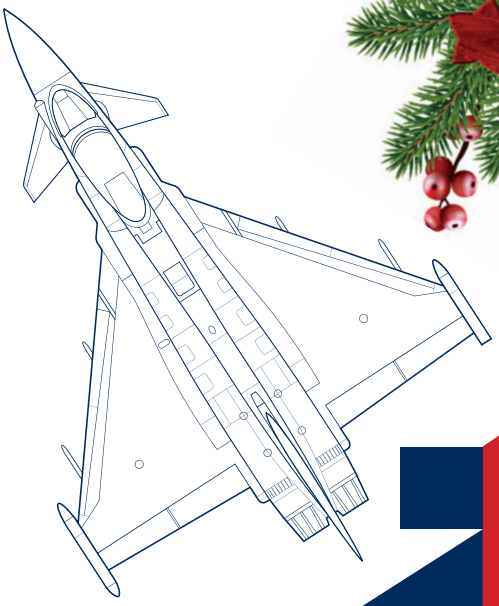
Father Christmas Typhoon Present Delivery

DID YOU KNOW?.....



Aviation fuel is used to power aircraft. Aircraft including F-35s and Typhoons currently use conventional aviation fuel, which as a traditional fossil fuel, is not as climate friendly as we would like.

In November 2020 the Ministry of Defence changed its standard for acceptable aviation fuel for military aircraft and now allows up to 50 per cent of an aircraft's aviation fuel to come from sustainable sources – known as Sustainable Aviation Fuel (SAF)

SAF is similar in its chemistry to traditional fuels but is manufactured from sustainable fuel sources. These include hydrogenated fats and oils, wood waste, alcohols, sugars, household waste, biomass and algae.

It is estimated that by substituting 30 % of conventional fuel with a SAF, a jet travelling 1000 nautical miles could reduce its CO_2 emissions by 18%. The Royal Air Force is committed to achieving Net Zero by 2040, or earlier, and the ability to use SAF in our aircraft will lead to significant reductions in emissions and improve our carbon footprint.

Activity Challenge Instructions

Father Christmas's sledge has broken down. Not to worry the RAF have come to his rescue and offered to deliver the remaining presents using one of our Typhoon aircraft.

For this activity we are going to plan on our Typhoon aircraft being able to carry a total of 1000 litres of fuel which will let it fly 2900 nautical miles (NM)*.

Father Christmas has plotted the route he needs the Typhoon to fly in the image below. Using the flight path, can you work out how many litres of fuel the Typhoon will need to complete its mission?

** Planning figure for this challenge only and is not representative.*

Find out what it's like to be an RAF Engineer working on the Line with Typhoon aircraft here:

https://**rafyouthstem.org.uk/resource/a-day-in-the-life-of-an-raf-engineer/**

Enjoy a virtual tour of a Typhoon here:

https://**rafyouthstem.org.uk/resource/typhoon-air-craft-virtual-walkround/**

Hear from a Senior Engineering Officer about their job here:

https://**rafyouthstem.org.uk/resource/stem-interview-with-sqn-ldr-stephanie-wilde-senior-engineering-officer/**

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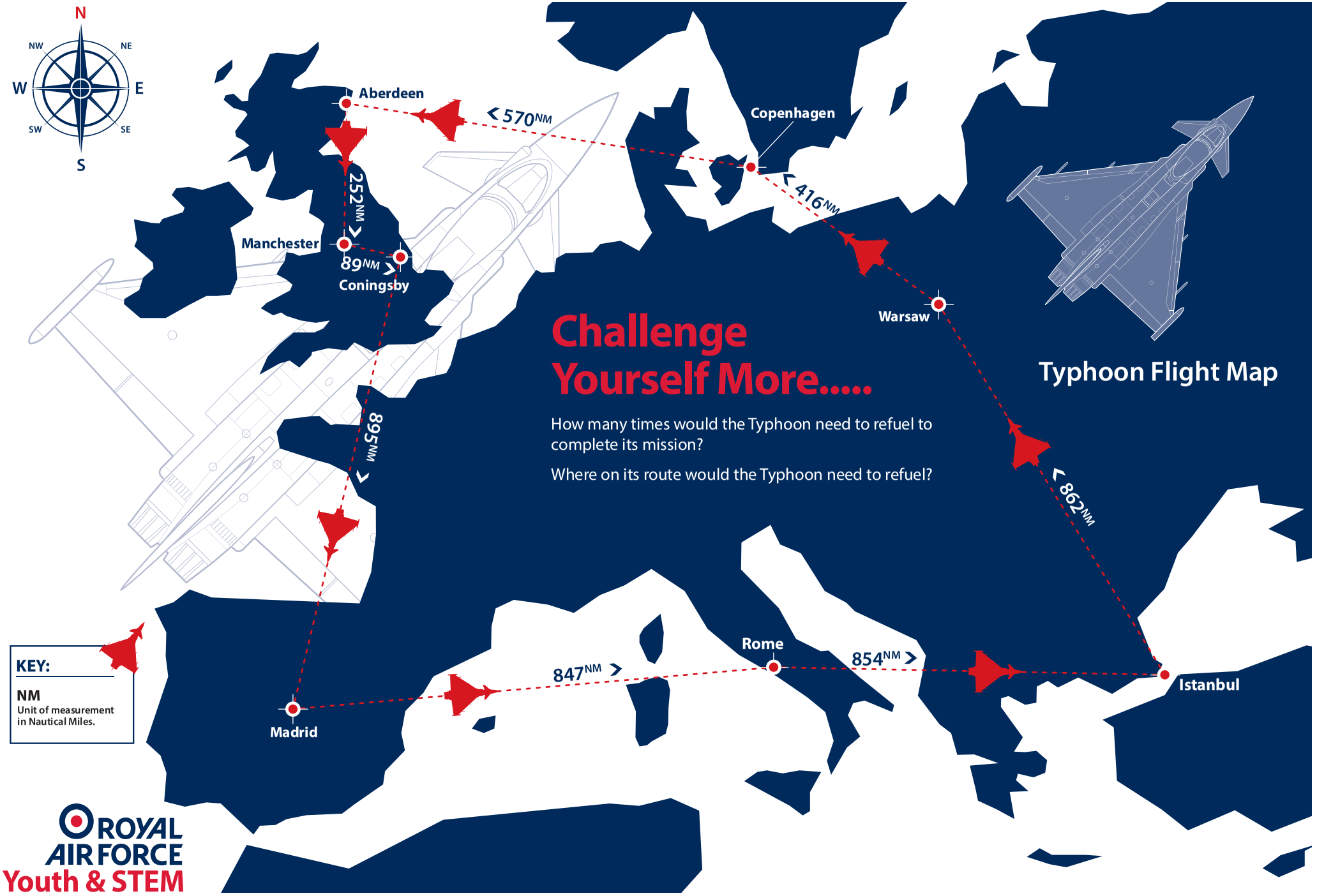
N
NW
NE
W
E
SW
SE
S
Aberdeen
570NM
Copenhagen
416NM
252NM
Manchester
89NM
Coningsby
Warsaw
Challenge Yourself More.....
How many times would the Typhoon need to refuel to complete its mission?
Where on its route would the Typhoon need to refuel?
Typhoon Flight Map
895NM
862NM
KEY:
NM
Unit of measurement in Nautical Miles.
Rome
847NM
854NM
Istanbul
Madrid
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