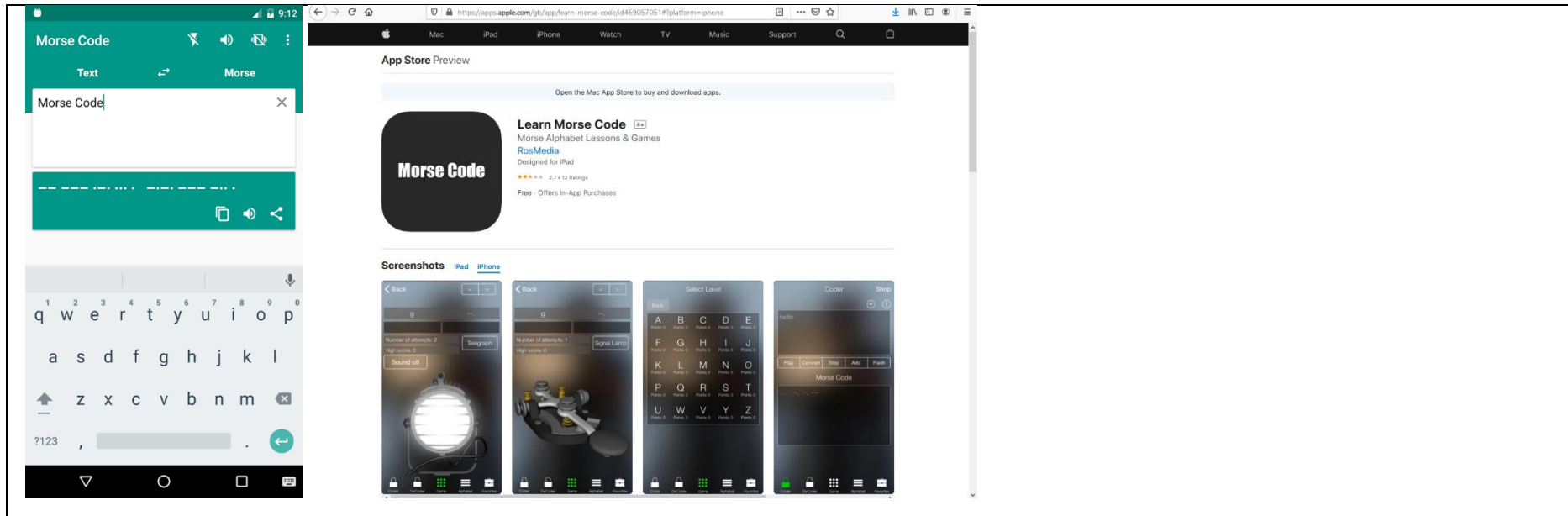


## LESSON PLAN – Scout Communicator Badge

<b>Name</b> Andy Thomas GOSFJ	<b>Date</b> 5 January 2021  <b>Revised</b> 4Mmarch 2021	<b>version</b> 2.1	<b>Note: proposed slight variation in normal Scout Communicator Badge Option 2 because of COVID-19</b>  <a href="https://members.scouts.org.uk/supportresources/4619/badges-and-awards?cat=377,786&amp;moduleID=10">https://members.scouts.org.uk/supportresources/4619/badges-and-awards?cat=377,786&amp;moduleID=10</a> may be relevant
<b>Level</b>  <b>Activity Badge - Communicator</b>	<b>Length</b>  <b>Approx 40 minutes online zoom</b>	<b>Type of Lesson</b>  <b>Online via zoom</b>  <b>Moderated/Hosted by Scout troop Leader</b>  <b>Tutor is a radio amateur</b>	
<b>Class Profile:</b> Scouts aged 10 to 14			<b>Reference document:</b>  <b>Option 2: communication Codes</b>
<b>Lesson Aims</b>  <b>Main:</b> To Qualify for the Communicator Badge  <b>Subsidiary:</b> Introduction to amateur radio			
<b>Outcomes for Students:</b> By the end of the lesson, the students will have  1) Used the phonetic alphabet and Morse code in exchanges with each other and with the tutor.  2) They will be familiar with at least 8 “Q” three letter abbreviation codes used in radio communication.			The Amateur radio licence Foundation course requires experience of Morse Code similar to (4).  Items 1 and 2 are also parts of the Foundation course.

<p>3) They will have downloaded a Morse Code app onto their smartphone/iphone and</p> <p>4) used it to generate audible Morse Code to send to the tutor and to each other.</p> <p>These tasks complete option b of the syllabus for the Communicator badge, with the downloading and use of the app replacing the requirement to build an oscillator.</p>	
<p><b>Anticipated Problems:</b> (management of tasks, potential difficulties, timing problems etc.) Students should be prepared with phonetic alphabet and Q code, and have downloaded a morse code app.</p> <p>Students exchanging information in phonetic alphabet with each other in groups of 3 or 4</p>	<p>Solutions:</p> <p>Trop Leader to distribute printed sheets the week before</p> <p>Troop leader to act as Host Moderator and set up workshops for timed period</p>
<p><b>Materials:</b></p> <p><b>Printed:</b></p> <ul style="list-style-type: none"> <li>• Radio Phonetic alphabet, as given in <a href="https://radio-scouting.info/wp-content/uploads/2018/04/International-Phonetic-Alphabet-x4.pdf">https://radio-scouting.info/wp-content/uploads/2018/04/International-Phonetic-Alphabet-x4.pdf</a></li> <li>• Radio Q Code – eight examples taken from: <a href="https://en.wikipedia.org/wiki/Q_code">https://en.wikipedia.org/wiki/Q_code</a></li> <li>• Morse Code sheet as in <a href="https://en.wikipedia.org/wiki/Morse_code">https://en.wikipedia.org/wiki/Morse_code</a></li> </ul> <p><b>Morse Code app for Students' android smartphone or iphone e.g.</b></p>	



### Lesson Procedure

Time Aim Interaction	Procedure	Comments
<p data-bbox="277 1045 409 1074"><b>+00 to +5</b></p> <p data-bbox="217 1102 470 1166"><b>Tutor: Set context for amateur radio</b></p> <p data-bbox="277 1313 409 1342"><b>+5 to +10</b></p>	<p data-bbox="526 1045 1402 1150"><b>Tutor will show some pictures of his amateur radio station and explain how the following are used: Morse code, Q codes, and Phonetic alphabet.</b></p> <p data-bbox="519 1235 1408 1299"><b>Tutor will show the 2minute promotion video from Essex Ham – as at</b></p> <p data-bbox="712 1327 1216 1359"><b><a href="https://www.essexham.co.uk/videos">https://www.essexham.co.uk/videos</a></b></p>	

**Tutor: Introduce  
phonetic alphabet  
and Q code  
exercise**

**+10 to +30**

**Interactive: Scouts  
in groups  
practising  
Exchange**

**Set task from previous documents: you will need:**

**Q Code check sheet**

**Phonetic alphabet sheet**

**POSSIBLE EXCHANGES**

**“Alpha November Delta Yankee, this is (name of Scout in  
phonetic spelling)”, how do you read me? Over”**

**“(name of scout), this is Alpha November Delta Yankee, your  
signal is loud, and clear, what is your (location) ? Over”**

**“Please spell your location (Golf Romeo Echo Alpha Tango  
break Golf Lima Echo November, Great Glen, over)”**

**Students tick off the following on their  
answer sheet**

- **QRZ? (who is calling me (Scout name)?)**
- **QSL? (I acknowledge hearing the other Scout)**
- **What is their QTH (location)?**
- **Is there QRM (interference) on the signal?**
- **Is there QRN (hissing noise) on the signal?**
- **Speaking fast QRQ? Or slow? QRS**

<p><b>+30 to +40</b></p> <p><b>Tutor: Some morse Code</b></p> <p><b>Tutor sends 73,</b></p> <p><b>Interactive: Class copy it &amp;</b></p> <p><b>Send it on their apps</b></p>	<p><b>“Thank you, 73”</b></p> <p><b>73 is an abbreviation which means “best wishes”.</b></p> <p><b>Listen to the sound of 73 in Morse code and send it with an app</b></p> <p><b>- - . . . / . . . - -</b></p>	<ul style="list-style-type: none"><li><b>• Did we finish? QRT</b></li></ul>
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# International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

A ● —  
B — ● ● ●  
C — ● — ●  
D — ● ●  
E ●  
F ● ● — ●  
G — — ●  
H ● ● ● ●  
I ● ●  
J ● — — —  
K — ● —  
L ● — ● ●  
M — —  
N — ●  
O — — —  
P ● — — ●  
Q — — ● —  
R ● — ●  
S ● ● ●  
T —

U ● ● —  
V ● ● ● —  
W ● — —  
X — ● ● —  
Y — ● — —  
Z — — ● ●

1 ● — — —  
2 ● ● — — —  
3 ● ● ● — —  
4 ● ● ● ● —  
5 ● ● ● ● ●  
6 — ● ● ● ●  
7 — — ● ● ●  
8 — — — ● ●  
9 — — — — ●  
0 — — — — —

Try and think of it in *sounds* so that a dot is a *dit* and a dash is a *dah*, and it's three *dits* long. So A isn't *dot-dash*, it's *dit-dah*

Some Q codes – remember these

<b>QRG</b>	Will you tell me my exact frequency (or that of ...)?	Your exact frequency (or that of ...) is ... kHz (or MHz).
<b>QRM</b>	Is my transmission being interfered with?	Your transmission is being interfered with ...
<b>QRN</b>	Are the Atmospherics (noise) strong?	Atmospherics (noise) are very strong
<b>QRO</b>	Shall I increase transmitter power?	Increase transmitter power
<b>QRP</b>	Shall I decrease transmitter power?	Decrease transmitter power.
<b>QRQ</b>	Shall I send faster?	Send faster (... words per minute).
<b>QRS</b>	Shall I send more slowly?	Send more slowly (... words per minute).
<b>QRT</b>	Shall I stop sending?	Stop sending.
<b>QRZ</b>	Who is calling me?	You are being called by ... (on ... kHz (or MHz)).
<b>QSB</b>	Are my signals fading?	Your signals are fading.
<b>QSL</b>	Can you acknowledge receipt?	I am acknowledging receipt.
<b>QSY</b>	Should I change to transmission on another frequency? If so what one?	Change to transmission on another frequency ( <i>or</i> on ... kHz ( <i>or</i> MHz)).
<b>QTH</b>	What is your position in latitude and longitude (or according to any other indication)?	My position is ... latitude, ... longitude (or according to any other indication).

A FULL LIST FOR SHIPS AND AIRCRAFT IS AT: [https://en.wikipedia.org/wiki/Q\\_code](https://en.wikipedia.org/wiki/Q_code)

## NATO Phonetic Alphabet

The NATO phonetic alphabet is a **Spelling Alphabet**, a set of words used instead of letters in oral communication (i.e. over the phone or military radio). **Each word** ("code word") **stands for its initial letter** (alphabetical "symbol"). The **26 code words** in the NATO phonetic alphabet are assigned to the 26 letters of the English alphabet in alphabetical order as follows:

Symbol	Code Word	Morse Code	Phonic (pronunciation)
A	Alfa/Alpha	● —	AL FAH
B	Bravo	— ● ● ●	BRAH VOH
C	Charlie	— ● — ●	CHAR LEE
D	Delta	— ● ●	DELL TAH
E	Echo	.●	ECK OH
F	Foxtrot	● ● — ●	FOKS TROT
G	Golf	— — ●	GOLF
H	Hotel	● ● ● ●	HOH TELL
I	India	● ●	IN DEE AH



Symbol	Code Word	Morse Code	Phonic (pronunciation)
J	Juliett	• — — —	JEW LEE ETT
K	Kilo	— • —	KEY LOH
L	Lima	• — • •	LEE MAH
M	Mike	— —	MIKE
N	November	— •	NO VEMBER
O	Oscar	— — —	OSS CAH
P	Papa	• — — •	PAH PAH
Q	Quebec	— — • —	KEH BECK
R	Romeo	• — •	ROW ME OH
S	Sierra	• • •	SEE AIRRAH
T	Tango	—	TANG OH
U	Uniform	• • —	YOU NEE FORM
V	Victor	• • • —	VIK TAH

Symbol	Code Word	Morse Code	Phonic (pronunciation)
W	<b>Whiskey</b>	● — —	WISS KEY
X	<b>X-ray</b>	— ● ● —	ECKS RAY
Y	<b>Yankee</b>	— — ● ●	YANG KEY
Z	<b>Zulu</b>	— — — — —	ZOO LOO