The name [Serialism](#) is a reference to the technique used by Messiaen and other composers, and a clue to the use of interversion (see later) to solve the hunt.

The pieces of music on p1, 7, 9 & 10 are encoded using his 'Communicable Language', first used in [Méditations sur le mystère de la Sainte Trinité](#) (the church clued on the poster). There is one decode [here](#) (others seem to use a slightly different representation of the letter 'O')

Each piece also has a dotted line connection to a hexagon which confirms the answer. The pieces of music are:

Page	Decoded music (French)	English translation	Dotted line connection
1	<b>Arcs en ciel</b>	Rainbows	Hexagon of a rainbow
7	<b>Brusques étoiles</b>	Sudden stars	Picture of comet C/1769 P1 (a sudden star!)
9	<b>Fouillis</b>	Mess, jumbles, tangles	Mr Messy's tangled thread
10	<b>Epees de feu</b>	Swords of fire	Essex fire badge which features swords

These are all fragments from Messiaen's Preface to the [Quartet for the End of Time](#), specifically referring to [movement 7](#) (Tangled rainbows...) whose description includes:

*"Ces épées de feu, ces coulées de lave bleu-orange, ces brusques étoiles: voilà le fouillis, voilà les arc-en-ciel!"*

The theme is synaesthesia, the correlation between sound and colour, which influenced Messiaen's composition. This is a clue to use the same colour-to-note mapping as in the poster, to solve the Messi/MOTD code – see below.

## Heraldry and the French towns

Page 5 includes a map of France - known because of its shape as **L'Hexagone**, linking to the 65 hexagons in this ATH – which is surrounded by a circle of letters and armorial fragments.

### Circle of letters

Starting at due North (the 'H' below the yellow shield) – or perhaps we are meant to start in line with the little Minesweeper mine at Messines – and progressing clockwise, the letters, taken alternately, spell out the following:

**HERALDRY OF GAUL BE GOT [or BEGOT] TOO FROM ARMORIAL FRAGMENTS ROUND PERIMETER**

This says that the coats of arms of the settlements on the map can also be reconstructed from the fragments around the perimeter, as an aid to identifying the locations. ("Begot too" means in addition to the other approach of identifying the place using the Mess connections, then finding its heraldry that way.)

## Circle of armorial fragments

These are deconstructed coats of arms from the settlements on the map. They are used in three ways:

- The re-assembled coats of arms allow the precise settlement to be identified. (This would be impossible otherwise, given the scale of the map and obscurity of some of the places)
- For each settlement, take the letter of adjacent to its shield, followed by the letters next to each item on the shield (working in order from top to bottom, then left to right). This yields a string for each settlement (e.g. OTTOMAN for LAON). These are used to help identify the senders of each postcard. See table below for the strings.
- There are some fragments left over after constructing the 12 coats of arms – a white shield, red chevron, three gold buttercup/cinquefoil flowers and three red boxing-glove-like objects (possibly wheatsheaves? We'd love to know!) These can be assembled into the coat of arms of MESSING – seen here on the village sign.



## France map

There are three symbols, in the red, white and blue of France, representing settlements which can be identified with the help of the heraldry clues. Each symbol connects to a particular Mess theme of the hunt i.e.

- Red Hexagons: Messier (all birthplaces of his collaborators). The shape links to hexagonal Messier objects.
- White ovals: Messiaen (all places where he lived/worked). The oval links to Messiaen's use of cartouches to highlight key names (e.g. Dieu) in Méditations Sur le Mystère de la Sainte Trinité, just as the Egyptians highlighted Kings & Queens on the Rosetta stone. Like Messiaen, the stone's decoder Champollion lived in Grenoble, so that's another connection between these ovals and Messiaen.
- Blue squares: Mess/Messi (Two begin with Messi, the other two with Mess so clue Messy or just Mess)
- There's also a minesweeper mine symbol at Messines, so we have a connection to all the main themes.

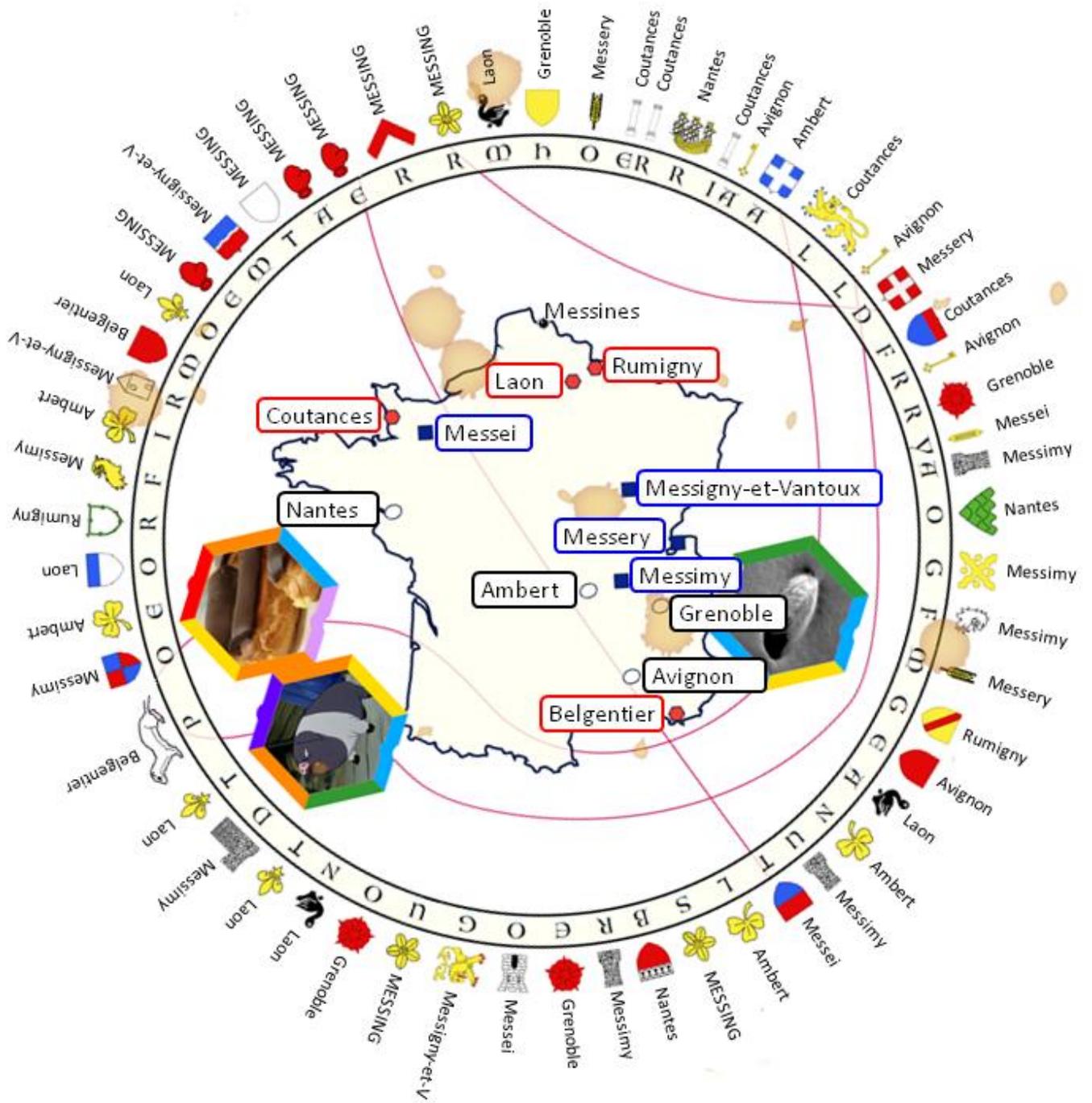
These settlements are used as follows:

- Using their shapes they can be matched to one of only four postcard backs which have the postmark of that settlements. So for example, LAON is a hexagon so must be the source of either the page 2, 3, 10 or 12 postcard. This helps to narrow down the next step i.e...
- Using the armorial fragment string for that town, the precise postcard can be identified. So for example, LAON's string is OTTOMAN, which must refer to the postcard on p12 sent by the Ottoman Sultan Bayezid II.
- This therefore gives a one-to-one mapping from town to postcard. We thought there might be another use for this, but otherwise, it is simply to provide another clue to identify the senders & recipients (which it did in several cases e.g. knowing DOM helped us to get the very obscure Portuguese postcard, and OFF GUARD was fairly quickly understood as a basketball position.)

The towns and their heraldry and armorial fragment strings are:

Settlement (click for coat of arms)	Map symbol	Connection	Significance	Heraldry string
<a href="#">Belgentier</a>	Red hexagon	Messier	Nicolas Claude Fabri de Peiresc birthplace (b. 1580). French astronomer credited with the discovery of the Orion nebula (M42).	MP
<a href="#">Coutances</a>	Red hexagon	Messier	Guillaume Le Gentil birthplace (b. 1725). French astronomer who discovered/rediscovered Messier objects M32, M36 & M38.	FLIER
<a href="#">Rumigny</a>	Red hexagon	Messier	Lacaille birthplace (b. 1731). French astronomer who discovered/rediscovered Messier objects, including M55 and M83.	GR
<a href="#">Laon</a>	Red hexagon	Messier	Pierre Méchain birthplace (b. 1744). French astronomer & Messier collaborator; discovered many of the Messier objects and comets.	OTTOMAN
<a href="#">Avignon</a>	White oval	Messiaen	Olivier Messiaen was born here	EARL
<a href="#">Ambert</a>	White oval	Messiaen	Olivier Messiaen lived here as a child (after Avignon)	ALIEN
<a href="#">Grenoble</a>	White oval	Messiaen	Olivier Messiaen lived here as a child (after Ambert) and later in life	HERO
<a href="#">Nantes</a>	White oval	Messiaen	Olivier Messiaen went to school here (after Grenoble)	BRO
<a href="#">Messery</a>	Blue square	Mess(y)	Begins with Mess	DOM
<a href="#">Messei</a>	Blue square	Mess(y)	Begins with Mess	TOY
<a href="#">Messimy</a>	Blue square	Mess(i)	Begins with Mess(i)	OFF GUARD
<a href="#">Messigny-et-Vantoux</a>	Blue square	Mess(i)	Begins with Mess(i)	MGR

The completed France map, with armorial fragments, looks like this:



## Postcard fronts

These represent the 12 works from Messiaen's "From the canyons to the stars..." – which has been the sonic background to more than one hunt-solving evening this year! This gives us a mapping from page number to work number, allowing us to put the cards in movement order (as per the Trifid code).

The movements are:

Page	Photograph and connection	Movement name	Mvmt. No.
1	<b>Bryce Canyon National Park</b> , Utah - taken from Sunrise Point, at sunrise to highlight the <b>red-orange rocks</b>	Bryce Canyon et les rochers rouge-orange (" <b>Bryce Canyon</b> and the <b>red-orange rocks</b> ")	7
2	Jodie Foster in Contact, based on Carl Sagan's book about <b>interstellar contact</b> from the Vega star system.	Appel interstellaire (" <b>Interstellar call</b> ")	6
3	<b>Music</b> (two quavers) superimposed on <b>Aldebaran</b> in a tea-stain representation of the constellation Taurus	Les ressuscités et le chant de l'étoile Aldebaran (" <b>The resurrected and the song of the star Aldebaran</b> ")	8
4	John Wayne as the centurion (Longinus) in The Greatest Story Ever Told. He says: "Truly, this man was the Son of God". Supposedly when the director asked him to put more 'awe' into it, he said "Awww, truly, this man was the Son of God". Hence the <b>awe</b> connection.  We think "Hello, God" is either John Wayne speaking to God through Jesus, or 'awe' making us aware of the presence of God, rather like him sending a message.	Cedar Breaks et le don de crainte (" <b>Cedar Breaks and the gift of awe</b> ")	5
5	Gregory Peck as Atticus Finch in To Kill A <b>Mockingbird</b> .	Le moqueur polyglotte (" <b>The mockingbird</b> ")	9
6	<b>Robin</b> Williams on a <b>chat</b> show- see <a href="http://www.cannabisculture.com/content/2014/09/03/rip-robin-williams-craziest-most-wonderful-one">http://www.cannabisculture.com/content/2014/09/03/rip-robin-williams-craziest-most-wonderful-one</a>	Le cossyphe d'Heuglin (" <b>The white-browed robin-chat</b> ")	4
7	YOUR SECRET NAME - this movement celebrates the words of the 14th-century mystic John of Ruysbroeck: "When we enter the state of grace, we receive from the Holy Spirit <b>a new name</b> , which shall be eternal"	La Grive des bois (" <b>The Wood Thrush</b> ")	10
8	Horoscope (birth chart) - showing <b>what's written in the stars</b> for, appropriately enough, <b>Olivier Messiaen</b> .	Ce qui est écrit sur les étoiles (" <b>What is written in the stars</b> ")	3
9	<b>Hawaiian archipelago</b> - probably from a bird distribution map.	Omao, leiothrix, elepaio, shama (" <b>Omao, leiothrix, 'elepaio, shama</b> ") - first & third are only found in <b>Hawaii</b>	11
10	Adam Jones of the Baltimore <b>Orioles</b> . (A Baltimore Oriole is one of the New World orioles that Messiaen would have encountered at Bryce Canyon.)	Les orioles (" <b>The orioles</b> ")	2
11	Machine guns defending <b>Zion</b> (the last human <b>city</b> on Earth) in The Matrix Revolutions.	Zion Park et la cité céleste (" <b>Zion Park and the celestial city</b> ")	12
12	A <b>desert</b> - in this case, Mesquite Flat Sand Dunes, Death Valley, California. (The photo is taken from an almost identical viewpoint to this picture: <a href="https://www.trover.com/d/oElr-mesquite-flat-sand-dunes-inyo-county-california">https://www.trover.com/d/oElr-mesquite-flat-sand-dunes-inyo-county-california</a> )  "Hello, God" meaning? Either this is a referenced to 'Death' (as in Death Valley) and meeting our maker, or this movement being Messiaen's attempt to communicate with God.	Le désert (" <b>The desert</b> ")	1

## Postcard backs

The postcard backs feature disguised messages relating to notable historical or fictional events. From: & To: indicates that we need to identify the sender & recipient. There are four key pieces of information on each card:

- The *sender*. The significant letters of the senders are used twice – in their own right, and with the stamps. See below for both cases.
- The *recipient*. The Trifid code tells us put the postcards in movement (not page) order. The significant letters of the recipients then spell INTERVERSION. Interverision is a permutation technique used by Messiaen in works such as the [Ile de Feu II](#) movement of *Quatre Études de rythme*. The Trifid code then tells us to apply recipients to senders i.e. apply Messiaen's interversion to the sender letters (also in movement order) i.e.:

Sender letters	<b>B</b>	<b>E</b>	<b>E</b>	<b>R</b>	<b>B</b>	<b>E</b>	<b>C</b>	<b>A</b>	<b>L</b>	<b>H</b>	<b>S</b>	<b>L</b>
Inteversion I	C	E	A	B	L	R	H	E	S	E	L	B
Inteversion II	H	R	E	L	S	B	E	A	L	E	B	C
Inteversion III	E	B	A	S	L	L	E	E	B	R	C	H
Inteversion IV	E	L	E	L	B	S	R	A	C	B	H	E
Inteversion V	R	S	A	B	C	L	B	E	H	L	E	E
Inteversion VI	<b>B</b>	<b>L</b>	<b>E</b>	<b>C</b>	<b>H</b>	<b>B</b>	<b>L</b>	<b>A</b>	<b>E</b>	<b>S</b>	<b>E</b>	<b>R</b>

As shown, at interversion VI, this process yields:

### BLECHBLAESER

This is a transliteration of the German word **Blechbläser**, which means Brass in the musical sense e.g. a brass player or brass section of an orchestra. This has two uses:

- As directed by the Trifid code, we re-translate i.e. from German (Blechbläser) into English (Brass) and then back into German (**Messing**). Hence this is a clue to the treasure village.
- It ties in nicely with the postcard fronts, specifically the first movement of *Des Canyons aux Étoiles...* - the extraordinary solo **brass** playing of *Interstellar Call*.
- The *stamp*. This decodes to a letter (see Messiaen bird code above). Following the bird code instruction, we add sender to stamp (i.e. add the letter values and take the resulting letter). Taken in page order, this gives:

### IN FALLEN TREE

which gives the penultimate direction on the River Mess route.

- The *postmark*. This just matches the France map (as described above) in order to help identify the sender.

This table shows the information for each card, with the connections to the fronts, France map & heraldry. The green column is used in Page Order (as presented), and the orange columns in Movement order, as described above.

Page order	Mvmt order	Postcard message, sender and recipient	Heraldry string & connection	Settlement	Settlement & postmark shape	Sender Letter	Recip. letter	Bird on stamp & direction	Stamp Letter	Sender + Stamp
1	7	This refers to <a href="#">Pero da Covilha</a> , who spent many years in Ethiopia. Eskender was the Emperor when Covilha arrived in c.1488 - but died in 1494 - most likely either Na'od or Dawit would have been Emperor when this card was written, so the E likely comes from <b>Emperor</b> or <b>Ethiopia</b> rather than from <b>Eskender</b> .	<b>DOM</b> - Portuguese honorific. Most references show him without the title Dom, but <a href="#">this one</a> shows him using the title in signing a letter.	Messery	Square	C	E	Woodlark - right	F	I
2	6	From <b>Amelia Earhart</b> to <b>Gene Vidal</b> , federal director of air commerce (and coincidentally father of Gore Vidal), who suggested she use Howland Island for crossing the pacific during her round the world flight attempt. She disappeared en route to the island, on July 2nd 1937.	<b>FLIER</b> – which Earhart was.	Coutances	Hexagon	E	V	Cetti's warbler - right	I	N
3	8	<b>Nancy Astor</b> talking to <b>von Ribbentrop</b> - see <a href="#">this article</a> .	<b>MP</b> – Astor was the first female MP to take her seat.	Belgentier	Hexagon	A	R	Tawny owl - right	E	F

Page order	Mvmt order	Postcard message, sender and recipient	Heraldry string & connection	Settlement	Settlement & postmark shape	Sender Letter	Recip. letter	Bird on stamp & direction	Stamp Letter	Sender + Stamp
4	5	<b>Bharata</b> to his brother Lord <b>Rama</b> in the epic poem Ramayana	<b>BRO</b> – as in brother	Nantes	Oval	B	R	Eurasian golden oriole - left	Y	A
5	9	Robert Dudley, Earl of <b>Leicester</b> to his nephew Sir Philip <b>Sidney</b> , who, mortally injured on the battlefield, gave his water to another wounded man. "Noble" is an indication to use his Earl of Leicester title (as is the heraldry fragment clue.) Dudley's 'all I have' quote can be seen here. <a href="https://books.google.co.uk/books?id=CyKqoDDf3AsC&amp;pg=PA380&amp;lpg=PA380&amp;dq=what+did+leicester+say+about+philip+sidney%27s+death?&amp;source=bl&amp;ots=tJXUvgmtjZ&amp;sig=jj6ST1LlOXL9lAcBaE79anwY5o&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwily4yqgsjYAhUYOsAKHX8WBpo4ChDoAQgUAMAI#v=onepage&amp;q=what%20did%20leicester%20say%20about%20philip%20sidney's%20death%3F&amp;f=false">https://books.google.co.uk/books?id=CyKqoDDf3AsC&amp;pg=PA380&amp;lpg=PA380&amp;dq=what+did+leicester+say+about+philip+sidney%27s+death?&amp;source=bl&amp;ots=tJXUvgmtjZ&amp;sig=jj6ST1LlOXL9lAcBaE79anwY5o&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwily4yqgsjYAhUYOsAKHX8WBpo4ChDoAQgUAMAI#v=onepage&amp;q=what%20did%20leicester%20say%20about%20philip%20sidney's%20death%3F&amp;f=false</a>	<b>EARL</b> – as in Leicester.	Avignon	Oval	L	S	Alpine chough - left	Z	L
6	4	From the exoptition to the North Pole in Winnie the Pooh. <b>Ro</b> is thanking <b>Eeyore</b> for hanging his tail in the water to try to rescue him after he fell in.	<b>TOY</b> – these were Christopher Robin's toys.	Messei	Square	R	E	Eurasian reed warbler - left	T	L
7	10	The dotted line with TV to the Hercules TV show indicates this a postcard from <b>Hercules</b> . He's asking his nephew <b>Iolaus</b> to bring a torch to cauterise the severed head of the Hydra (since otherwise two would grow back - more monster-ous than the last.)	<b>HERO</b> – Hercules is the archetype.	Grenoble	Oval	H	I	Black-eared wheatear - left	W	E
8	3	This refers to E.T. - The Extra Terrestrial. " <b>Tyler</b> : Hey, Elliot, where's your goblin?... <b>Elliot</b> :... he's not a goblin." E.T. of course goes home.	<b>ALIEN</b> – which E.T. was.	Ambert	Oval	E	T	Cetti's warbler - right	I	N
9	11	<b>J.R. Smith</b> of the Cleveland Cavaliers basketball team, to President <b>Obama</b> . Celebrated shirtless after winning 2016 NBA title, something to which Obama referred in his congratulatory call. As a result, wore not only a shirt but a suit at the team's traditional invitation to the White House.	<b>OFF GUARD</b> - his position is shooting guard, also known as off guard.	Messimy	Square	S	O	Alpine chough - right	A	T
10	2	Sent from <b>Albert Einstein</b> to <b>Amalie Emmy Noether</b> . See <a href="https://www.perimeterinstitute.ca/poetry-logical-ideas">https://www.perimeterinstitute.ca/poetry-logical-ideas</a> . Einstein wrote to Hilbert "Yesterday I received from Miss Noether a very interesting paper on invariant forms. I am impressed that one can comprehend these matters from so general a viewpoint."	<b>GR</b> – General Relativity	Rumigny	Hexagon	E	N	Eurasian curlew - right	M	R
11	12	From Monsignor <b>Laboa</b> of the Apostolic Nunciature of the Holy See (Vatican diplomatic quarter) in Panama, to Manuel <b>Noriega</b> . Noriega was given refuge by the Vatican but forced out by the US using tactics such as playing heavy rock music.	<b>MGR</b> – short for Monsignor.	Messigny-et-Vantoux	Square	L	N	Greater short-toed lark - left	S	E
12	1	Sent by Sultan <b>Bayezid II</b> to <b>Pope Innocent VIII</b> . The Pope held the Sultan's brother Cem captive to prevent him contesting the throne, receiving for this service an annual fee and a promise not to attack Venice, Rome or Rhodes. The money is said to have funded much of the Sistine chapel.	<b>OTTOMAN</b> – Bayezid II was Sultan of the Ottoman Empire.	Laon	Hexagon	B	I	Blue rock thrush - right	C	E

# Lionel Messi, Syria and Match of the Day

## Syria Map

When the pages are laid out as above, the pages contain a map of Syria, which precisely accommodates the 65 hexagonal images. There is only one possible layout (see below) for which every side matches the adjacent side's colour (proven by computing all of them.) The VBA procedure we used to match the hexagons is [here](#).

## Pope's *Messiah* and the dominoes

The picture on p4 shows popes (Paul VI, Nicholas III and Eugenius IV) and a Netflix production called *Messiah*. This is a rebus for Alexander **Pope's *Messiah***. This work was likely chosen because of its Mess... name, and because it features in Longfellow's *Poetry of Places* anthology under the Introductory to Syria section, indicating this is where we need to start to solve the Syria code.

The obscured text above is the first line, with the h of nymphs highlighted in red. This is a clue that the red domino can be used to find this red letter in Pope's *Messiah* (1st domino 2-5 = 1st line, 2nd word, 5th letter). Using this approach, and respecting the orientation of the dominoes (e.g. the middle row are read 'backwards') gives the following text:

### HELP LIONEL TO REARM REBELS

This is a reference to [this bizarre article](#). So we have to arrange the hexagons in Syria and find a route for Messi through Syria. The start and end points are given by the following features on the Syria map, in the same grey as the border:

- An assault rifle in the region of Homs. As per the domino code, this is where Messi is alleged to have 'instructed' the rebels to bring arms into Syria. So we need to place the Messi piece (coloured all-blue to indicate its significance as a starting piece. Blue is sometimes used as a start colour e.g. in flowcharts)
- A dot with Arabic text indicating that this is Al Miyadeen, a town on the Euphrates, and the ultimate alleged destination of Messi's armaments. The all red goal piece is placed here, indicating this where we should stop - the goal of our route through Syria, and also Messi's goal in the corresponding game of football.

## Rainbow hearts

On page 1, Messi appears to be thinking of 7 multi-coloured hearts. This is a clue that the route can be worked out by figuring out the correct colours to use when crossing from one hexagon to the next.

## The xylophone

Syria has a dotted-line connection to the rainbow-coloured xylophone hexagon – each note on the xylophone is has a different colour. Typically the bottom note would be C, to allow for a major scale – so C = Red, giving the same colour-to-note mapping established from the poster (Red = C, Orange = D, Yellow = E, Green = F, Blue = G, Indigo = A, Violet = B). So if we find the right music (as per the New Year's Day clue) we can convert this into colours and head off in the right direction.

## Match of the day

The tune is the Match of the Day theme tune, clued by four things:

- the TV showing the opening Match of the Day, and so emitting its theme tune in rainbow-coloured music
- the Messi theme – hence you would expect the music to be football-related
- The 'match your mood' hint from the setters
- The fact that MOTD uses hexagons heavily in its graphics to represent its teams e.g.



We use this to trace Messi's route through the hexagons towards the goal. For example, the first **G** of the MOTD theme (it has to be G to avoid accidentals which are not coded) means we could take any blue side out of Messi's hexagon, but the subsequent **C** means we have to go via Eloi to Adolphine. Continuing this yields:

G	C	E	G	E	E	E	E	E	F	G	E	D	E	F	G	B	D	F	D	D	D	D	D	E	F	D	C	D	E	G
E	A	C	H	P	I	S	M	A	P	O	F	S	K	Y	E	A	C	H	P	I	C	I	S	M	E	S	S	I	E	R
C	E	G	E	E	E	E	E	F	G	E	F	G	A	A	B	C	C	B	B	A	C	G	G	A	G	F	E	E	D	C
S	O	N	U	M	B	E	R	I	N	A	T	I	D	Y	I	N	C	R	E	A	S	I	N	G	O	R	D	E	R	

With punctuation, this can be interpreted as:

EACH P[AGE] IS **M**AP OF SKY. **E**ACH PIC **S** MESSIER' **S**O[BJECT]. NUMBER **I**N A TIDY, **I**NCREASING **G** ORDER.

Or alternatively, with the same meaning:

EACH P[AGE] IS **M**AP OF SKY. **E**ACH PIC **S** MESSIER, **S**O NUMBER **I**N A TIDY, **I**NCREASING **G** ORDER.

Either way, it tells us to treat each page as a map of the sky, and each hexagon as a Messier object, then to order the letters by Messier number. See 'Charles Messier and the Night Sky code' above.

The 'tidy' is a reference to this being the correct order (to yield the directions), as opposed to the messy order found if you follow Mr. Messi's thread (which just gives the Xmas greeting.) The T of Tidy begins on Mr. Tidy which is neat (or rather, tidy).

Every 8th letter is **highlighted** above, giving **MESSING** - see 'the route to the box' for the relevance of this.

Here's the final map of Syria, showing the hexagons, Messi's route, the message, and every 8<sup>th</sup> letter circled:



## Al Jazeera

[This article](#) is headed "**Mess in Syria could get messier**", a clue that if we fit the mess of hexagons into the Syria map, an indication of how to use the Messier objects will be revealed.

## Presence of hexagon answers in Syria map

The letters constituting each hexagon answer can be found contiguously placed in the Syria map when correctly arranged. (Achieving this requires folding the map sides round to meet other as needed for each case, and requires also that we count two hexagons linked by the side of one other hexagon as connected.)

Both **Sigmundskron Castle** and its Italian name of **Castel Firmiano** are to be found, as is all of **Prince Rupprecht van Bayern!** This is either an astonishing achievement, or simply a demonstration of how many options are available with 65 letters! (The only exception appears to be that **Allaechochelys** is missing one L, the Swallow has to become a **Swift**, and Azophi has to use his alternative name of **Al Sufi**.)

Certain thematic words are also to be found, including of course **MESSING-CUM-INWORTH, MESSINES, MESSIAEN, REBELS** and **INTERVERSION**.

## The comets

Page 7 has a B&W picture of comet [C/1769 P1](#) (discovered by Messier) over Nuremberg. This, with the dotted line, is a clue to interpret 1769 (and all the other years on the arc) as Messier comet discoveries.

The arc comprises years of comets discovered by Messier. The [current method of naming comets](#) includes a letter indicating the [half-month](#) in which the comet was discovered. So taking each year from the arc, finding the name (designation) of the comet that Messier discovered in that year (using this [list of all Messier's comet observations](#) - discoverers are shown in the last column), and extracting the half-month letter gives:

**PUB PALATABLE BUT WE SUGGEST GET A TABLE**

This sounds like the setters recommending the Old Crown in Messing, near the start of the route, as a decent pub, but suggesting (perhaps because it's more of a dining pub) that we book a table if we intend to visit.

## The River Mess

### The blue-bordered map and images

The blue-border and line of the map on page 3 suggests a river; the Mess theme (and the shape of the river) indicates this is the **River Mess** in Luxembourg – it runs roughly NW to SW (orientation indicated by the compass). The red dots are towns on the Mess; the name of each one appears scrambled in the (similarly blue-bordered) images on other pages, together with an image/code that represents a point on the final route to the treasure. As described in 'the route to the box', we can pick up the Mess, following these clues in the same order of the towns.

The towns (in the order they appear on the river) are:

Order	Page	Anagram	Town	Image/Clue	Meaning
1	9	WHOLE CRUISE	Schouweiler	Wagonwheel/wreath	Xmas decoration on house opposite Messing Green.
2	6	PINK RANGES	Sprinkange	Public footpath sign	<a href="#">This one</a> on School Lane, Messing
3	12	BEAT GENT	Bettange	Broken stile	Seen on entry into Conyfield wood
4	2	NECK GEAR	Reckange	Y-shaped tree	Just after the stile
5	1	HEN GALE	Ehlinge	Blue post	Just before the pond (similar to <a href="#">picture 12 here</a> )
6	11	CAKE WRING	Wickrange	Pond	The smaller one in Conyfield wood
7	10	PINE PORTER	Pontpierre	Messiaen birds code	See below – decodes to IN FALLEN TREE
8	3	BE GERM	Bergem	Astronomical code	See below – decodes to IN A TREE CLEFT

## Les Oiseaux

The birds on p10 are the subjects of movements in [Messiaen's Catalogue d'oiseaux](#). There are 13 movements/birds, and each bird can face either right or left, allowing a mapping to the alphabet. The right-facing birds map to A-M (in movement order) and the left-facing birds N-Z (in reverse movement order). This is clued by the right- and left-facing Choughs on the card, which represents A...Z. The birds decode to:

### ADD SENDER TO STAMP

This is an instruction to add the letter-values of the postcard senders to the birds on the stamps (see the postcard backs for details) yielding the required direction:

### IN FALLEN TREE

The birds are as follows:

Table to decode birds from Messiaen movements				Decoded text	
Mvmt	Bird	Letter (facing R)	Letter (facing L)	Bird - facing direction	Plaintext
1	Alpine chough	A	Z	Alpine chough - right	A
2	Eurasian golden oriole	B	Y	Black-eared wheatear - right	D
3	Blue rock thrush	C	X	Black-eared wheatear - right	D
4	Black-eared wheatear	D	W	Greater short-toed lark	S
5	Tawny owl	E	V	Tawny owl - right	E
6	Woodlark	F	U	Eurasian curlew - left	N
7	Eurasian reed warbler	G	T	Black-eared wheatear - right	D
8	Greater short-toed lark	H	S	Tawny owl - right	E
9	Cetti's warbler	I	R	Cetti's warbler - left	R
10	Common rock thrush	J	Q	Eurasian reed warbler - left	T
11	Common buzzard	K	P	Black wheatear - left	O
12	Black wheatear	L	O	Greater short-toed lark	S
13	Eurasian curlew	M	N	Eurasian reed warbler - left	T
				Alpine chough - right	A
				Eurasian curlew - right	M
				Common buzzard - left	P

## Astronomical code

The 'BE GERM' code on page 3 begins with Pubs A.S.P.; VIII; 109 which tells us to look in the Publications of the Astronomical Society of the Pacific, Volume VIII, page 109. This can be found [here](#).

R.A. is Right Ascension and N.P.D. is [North Polar Distance](#) - being the angle from the North Pole, it is the complement of the more-commonly used declination, measured from the equator. Declination = 90° - N.P.D.

This all tells us that the letter strings below can be used (with the tables on p130-131, and the instructions for parsing the resulting digits) to find the R.A. & N.P.D. of astronomical objects – in this case Messier objects. These can then be mapped to letters using Messier-Hexagon mapping found from the Night Sky code, giving the final direction to the box:

### IN A TREE CLEFT

The objects are:

Strings	Resulting messier object	Letter
HODIVATE FONAHOLD	M96 Leo Spiral Galaxy	I
LARENDOW DULINIZE	M57 Lyra Ring Nebula	N
LAFERKIN HUFATION	M8 Sagittarius Lagoon Nebula	A
FAPIPTIK HORIBODE	M41 Canis Major Open Cluster	T
LUGOROUS HIPERKIN	M73 Aquarius Asterism	R
BAPEBLOW DOPAFRAS	M32 Andromeda Galaxy Dwarf Elliptical	E
DUDIREKT DUGILEGE	M36 Auriga Open Cluster	E
KINOCEAN HOZINODE	M80 Scorpius Globular Cluster	C
LAFAVISH HUDABATE	M20 Sagittarius Trifid Nebula	L
HOYALONE DAPARINE	M108 Ursa Major Barred Spiral Galaxy	E
LUGEMBUE HIPEJEKT	M72 Aquarius Globular Cluster	F
JALIRIZE FOLABOUT	M86 Virgo Lenticular Galaxy	T

## ATH Scoreboard

Scoreboard is a pun on the word 'score' meaning 20 – it brings together the 5 main themes of the hunt, all of which are celebrating anniversaries in multiples of 20 years. So the board shows the number of scores of years of this anniversary. (20 is also the sum of all these numbers i.e. there are a score of scores!) The anniversaries are:

Team	Theme	Score	Years ago	Anniversary
Music (quavers)	Messiaen	1.25	25	Messiaen died in 1992
Football	Messi	1.5	30	Messi born in 1987
Mess / Thread	(Mr.) Messy	2.25	45	Mr Messy published in 1972
Mine	Messines	5	100	Messines battle in 1917
Astronomy	Messier	10	200	Messier died in 1817

This serves 2 purposes:

- It clues the themes, and ties them together, as part of the overall theme of Mess
- It clues another 'Mess' anniversary not shown, that of **Messalina**, born in AD 17. This is 2000 years ago or exactly 100 score years. This **score of 100** is the largest we can get out of the hunt. So this is an indication of the importance of Messalina's connection to Claudius and Boudicca, the Iceni and the treasure location – notably the Rampart in **Messing** where Boudicca supposedly fought a battle.

## Dotted lines

Some images are connected up via dotted lines. These give useful additional connections between items on a page. See elsewhere in this document for the details of each one.

## Poster

The poster introduces the main themes of the hunt, giving a headstart on interpreting the main hunt document.

- Man with telescope: [Charles Messier](#) (1730-1817), the French astronomer and comet hunter, who catalogued 110 astronomical objects (using his 4" refractor) in order to help distinguish such permanent, static objects from comets. Introduces the **Messier** theme of the hunt.
- Building: The conical roofed octagonal towers, and the decorative balustrades - around the tower and at the bottom of the page - are from the [Musee de Cluny](#) in Paris. This was formerly known as the Hotel de Cluny - another clue to Messier who performed his observations in the tower.
- Vaulted blue ceiling with stars: this is that of Saint Chapelle (which I was lucky enough to visit just after it re-opened in 2015, an absolute must for any Paris visit). This is a clue to **Messiaen**, whose colour-related work was influenced by the light through the stained glass at Saint Chapelle. (Also a connection to Messier in that, some of its stained glass is now on display at the Musee de Cluny.)
- Round stained glass windows: these are mirror images (why?) of Saint Cecilia in a [stained glass window at Eglise de la Trinite](#) in Paris. Cecilia is the patron saint of musicians and is often seen, as here, carrying an organ. This is a clue to Olivier **Messiaen** who was organist at this church for many years and also wrote Méditations sur le Mystère de la Sainte Trinité which features in the hunt. As well as the Messiaen theme, this is also a clue to using a style of synesthesia to decode the rectangular window code.
- Arched stained glass window: another [window from St Trinite](#), so another **Messiaen** & colour link. You can make out the "S.T." on some of the panes.

- Rectangular stained-glass windows: these take Messiaen's connection of colours to music, in this case mapping the rainbow colours ROYGBIV to ascending notes on the major scale (red = C up to violet = B). (The same mapping is used in the Messi MOTD code later in the hunt.) The height of each 'pane' gives the note duration.

This yields the tune for 'Deck the Halls'. Its lyrics can then be decoded as follows:

- V2. LL.3-4: Indicates we need to use lines 3 & 4 of verse 2 i.e.
  - Follow me in merry measure, Fa, la, la, la, la, la, la, la!
  - While I sing of beauty's treasure, Fa, la, la, la, la, la, la, la, la!
- The various additions/strike-outs correspond to the note on which they are written, so we have:
  - Change RR to SS in the 2nd syllable of 'merry', giving 'messy'
  - M PL: Change M to PL in the first syllable of 'measure' giving 'pleasure'
  - +: indicates this note must be sharpened (in our coding F#). A sharp symbol would have been too obvious.
  - EA: remove EA from first syllable of 'beauty' giving 'bu'
  - TY'S RIED: Change TY'S to RIED in second syllable of beauty, so the whole word reads 'buried'
- The end result is a clue to the MESSy theme of the hunt:
  - **Follow me in messy pleasure, Fa, la, la, la, la, la, la, la!**
  - **While I sing of buried treasure, Fa, la, la, la, la, la, la, la!**
- Car: a [Messerschmitt KR200](#) bubble car, with wings and tail fin added (perhaps a nod to Messerschmitt's better known role as an aircraft manufacturer?) Clues the 'Mess' theme of the hunt.
- Shoes: Lionel Messi's [rainbow football boots](#). Links to the Messi theme and overall Mess theme - we have Messier on a Messerschmitt in Messi boots! While also tying nicely into the Messiaen rainbow-music theme.
- Comet: connection with Messier; the gold coins also tie this to the concept of a treasure hunt
  - Comet tail: rainbow, connects with the rainbow-music code
  - Stars with trails: possibly meant to represent comets/Messier objects? There are 10 in total - 4 have ended up on the tops of christmas trees, 2 among the stars on the chapel roof, and the rest appear to be in mid-air.
  - Titles: the font is called Shangri La - possibly a reference to treasure hunting; most likely not significant.
  - There's no obvious reference to **Messines** and there should be – so we'll guess that all that gold is meant to clue a Gold Mine, such as King Solomon's Mine perhaps.

## Setter's messages

The setters issued a few other helpful messages and hints during the course of the hunt; these were the most significant ones

### Christmas message

The setter's Christmas message incorporated two elements:

**Playing cards:** using the rank of Spades/Diamonds for letters A-M, and Clubs/Hearts for N-Z, this gives the following message, appropriate to the mess theme:

#### **MESSY YULE**

**Poetry:** "Presume not too much Christmas cake to measure: The proper study of mankind is treasure." This is an adaptation of the opening lines of **Pope's *An Essay on Man: Epistle II***:

**...presume not God to scan; the proper study of mankind is man.**

This is a clue to Pope (needed for the dominoes code). The poem also features the following line, which may be intended as a Messier link:

**Could he, whose rules the rapid comet bind...**

### New Year's Day message

*"If you are still struggling to make sense of the hunt, it may help concentrate the mind to put some music on. Choose carefully; it is just a matter of finding a piece that matches your mood and will take your thoughts in the right direction."*

This was to tell us to choose the right piece of music in order to take Messi (who is thinking of the colours he might need to find his way through Syria) in the right direction. The key word is 'matches', clueing Match of the Day. (Right direction may also help send us to the right from Messi's hexagon, rather than up or down.) This clue was subtle enough that we still didn't have the conviction to focus on MOTD, continuing to 'mess about' with other music such as Messiaen (too many accidentals!), Deck the Halls (also known as New Year's Day to match the message) and In The Mood (mood, geddit?) by Glenn Miller and his Blechbläser.

### Quiz questions

*"Usually, taking the initial letters of the answers in sequence spelt out some kind of message. Of course, there are no quiz questions this year, so that technique can't work, can it?"*

A clue to use the first letters of the Hexagon images, in place of question answers.

### Google images

*"If you're stuck on identifying pictures and you haven't already discovered it, try out Google's 'reverse image search'... though be warned that while it will help a bit with the hunt, it is no substitute for thinking."*

This would have been helpful for new teams – though not *that* helpful since the setters went out of their way to make the images Google-proof this year. This seems to have been mainly done by using stills from videos, which is smart – even Google haven't indexed every frame of YouTube – yet! Hence the need for thinking, in order to find the image via its theme/meaning, rather than vice versa.

## The Hexagonal Images

These are presented sorted in Messier order to give the macro directions to the treasure. Sort by Messy order to give the Christmas greeting.

The Messiaen, Messier, Messi and Messines themes appear multiple times – for the rest, we were not certain whether there were many smaller themes, or just a single ‘Mess’ theme – so have shown these as Mess with the more detailed theme as a suffix in brackets e.g. Mess(erschmitt).

Page	Messy order (using thread)	Messier order (Messier number)	Initial letter	Image identification	Theme	Connection to theme
3	48	1	F	St <b>Francis</b> of Assisi, from some movie/TV show we can't find.	<b>Messiaen</b>	<b>Messiaen's</b> opera St Francis of Assisi - which uses three ondes martenots
9	12	4	I	Alex de la <b>Iglesia</b> , Spanish film director	<b>Messi</b>	Directed the <b>Messi</b> documentary in 2014.
9	42	6	N	Mr <b>Neat</b> (white coat) from Mr Messy book.	<b>Mess(y)</b>	Mr. Neat & Mr. Tidy are characters in Mr. <b>Messy</b>
9	43	7	D	An Isle of Man bank note, apparently from the 19th century. It is from <b>Dumbell's</b> Bank (the word has been replaced with ????)	<b>Messier</b>	Dumbbell Nebula is M27 & M76 is Little Dumbbell
8	19	8	A	<b>Adolphine</b> (or more likely her criminal robot double Adolphine II as she is robbing a bank) in smurf-creator Benoît Brisefer's comic strip	<b>Mess(erschmitt)</b>	Links to the <b>Messerschmitt</b> ME261 - unofficially named Adolfine in tribute to Hitler.
5	31	10	N	<b>Napoleon</b> the pig from the animated Animal Farm	<b>Messier</b>	<b>Messier</b> discovered C/1769 known as Napoleon's comet. (Also, Messiaen's creation of his language communicable was influenced by the deciphering of the Rosetta Stone, found by Napoleon's forces.)
5	34	12	E	Chocolate <b>eclairs</b>	<b>Messiaen</b>	Wrote " <b>Éclairs</b> sur l'au-delà...". (I'm tempted to say that anyone eating these would get in a right Mess .....) )
5	35	14	S	<b>A Swallow</b>	<b>Mess(erschmitt)</b>	The first jet fighter was the <b>Messerschmitt</b> Schwalbe (Swallow)
10	9	16	S	A young <b>swan</b> diving for food	<b>Messier</b>	Swan nebula is <b>Messier</b> object M17 (also known as Omega nebula)
10	56	17	E	<b>St Eligius in His Workshop</b> - in the Rijksmuseum in Amsterdam, by the Master of Balaam.	<b>Messines</b>	Sint Eloi (Eligius) was the site of one of the largest mines of the battle of <b>Messines</b> .
10	6	18	X	Iannis <b>Xenakis</b>	<b>Messiaen</b>	Developed a system to translate graphical images into musical results. This is reminiscent of what <b>Messiaen</b> aimed to do in music - Xenakis was a student of Messiaen's
9	11	19	P	<b>Peckham Rye station</b>	<b>Messines</b>	Peckham is the name of one of the <b>Messines</b> craters. Peckham Rye is a rumoured (though false) burial place for Boudicca.
8	44	20	L	<b>Jeanne Loriod</b> a noted exponent of the Ondes Martenot.	<b>Messiaen</b>	Her book on it was prefaced by <b>Messiaen</b> , her brother-in-law, who used it extensively.
8	41	21	A	<b>Allaeochelys crepsesculpatata</b> from the Messel pit	<b>Mess(el)</b>	<b>Messel</b> pit fossil

8	13	22	C	A <b>Cat(erpillar) mining shovel</b> I think. The nearer logo has been blacked out.	<b>Messines</b>	Caterpillar was the name of one of the mines at <b>Messines</b>
10	10	24	E	<b>Essex Fire &amp; Rescue Service badge</b>	<b>Messiaen</b>	Note dotted line connection to <b>Messiaen's</b> 'Epees de feu' - linking to the swords on the fire & rescue badge. Their HQ (pictured) is in Kelvedon, very near Messing.
10	8	25	A	<b>Ascension Island</b> (I'm pretty sure, but haven't found this exact image - NG)	<b>Messiaen</b>	<b>Messiaen</b> wrote a work called L'Ascension
7	51	27	M	Sheila White as <b>Messalina</b> in the BBC's I Claudius	<b>Mess(alina)</b>	Note <b>Messalina's</b> connections with Claudius and Boudicca, and so the Messing area.
8	25	28	I	Symbol for the <b>Iceni</b> in the game Total War Rome II	<b>Mess(ing)? Mess(alina)?</b>	The Rampart at <b>Messing</b> is one of the sites suggested for the Icenis/Boudicca's final defeat - link to <b>Messalina</b> via Claudius.
7	60	29	D	<b>Dipstick</b> - the hand is holding one	<b>Mess</b>	Dipstick is <b>Messstab</b> in German. (Oil is Messy.)
12	18	30	E	<b>The Eton Rifles. The picture is of Eton boys preparing to go to war in 1915.</b>	<b>Mess</b>	As in Eton <b>mess</b>
1	46	31	V	A <b>vacuum cleaner</b> - likely a Miele.	<b>Messiaen</b>	<b>Messiaen</b> used the Ondes Martenot, which uses vacuum tubes to generate its unique sound. [Alternatively this could just be a device for picking up mess.]
1	47	32	E	<b>Eurotamandua</b> , an anteater-like fossil found in Messel, Germany	<b>Mess(el)</b>	<b>Mess</b> theme. One of several Messel/fossil references.
1	23	34	R	<b>Rainbow</b> - the style of art is called Kawaii (cuteness)	<b>Messiaen</b>	Link to Arcs en Ciel - see music section
3	5	35	Y	<b>Ypres Cathedral</b> and Cloth Hall in 1917	<b>Messines</b>	<b>Messines</b> is close to Ypres, and preceded the third battle of Ypres.
3	15	36	E	<b>Evil eye</b> (Nazar) amulet	<b>Messier</b>	<b>Messier</b> Object M64 is the Evil Eye Galaxy
3	28	37	I	<b>Andres Iniesta of Barcelona</b>	<b>Messi</b>	<b>Messi</b> . (Teammate; passed Messi ball as part of bizarre alleged Syria conspiracy).
3	63	38	G	<b>Olga Garcia</b> of Barcelona Ladies	<b>Messi</b>	Like <b>Messi</b> , she wears the No. 10 shirt for Barcelona. (A supernova in Messier 81 was detected by an astronomer called Garcia, but probably unconnected.)
2	1	40	H	Asian Giant <b>Hornet</b>	<b>Mess(erschmitt)</b>	<b>Messerschmitt</b> Me410 is the Hornisse (Hornet)
6	24	41	T	Mr <b>Tidy</b> (he wears the black coat in the Mr Messy book.)	<b>Mess(y)</b>	Mr. Neat & Mr. Tidy are characters in Mr. <b>Messy</b>
6	57	46	H	Caroline <b>Herschel</b> . An astronomer and sister of William. Discovered several comets, including the periodic comet 35P/Herschel-Rigollet, which bears her name	<b>Messier</b>	Another comet addict like <b>Messier</b> .
6	52	47	B	A <b>Beehive</b> in an apple tree	<b>Messier</b>	Beehive cluster is <b>Messier</b> Object M44
2	45	51	O	<b>Omega</b> , a Time Lord, as seen in The Three Doctors.	<b>Messier</b>	Omega nebula is <b>Messier</b> object M17 (also known as Swan nebula)
8	29	54	X	<b>Xylophone</b> (technically a glockenspiel but the toys are usually termed xylophones - and we need the X)	<b>Messiaen</b>	Links rainbow colours to pitches as seen elsewhere and in the poster. Such synesthaesia is part of <b>Messiaen's</b> work.
7	58	56	I	<b>Inworth village sign</b> , in the parish of Messing-cum-Inworth, near Tiptree in Essex.	<b>Mess(ing)</b>	<b>Messing</b> connection, and likely the treasure location

7	59	57	<b>N</b>	<b>Gina Torres</b> as Nebula in " <b>Hercules</b> : the legendary journeys" (from which Xena was a spin-off)	<b>Messier</b>	<b>Messier</b> M13 is the Hercules Globular Cluster. Nebula also hints at Messier (though M12 isn't one). Note dotted line to the 'monstrous... torch' postcard, showing a Hercules link.
4	21	58	<b>S</b>	The flag of the former principality of <b>Salm-Salm</b> .	<b>Messier</b>	<b>Messier</b> was born in Badonviller, the capital of Salm-Salm.
4	17	59	<b>Y</b>	<b>Yellowhammer</b> "little bit of bread and no cheese" song from Messiaen's "Méditations sur le Mystère de la Sainte Trinité"	<b>Messiaen</b>	<b>Messiaen</b> music. Score at <a href="https://www.researchgate.net/figure/236145957_fig7_Fig-9-Notacao-da-partitura-e-sua-resultante-espectral-Messiaen-Meditations-VIII">https://www.researchgate.net/figure/236145957_fig7_Fig-9-Notacao-da-partitura-e-sua-resultante-espectral-Messiaen-Meditations-VIII</a>
4	20	60	<b>R</b>	A <b>ring</b>	<b>Messier</b>	<b>Messier</b> object M57 is the Ring Nebula
9	62	62	<b>I</b>	<b>Island of Ireland Peace Park</b> , Belgium	<b>Messines</b>	Located in <b>Messines</b>
11	2	65	<b>A</b>	<b>Azophi</b> - lunar crater named after Abd Al-Rahman Al Sufi,, a 10th century Persian astronomer	<b>Messier</b>	Al Sufi is the first known observer of <b>Messier</b> object M31, the Andromeda Galaxy.
11	32	66	<b>G</b>	<b>Goal</b> Barcelona against Malaga - just before a controversial goal when the cross came from beyond the goal line - see YouTube.	<b>Messi</b>	Deulofeu scored the goal from a cross by Digne. <b>Messi</b> was to his left
8	22	69	<b>O</b>	An <b>Ondes Martenot</b>	<b>Messiaen</b>	Much used by <b>Messiaen</b>
8	16	70	<b>W</b>	<b>Whirlpool</b>	<b>Messier</b>	<b>Messier</b> Object M51 is the Whirlpool Galaxy
12	27	72	<b>F</b>	<b>Fingerprint</b>	<b>Mess(y)</b>	Fingerprint from inside the cover of Mr. <b>Messy</b>
12	53	73	<b>R</b>	Portrait of Crown Prince <b>Rupprecht</b> van Bayern by Leopold Schmutzler	<b>Messines</b>	Commanded one of the key army groups involved in the battle of <b>Messines</b> .
12	50	75	<b>O</b>	Map of <b>Ontario</b>	<b>Messines</b>	One of the <b>Messines</b> mines was at Ontario farm
1	7	76	<b>M</b>	<b>Lionel Messi</b>	<b>Messi</b>	Picture of <b>Messi</b> himself
9	55	80	<b>C</b>	A Roman coin featuring <b>Claudius</b> (appears to read TI CLAUD).	<b>Mess(alina)</b>	His third wife was <b>Messalina</b> . See <a href="http://www.wildwinds.com/coins/ric/claudius/t.html">http://www.wildwinds.com/coins/ric/claudius/t.html</a> . Again, possible Roman theme - Boudicca burned the temple of Claudius in Colchester (near Messing)
4	64	84	<b>H</b>	Lia <b>Halloran</b> , an artist who produces representations of Messier objects - seen here at work in a still from this video: <a href="https://www.youtube.com/watch?v=JXLVOoP18cl">https://www.youtube.com/watch?v=JXLVOoP18cl</a>	<b>Messier</b>	Art based on <b>Messier</b> objects. The spiral galaxy she is working on here looks like M83, the Southern Pinwheel.
4	65	86	<b>T</b>	<b>Treasure Chest</b>	<b>Mess</b>	This appears to be a <b>Mess</b> Chest. (The coins are photo-shopped)
4	54	87	<b>U</b>	This is <b>Undermine</b> (aka Dino Shout) from Transformers Cybertron (Galaxy Force)	<b>Messines</b>	<b>Messines</b> mining link
4	49	89	<b>R</b>	From the coat of arms of <b>Rosario</b> , Argentina.	<b>Messi</b>	Rosario is the birthplace of Lionel <b>Messi</b> . (And another weird connection ... there was a major character in Will and Grace called Rosario. Grace was played by Debra Messing.)
4	14	90	<b>N</b>	<b>Nineveh</b> from the Jonah window in Christ Church, Oxford. By Flemish artist Abraham van Linge, 1630s.	<b>Messiaen</b>	<b>Messiaen</b> influenced by light of stained glass windows.
6	37	93	<b>L</b>	<b>Turanga Leela</b> from Futurama. She's a space ship captain.	<b>Messiaen</b>	<b>Messiaen</b> wrote the Turangalila symphony, after which she is named.
11	3	95	<b>P</b>	<b>Pleiades supercomputer</b> , built by SGI for NASA.	<b>Messier</b>	Pleiades are <b>Messier</b> object M45.

11	30	96	I	Darwinius Macillae aka <b>Ida</b> from the Eocene era. In the American Museum of Natural History. Found in <b>Messel</b> , Germany	<b>Mess(el)</b>	Another <b>Messel</b> connection
2	39	97	C	Mustard and cress? Lepidium sativum? Presumably <b>Cress</b> given the C	<b>Mess(ing)?</b>	Cressing is a village a few miles from <b>Messing</b> . (It would be convenient if Sauce Messine included cress, but that's not normal. It does, though, include Mustard.)
2	40	101	K	<b>Knife</b> rests	<b>Mess(er)</b>	Messer is German for Knife. [Or... Messen is Dutch (or Flemish in Belgium, where Messines is) for knives, and Messenrust is Dutch for a knife rest. The Dutch singular of Messen is Mes which is close to Mesen, the Dutch name for Messines.]
11	38	105	U	This is a Yo-Kai Watch 2 character called <b>Untidy</b> - see <a href="https://aminoapps.com/c/yo-kai-watch/page/item/untidy/kYoW_EYFQIY2LEKa8pXaRGqLqr2G73YDLJ">https://aminoapps.com/c/yo-kai-watch/page/item/untidy/kYoW_EYFQIY2LEKa8pXaRGqLqr2G73YDLJ</a>	<b>Mess(y)</b>	<b>Untidy</b> is a reference to Messy
2	4	106	P	Field Marshal Herbert Charles Onslow <b>Plumer</b>	<b>Messines</b>	Winning commander at the Battle of <b>Messines</b> .
5	33	107	M	<b>Messier</b> lunar crater (as photographed from Apollo 11)	<b>Messier</b>	Lunar crater named after <b>Messier</b>
2	26	108	E	<b>Elephant</b>	<b>Messier? Messiaen?</b>	M16 Eagle Nebula contains "elephant's trunk" structures, but the (separate) Messiaen used Gajalila, meaning Elephant's game
2	61	109	S	<b>Sombrero</b>	<b>Messier</b>	<b>Messier</b> Object 104 is the Sombrero Galaxy
1	36	110	S	<b>Sigmundskron Castle</b> (Italian: Castel Firmiano).	<b>Mess</b>	Home of the mountain museum of Reinhold <b>Messner</b> . Minor Planet 6077 is Messner.