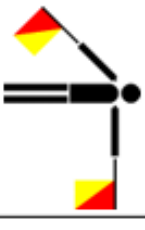
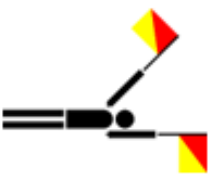
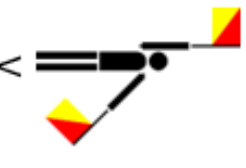
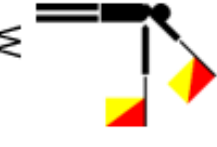
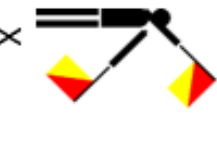
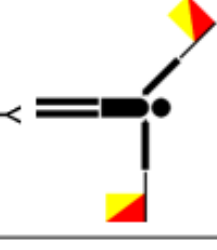
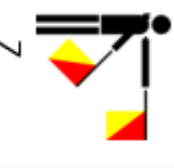


|                                                                                       |                       |
|---------------------------------------------------------------------------------------|-----------------------|
|    | A - 1                 |
|    | B - 2                 |
|    | C - 3                 |
|   | D - 4                 |
|  | E - 5                 |
|  | F - 6                 |
|  | G - 7                 |
|     | H - 8                 |
|     | I - 9                 |
|     | J - Letters to Follow |
|    | K - 0                 |
|   | L                     |
|   | M                     |
|   | N                     |
|      | O                     |
|      | P                     |
|      | Q                     |
|     | R                     |
|    | S                     |
|    | T                     |
|    | U                     |
|      | V                     |
|      | W                     |
|      | X                     |
|     | Y                     |
|    | Z                     |
|      | End of Word - Space   |
|      | Numerals to follow    |
|      | Cancel                |
|     | Error / Warning       |
|                                                                                       |                       |
|                                                                                       |                       |
|                                                                                       |                       |

# Caesar Shift Cipher

The Caesar Shift cipher is one of the oldest but simplest ciphers out there. It substitutes one letter for another in the alphabet, corresponding to a specific shift up or down the alphabet.

## Assembling your cipher wheel

1. Print out the wheels found on Page 20 and cut them out.
2. Use something (e.g. a pencil/pen) to poke the holes in the middle of both wheels.
3. Place the smaller wheel on top of the larger wheel and use a split pin to connect the two together. Make sure the wheels can rotate freely!

## Encrypting a message using the cipher wheel

1. Write out your message normally.
2. Pick a number between 1 to 26. This corresponds to the 'new' letter of the alphabet. For example, 1=A, 2=B, 3=C, and so on.
3. Turn the small wheel until the 'A' on the larger wheel is aligned with the chosen number (e.g. if you picked 25, the 'A' should be aligned with 'Y').
4. Encode your message by writing it out with the newly aligned letters from the larger wheel. For example, HELLO written with 25 is FCNNM.

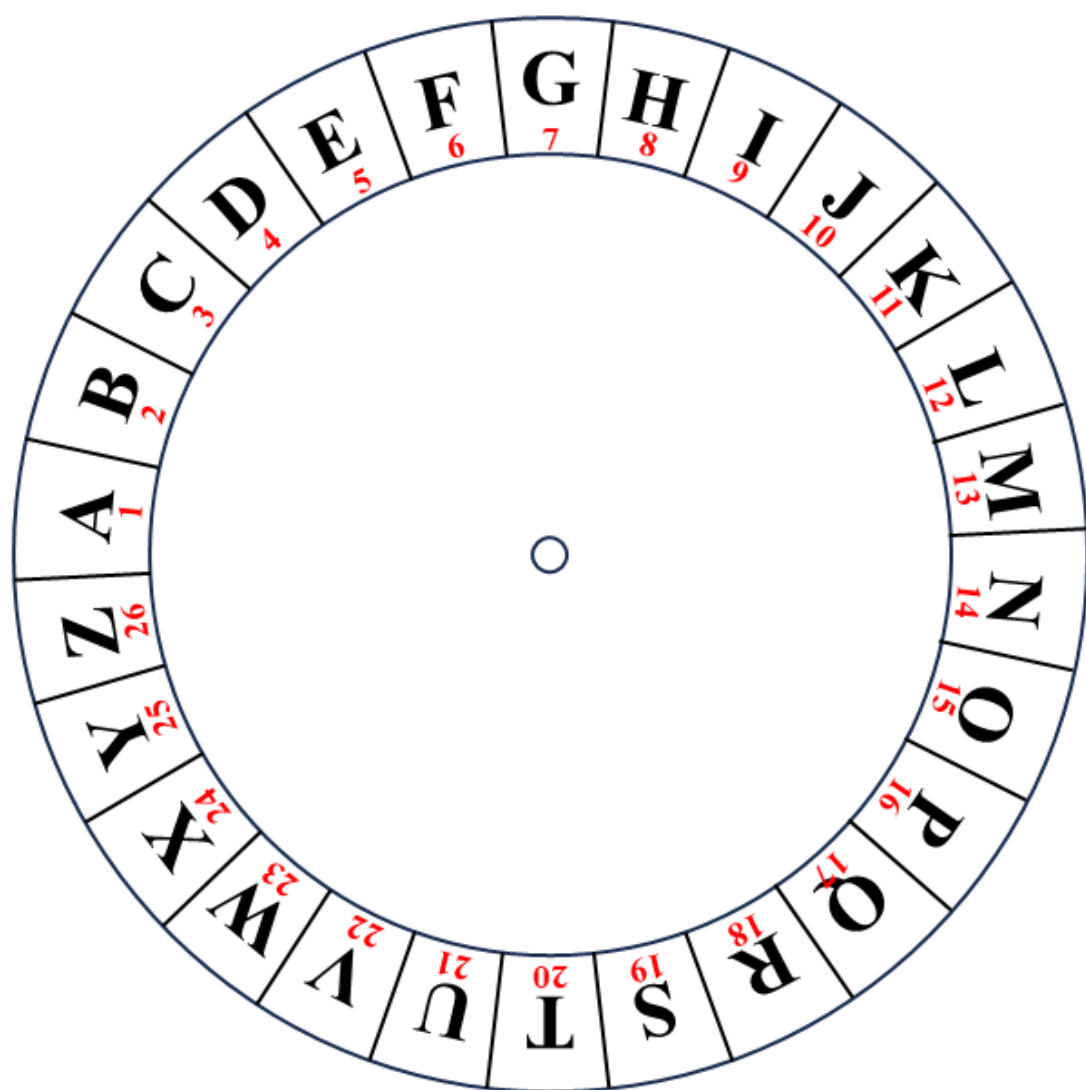
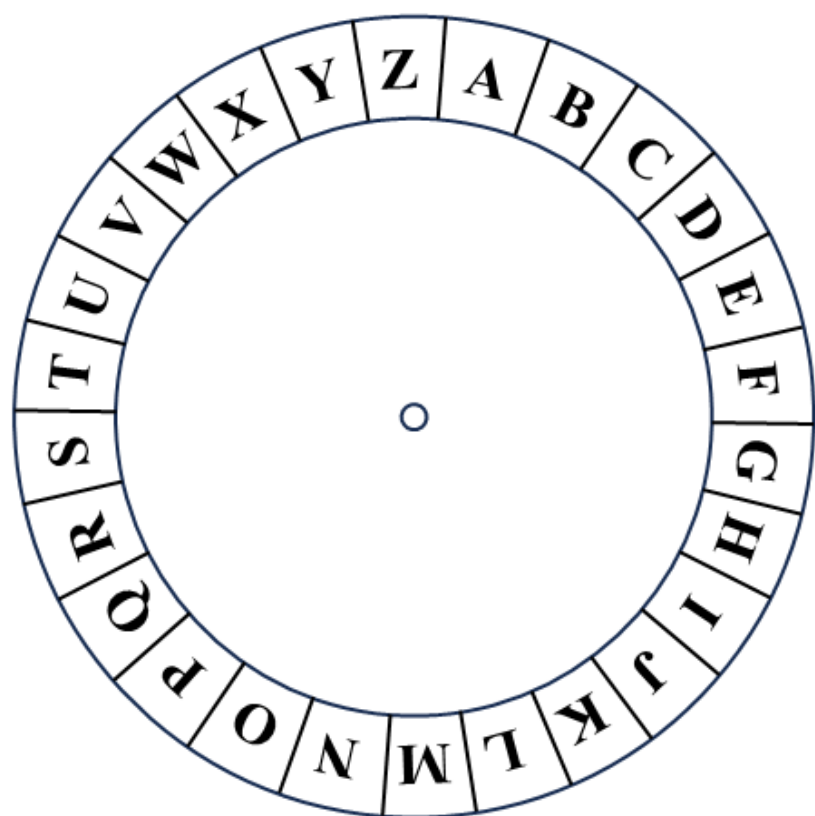
## Deciphering a message using the cipher wheel

1. Deciphering starts in the reverse of the encrypting process. You will need to know what encoding number was used so you can properly align your cipher wheel. Otherwise, it will take a lot of trial and error!
2. Turn the small wheel so that the encoding number is aligned to the correct letter. A paperclip may be handy to help make sure the wheels don't move whilst decoding your message.
3. To decode the message, find the letters from the encrypted message on the larger wheel and write down the aligned letter from the smaller wheel. So, the word TQXXA encrypted with the number 13 would be decrypted to say HELLO.

### For Bonus Points try to decode the following ciphers

1. IWPCZ P ATPSTG PI NDJG HRDJI VGDJE IDSPN!
2. LWTGT PGT NDJ YDXCXCXV JH UGDB?
3. WDL PGT NDJ UTTAXCV UDG YDIP YDIX?
4. LWPI PGT NDJG UPKDJGXIT VPBTH?
5. SD NDJ WPKT PCN WDQQXTH?





# AtBash Cipher

The AtBash cipher encrypts messages by substituting letters with the reverse alphabet. See below for the full code:

|              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>A = Z</b> | <b>B = Y</b> | <b>C = X</b> | <b>D = W</b> | <b>E = V</b> | <b>F = U</b> | <b>G = T</b> |
| <b>H = S</b> | <b>I = R</b> | <b>J = Q</b> | <b>K = P</b> | <b>L = O</b> | <b>M = N</b> | <b>N = M</b> |
| <b>O = L</b> | <b>P = K</b> | <b>Q = J</b> | <b>R = I</b> | <b>S = H</b> | <b>T = G</b> | <b>U = F</b> |
|              | <b>V = E</b> | <b>W = D</b> | <b>X = C</b> | <b>Y = B</b> | <b>Z = A</b> |              |

## Encrypting a message using Atbash

1. Write out your message normally.
2. For each letter, swap it to the inverse letter using the table above and write down your, now encrypted, message.

## Deciphering a message using Atbash

1. Use the table above to find the inverse letter in your encrypted message.
2. Write it out to decode the text.

## Atbash Ciphers to Decode and Answer

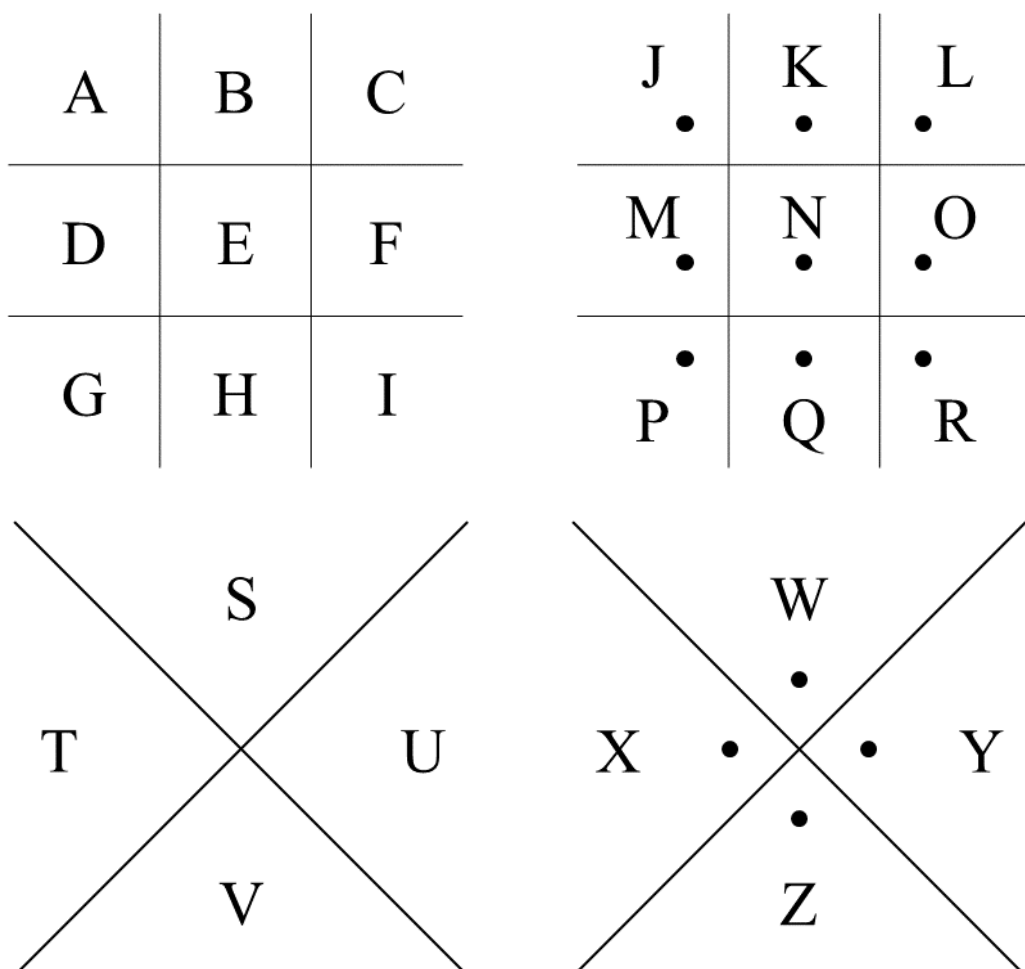
1. SLD NZMB KVLKOV SZE V BLF NVG GSRH QLGR?
2. DSZG WZB RH RG GLWZB?
3. WL BLF TL GL Z HXLFG TILFK
4. DSZG RH GSV XOLHVHG XRGB GL BLF?
5. WL BLF SZE V Z UZELFIRGV HLMT, RU HL DSZG RH RG?



**A = Z**  
**B = Y**  
**C = X**  
**D = W**  
**E = V**  
**F = U**  
**G = T**  
**H = S**  
**I = R**  
**J = Q**  
**K = P**  
**L = O**  
**M = N**  
**N = M**  
**O = L**  
**P = K**  
**Q = J**  
**R = I**  
**S = H**  
**T = G**  
**U = F**  
**V = E**  
**W = D**  
**X = C**  
**Y = B**  
**Z = A**

# Pigpen Cipher

The Pigpen cipher converts the letters in the encoding message into symbols consisting of a grid with or without dots.



Examples:

A =     T =     N =     Z = 

Try to encode your name, your group and favourite colour!

Try to decode:




























# International Morse Code

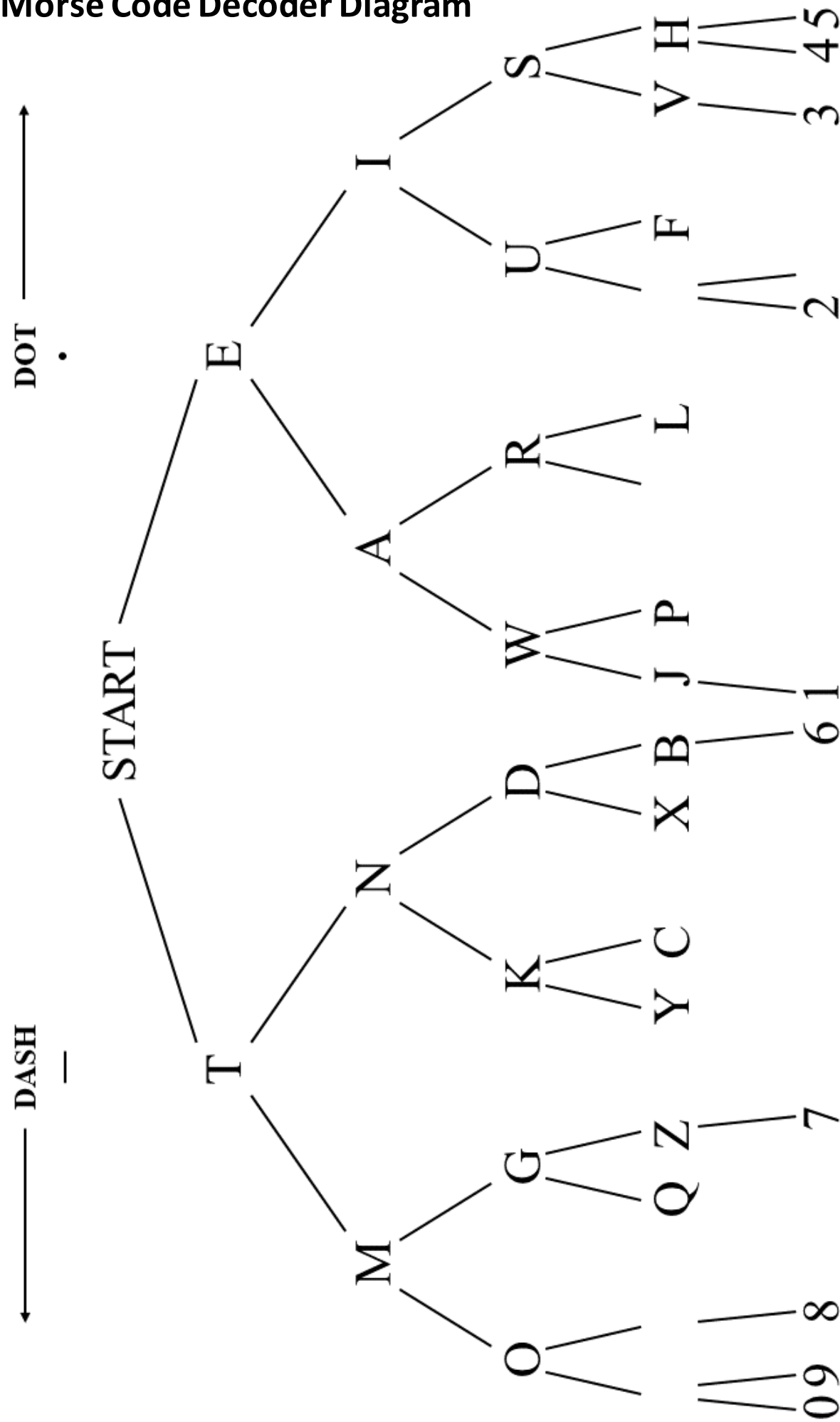
1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

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 ■ ■ ■ ■ ■

Morse Code Decoder Diagram



# Phonetic Alphabet

|   |         |   |          |
|---|---------|---|----------|
| A | Alpha   | N | November |
| B | Bravo   | O | Oscar    |
| C | Charlie | P | Papa     |
| D | Delta   | Q | Quebec   |
| E | Echo    | R | Romeo    |
| F | Foxtrot | S | Sierra   |
| G | Golf    | T | Tango    |
| H | Hotel   | U | Uniform  |
| I | India   | V | Victor   |
| J | Juliet  | W | Whiskey  |
| K | Kilo    | X | X-Ray    |
| L | Lima    | Y | Yankee   |
| M | Mike    | Z | Zulu     |

The ability to communicate and make yourself understood can make a difference in life-threatening situations – imagine for example that you are trying to alert a search and rescue helicopter of the position of a downed pilot. To ensure clear communication, NATO uses a number of well-known formats which are in general use. NATO standardization agreements enable forces from many nations to communicate in a way that is understood by all.

Some standards can be found in everyday civilian and military life. "Bravo Zulu", typically signalled with naval flags on ships at sea and meaning "well done", is also commonly used in written communication by the military, for example by replying "BZ" to an email.

## Numbers

|   |                            |  |  |
|---|----------------------------|--|--|
| 1 | One<br>( <i>ooh</i> )      |  |  |
| 2 | Two<br>( <i>too</i> )      |  |  |
| 3 | Three<br>( <i>tree</i> )   |  |  |
| 4 | Four<br>( <i>four-er</i> ) |  |  |
| 5 | Five<br>( <i>fife</i> )    |  |  |
| 6 | Six<br>( <i>six</i> )      |  |  |
| 7 | Seven<br>( <i>seven</i> )  |  |  |
| 8 | Eight<br>( <i>ait</i> )    |  |  |
| 9 | Nine<br>( <i>niner</i> )   |  |  |
| 0 | Zero<br>( <i>zee-ro</i> )  |  |  |

## Phonetic alphabet

The NATO alphabet became effective in 1956 and, a few years later, turned into the established universal phonetic alphabet for all military, civilian and amateur radio communications.

### International Morse Code

Morse code transmits text through on-off tones, light flashes or clicks. It was widely used in the 1800s for early radio communication, before it was possible to transmit voice.

### Flaghoist communication

Ships use flags as signals to send out messages to each other. The use of flags, known as flaghoist communication, is a fast and accurate way to send information in daylight.



## Semaphore

Semaphore is a system in which a person sends information at a distance using hand-held flags – depending on the position of the flags, the message will vary. The signaller holds the flag in different positions that represent letters or numbers.

### Panel signalling

Panels are visual signals for sending simple messages to an aircraft. Using a limited code, ground forces can send messages to pilots, for example to request medical supplies.

|                                             |  |  |
|---------------------------------------------|--|--|
| <b>B</b> Bravo<br>( <i>brah-oh</i> )        |  |  |
| <b>C</b> Charlie<br>( <i>char-lee</i> )     |  |  |
| <b>D</b> Delta<br>( <i>dell-fah</i> )       |  |  |
| <b>E</b> Echo<br>( <i>eck-oh</i> )          |  |  |
| <b>F</b> Foxtrot<br>( <i>fohs-rot</i> )     |  |  |
| <b>G</b> Golf<br>( <i>golf</i> )            |  |  |
| <b>H</b> Hotel<br>( <i>hoh-tel</i> )        |  |  |
| <b>I</b> India<br>( <i>in-dee-ah</i> )      |  |  |
| <b>J</b> Juliett<br>( <i>juh-lec-ett</i> )  |  |  |
| <b>K</b> Kilo<br>( <i>key-bill</i> )        |  |  |
| <b>L</b> Lima<br>( <i>lee-mah</i> )         |  |  |
| <b>M</b> Mike<br>( <i>mike</i> )            |  |  |
| <b>N</b> November<br>( <i>no-ven-ber</i> )  |  |  |
| <b>O</b> Oscar<br>( <i>oss-ah</i> )         |  |  |
| <b>P</b> Papa<br>( <i>pah-pah</i> )         |  |  |
| <b>Q</b> Quebec<br>( <i>keh-beck</i> )      |  |  |
| <b>R</b> Romeo<br>( <i>rou-me-oh</i> )      |  |  |
| <b>S</b> Sierra<br>( <i>see-ah-rr-nah</i> ) |  |  |
| <b>T</b> Tango<br>( <i>tang-go</i> )        |  |  |
| <b>U</b> Uniform<br>( <i>you-wee-form</i> ) |  |  |
| <b>V</b> Victor<br>( <i>nic-tab</i> )       |  |  |
| <b>W</b> Whiskey<br>( <i>tuiss-kee</i> )    |  |  |
| <b>X</b> Xray<br>( <i>ecks-ray</i> )        |  |  |
| <b>Y</b> Yankee<br>( <i>yang-kee</i> )      |  |  |
| <b>Z</b> Zulu<br>( <i>zoo-lou</i> )         |  |  |

## Guess the Emoji Phrase

Guess the Movie

Q1. 🐾 👑

Q2. 🏠 👤 🧠 👤

Q3. 🦖 🌴 🚗

Q4. 🐭 👤 🔪

Q5. 🧝 ✨ 💍

Guess the Song

Q6. 🗣️ 🎤 🌧️

Q7. 🦄 🧝 🌙

Q8. 👁️ 🐾

Q9. 🎵 🧝 💡 🏠

Q10. 🚀 👤 🌌

## Guess the Emoji Phrase

Guess the Food

Q11. 🍎 🍌

Q12. 🐟 🍷

Q13. 🍞 🌶️ 🧀

Q14. 🍫 🍪 🍷

Q15. 🍓 🍌 🍷

Guess the Country

Q16. 🗼 🌂

Q17. 🇺🇸 🍌

Q18. 🏔️ 🍷

Q19. 🐘 🏊

Q20. 🍕 🚲

# Answer Sheet

## Caesar Shift Cipher

- Q1. Thank a leader at your Scout Group today!
- Q2. Where are you joining us from?
- Q3. How are you feeling for JOTA JOTI?
- Q4. What are your favourite games?
- Q5. Do you have any hobbies?

## AtBash Cipher

- Q1. How many people have you met this JOTI?
- Q2. What day is it today?
- Q3. Do you go to a Scout group?
- Q4. What is the closest city to you?
- Q5. Do you have a favourite song, if so what is it?

## Pigpen Cipher

- Q1. What is your favourite camping snack?
- Q2. Look up at the stars; what can you see?
- Q3. Do you enjoy being in nature?

## Guess the Emoji Phrase

- |                              |                             |
|------------------------------|-----------------------------|
| Q1. The Lion King            | Q11. Apple Pie              |
| Q2. Home Alone               | Q12. Fish and Chips         |
| Q3. Jurassic Park            | Q13. Tacos                  |
| Q4. Ratatouille              | Q14. Chocolate Chip Cookies |
| Q5. The Lord of the Rings    | Q15. Fruit Smoothie         |
| Q6. Singing in the Rain      | Q16. France                 |
| Q7. Dancing in the Moonlight | Q17. USA                    |
| Q8. Eye of the Tiger         | Q18. Japan                  |
| Q9. Blinding Lights          | Q19. Australia              |
| Q10. Rocketman               | Q20. Italy                  |

## Conversation starters

*Remember these are starters, not questions to answer, the goal is to talk and make friends not to fill in a bunch of random questions*

Where are you from?

What languages do you speak?

When and where was your first scout/guide camp?

What colour is your group scarf?

What is your favourite scouting/guiding activity?

Do you have a favourite badge?

How would you describe yourself in 3 words?

What is a typical food of your country?

If you could travel anywhere in the world right now, where would you go?

Do you have a favourite Scout/Guide song or dance?

What are the names of the different Scouting/Guiding sections in your country?

What is a game your Scouts/Guides like to play?

What is your Patrol Name?

What are your leaders' names? Do they have a special Scouting/Guiding name?

What is the most recent camp or activity you have been on?

What is the longest hike you have ever been on?

How do you say the Scout/Guide promise in your language?

How many countries have you been in contact with over JOTA - JOTI?

Do you play any sports?

Do you play a musical instrument?

What is your favourite camp food?

What is the furthest you have travelled to go to a camp?

What is something you never want to do again?

Tell me about something you want to try but have never had the chance to.

If you could have any superpower, what would it be and why?

If you could travel in time, would you go to the future or back to the past?

What is your favourite game?

Tell me about your favourite fictional character?



Hello my name is \_\_\_\_\_

I am a Joey / Cub/ Scout / Guide from \_\_\_\_\_ Group.

What is your name and where are you from?

*[Pick a couple of other questions to ask from the conversation starters.]*

1.

2.

Record details below of who you connected with:

| Name | Group | Country | Something I learnt about them |
|------|-------|---------|-------------------------------|
|      |       |         |                               |
|      |       |         |                               |
|      |       |         |                               |
|      |       |         |                               |
|      |       |         |                               |
|      |       |         |                               |