Navigation foundations

1. Slides

1.1 Navigation foundations

e-Learning Module

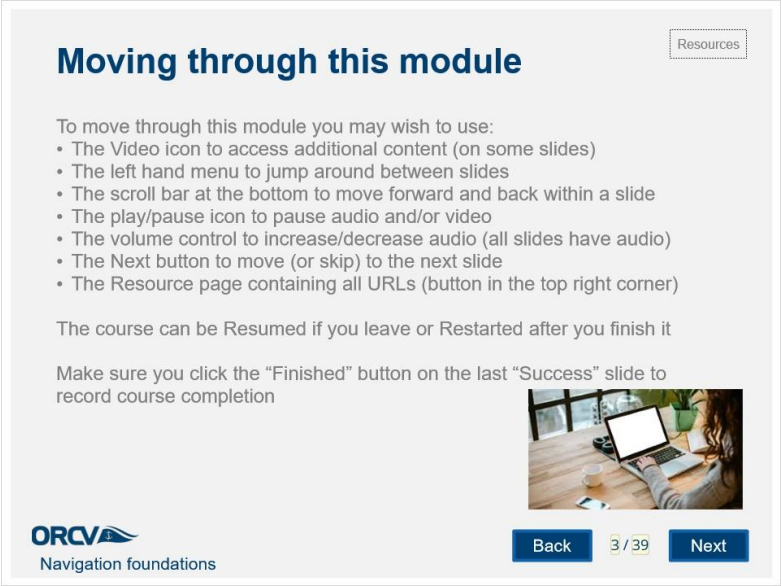
Notes:

1.2 Meet your presenter

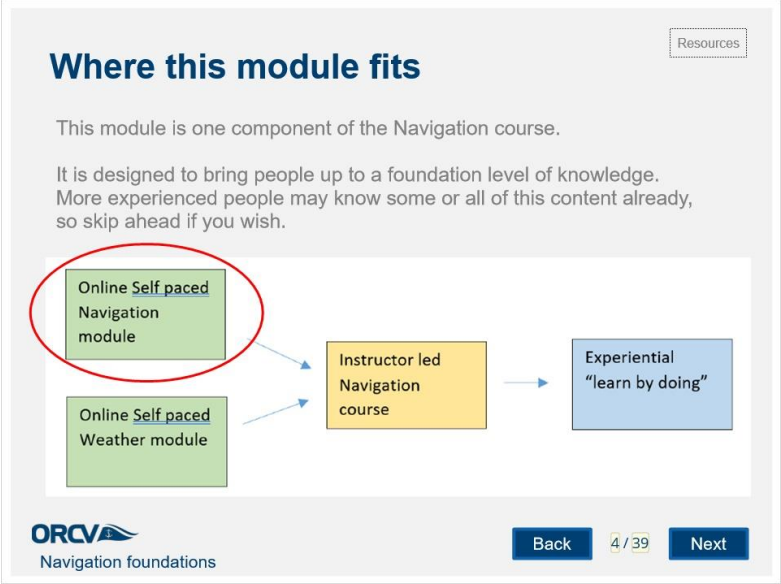
Martin Vaughan

Notes:

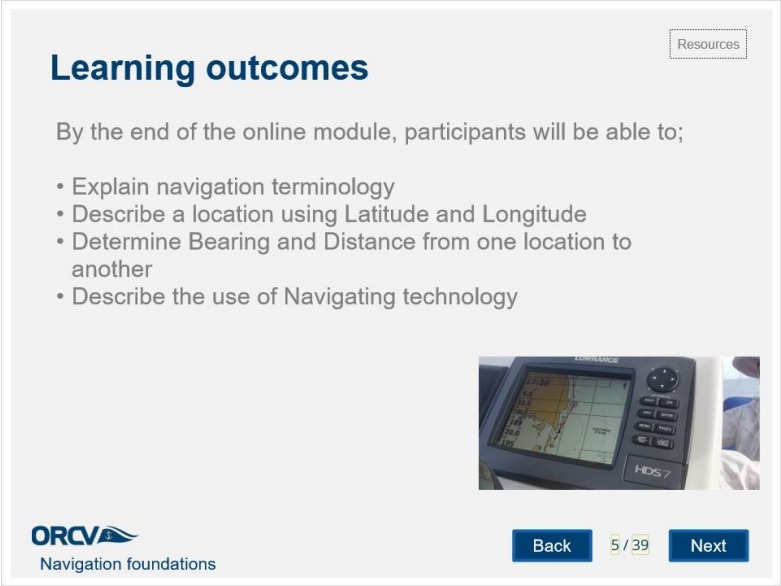
1.3 Navigating



1.4 Where this module fits



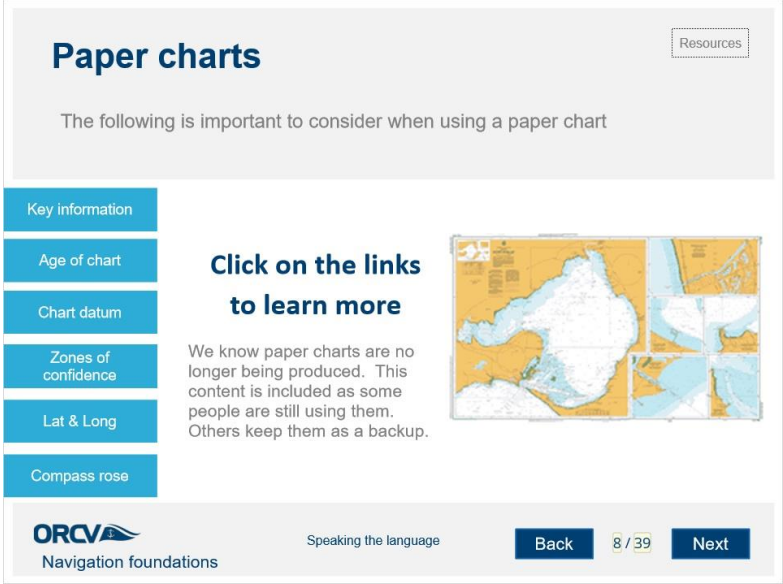
1.5 Learning outcomes



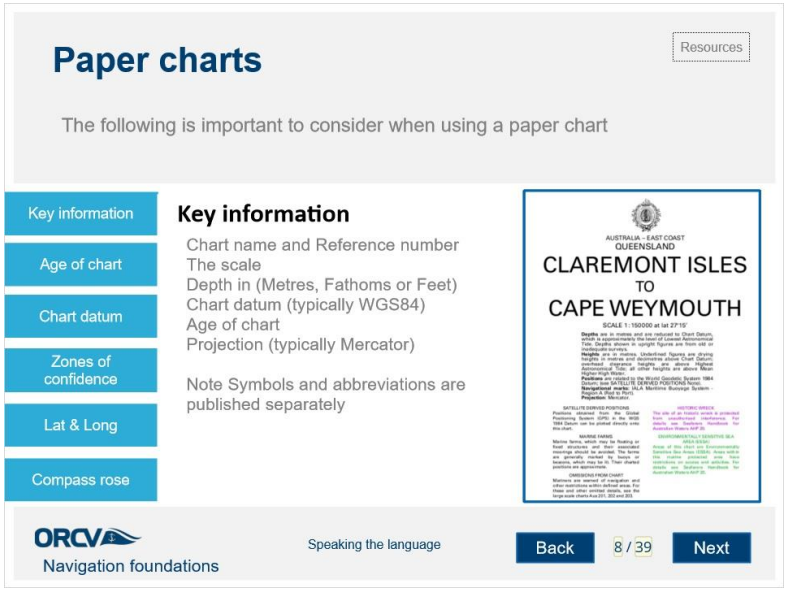
1.6 What is Navigation

1.7 Part 1 – Where am I ?

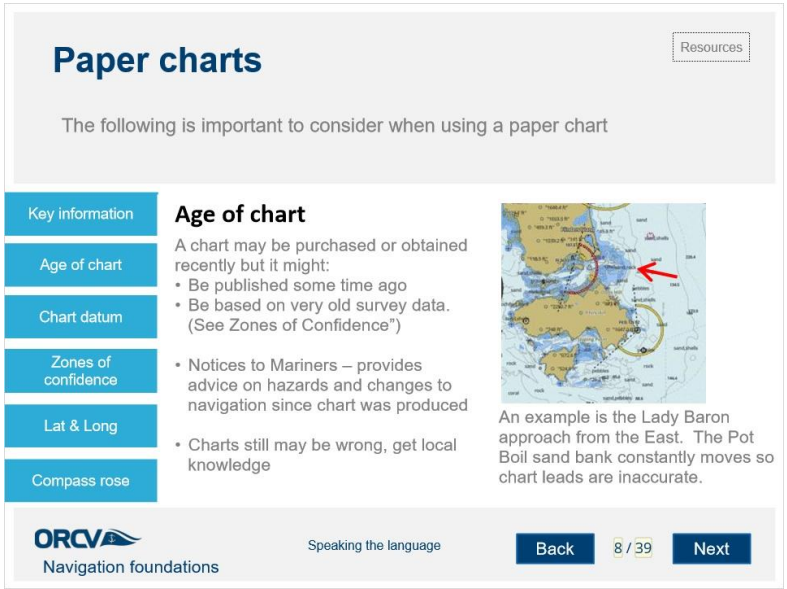
1.8 Paper charts



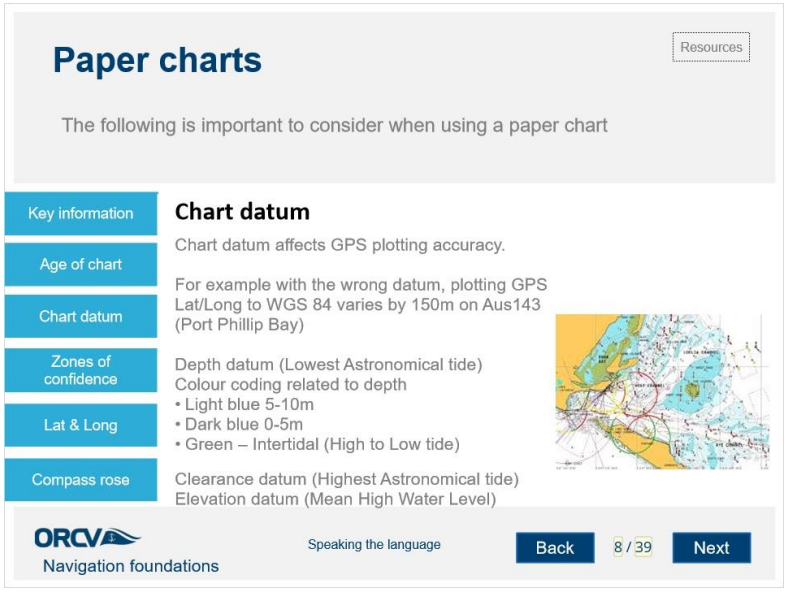
Tab A (Slide Layer)



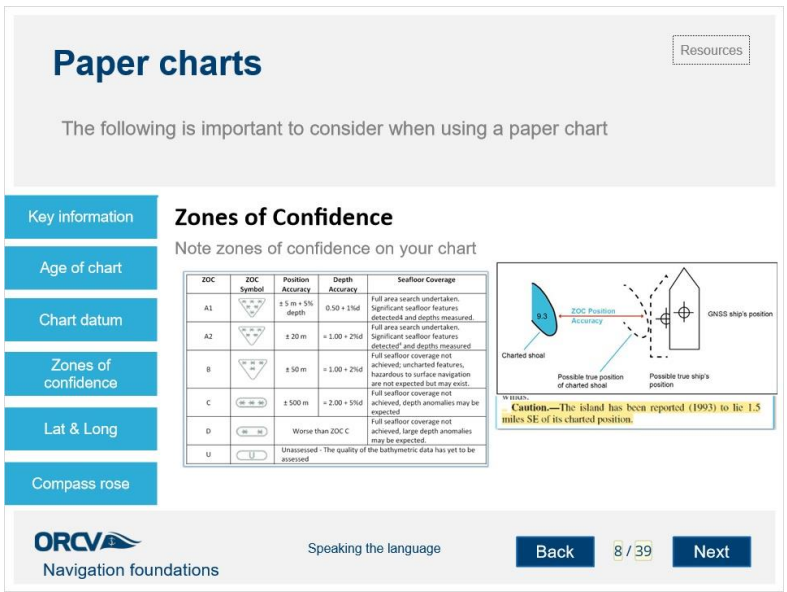
Tab B (Slide Layer)



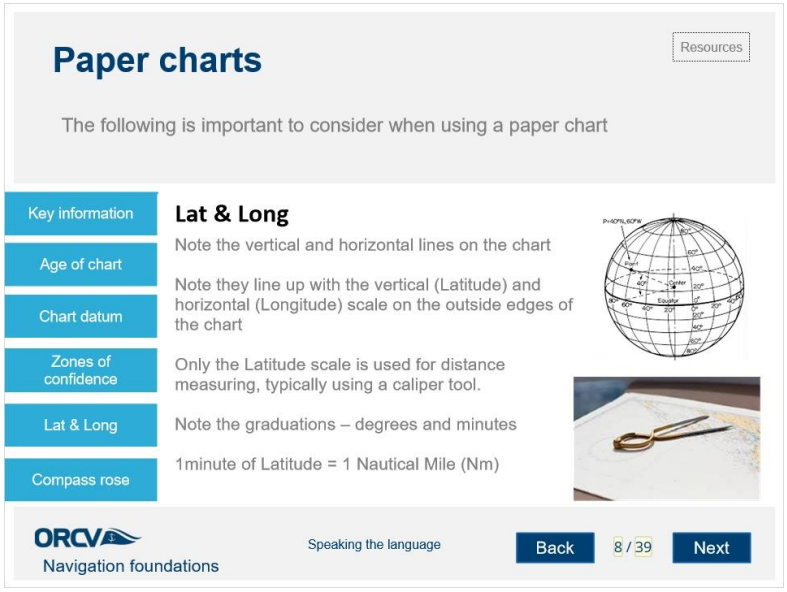
Tab C (Slide Layer)



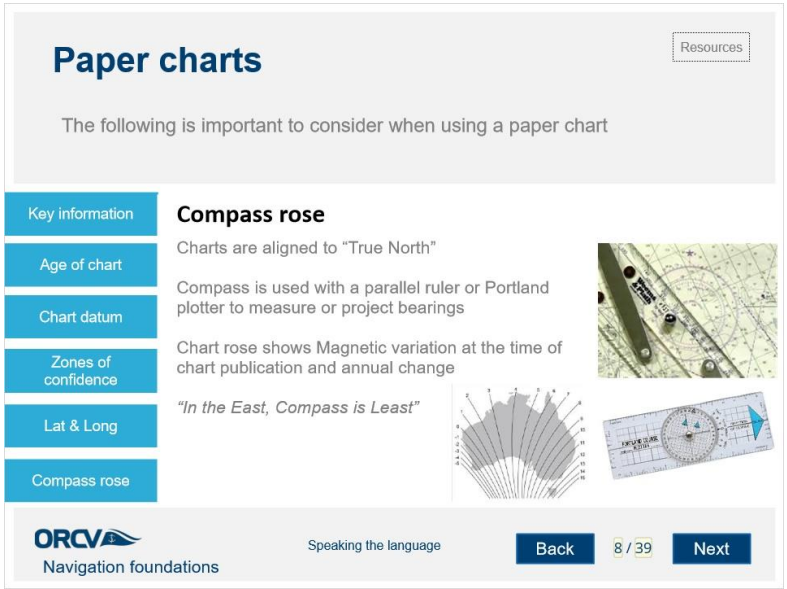
Tab D (Slide Layer)



Tab E (Slide Layer)

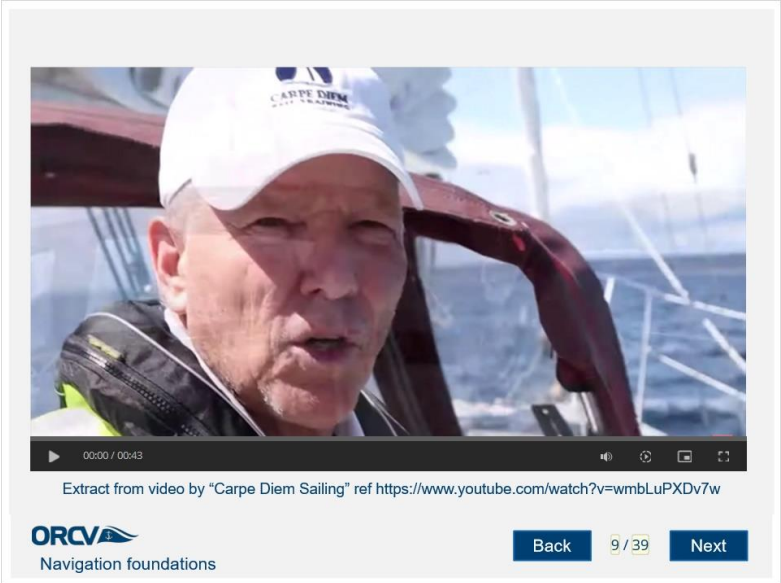


Tab F (Slide Layer)

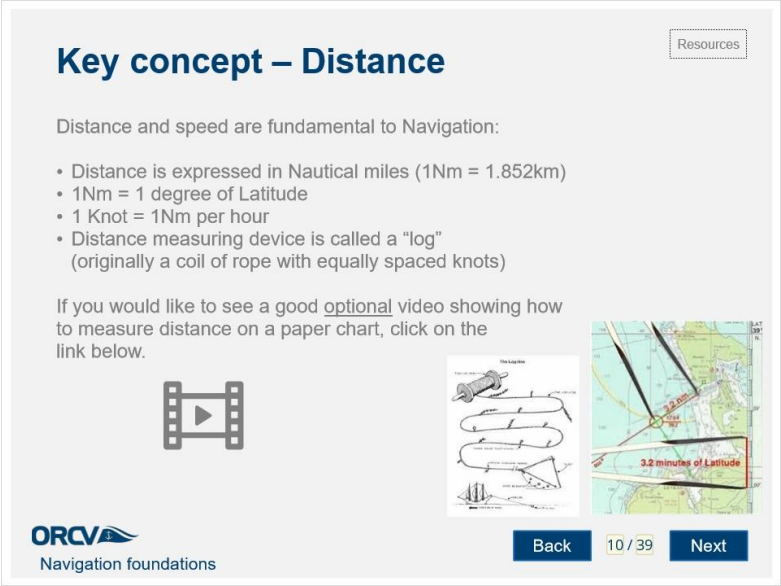


1.9 Key concept 1

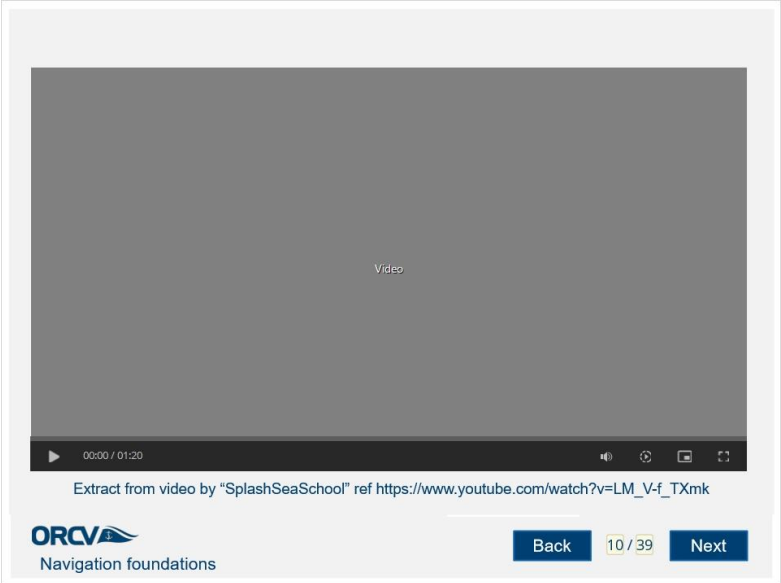
Video (Slide Layer)



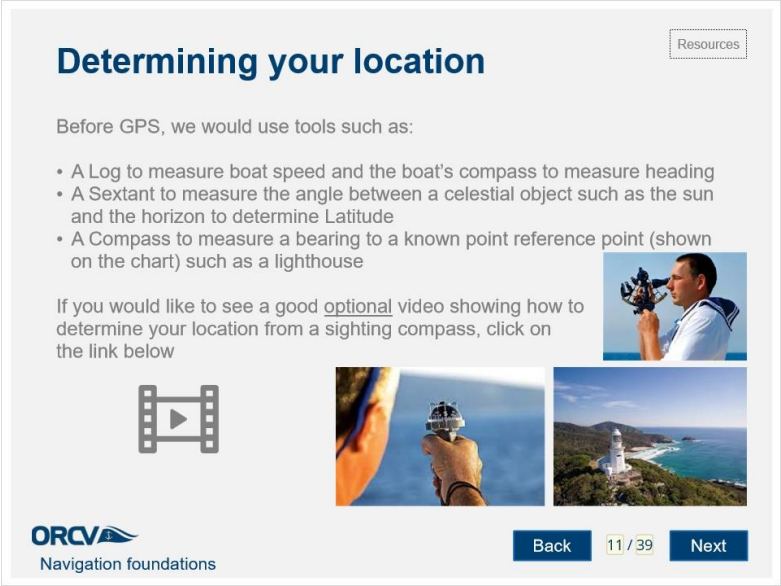
1.10 Key concept 2



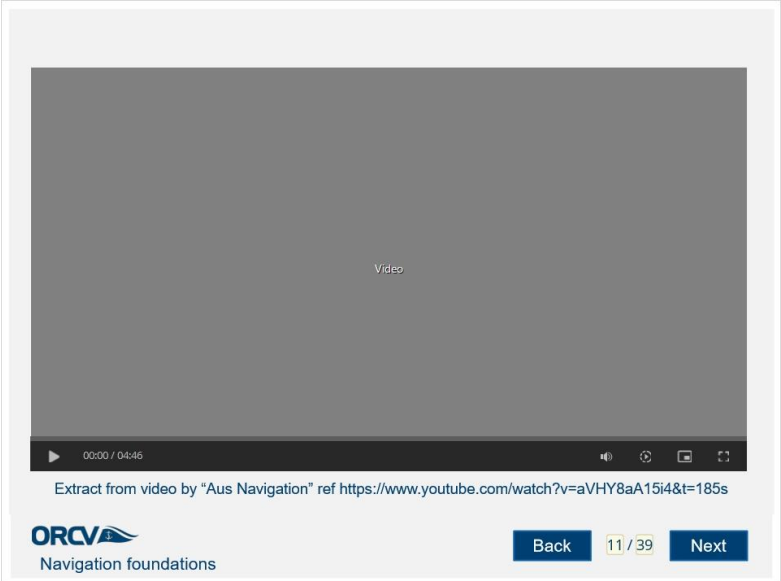
Video (Slide Layer)



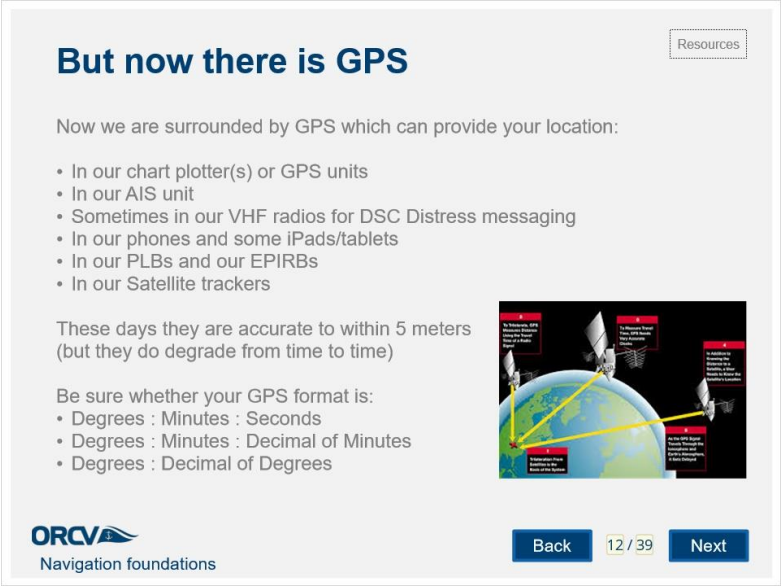
1.11 Determine location



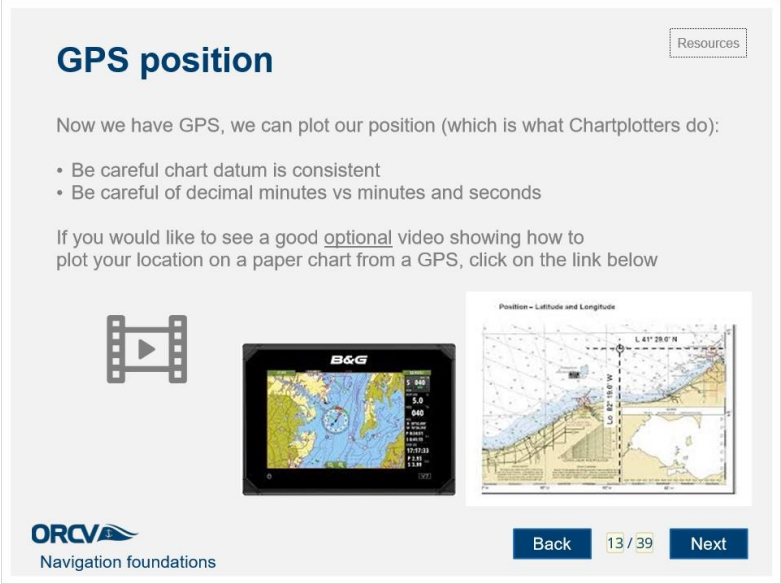
Video (Slide Layer)



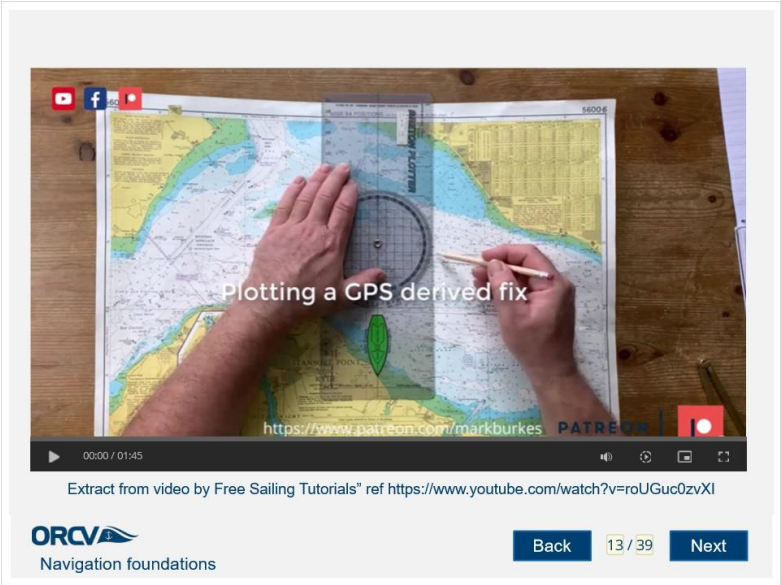
1.12 Now there is GPS



1.13 GPS position

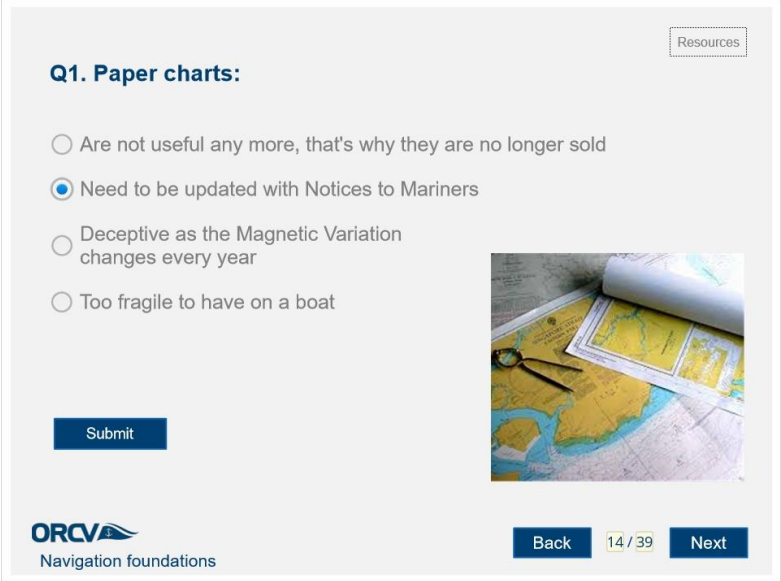


Video (Slide Layer)



1.14 Q1. Paper charts:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
	Are not useful any more, that's why they are no longer sold

X	Need to be updated with Notices to Mariners
	Deceptive as the Magnetic Variation changes every year
	Too fragile to have on a boat

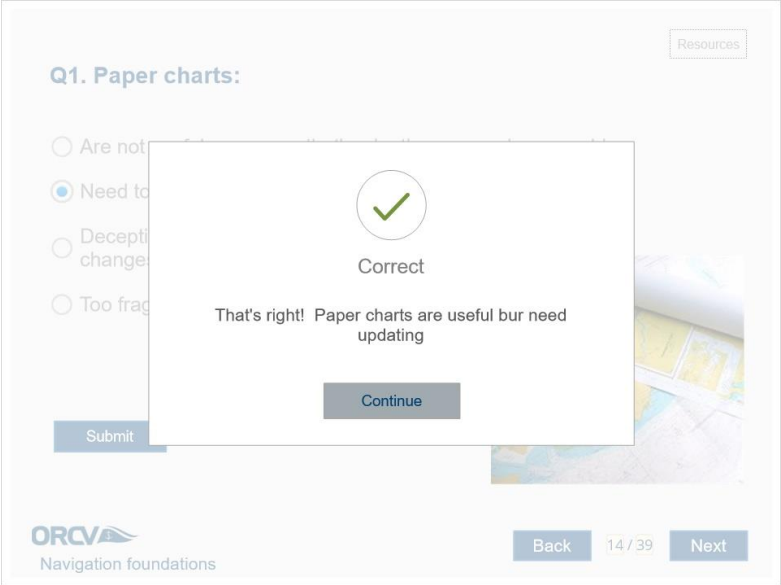
Feedback when correct:

That's right! Paper charts are useful bur need updating

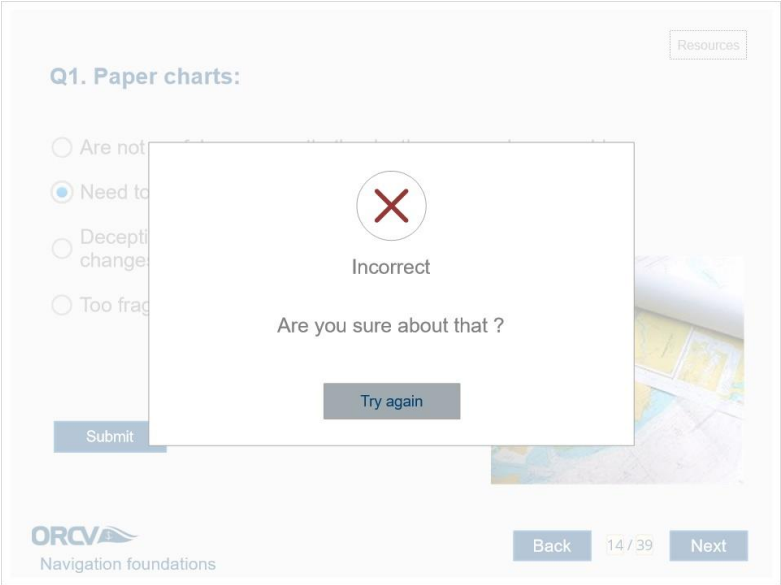
Feedback when incorrect:

Are you sure about that ?

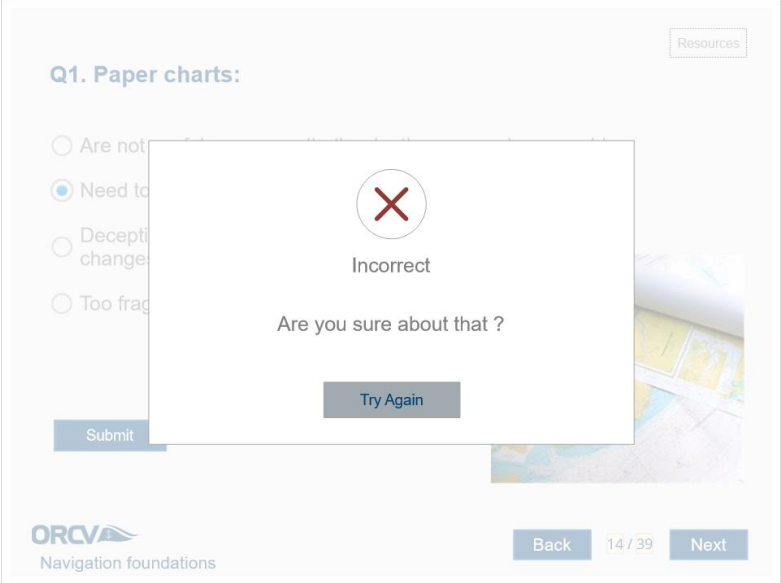
Correct (Slide Layer)



Incorrect (Slide Layer)

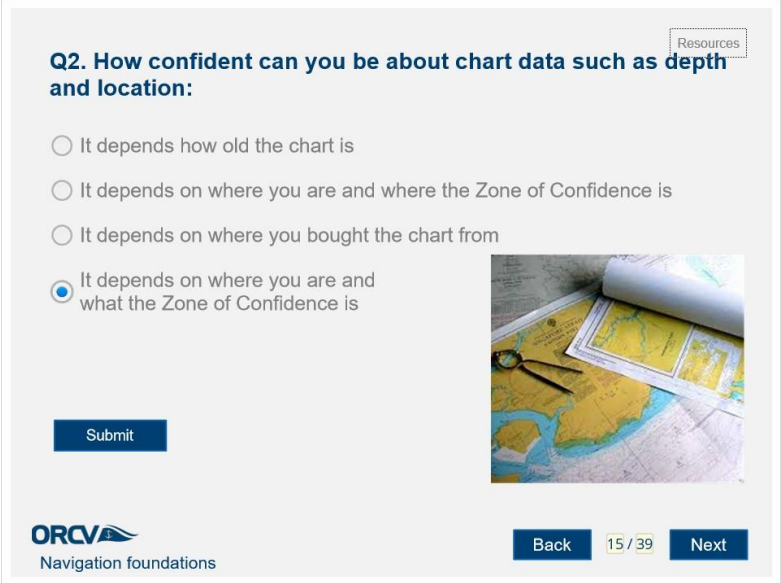


Try Again (Slide Layer)



1.15 Q2. How confident can you be about chart data such as depth and location:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
	It depends how old the chart is
	It depends on where you are and where the Zone of Confidence is
	It depends on where you bought the chart from
X	It depends on where you are and what the Zone of Confidence is

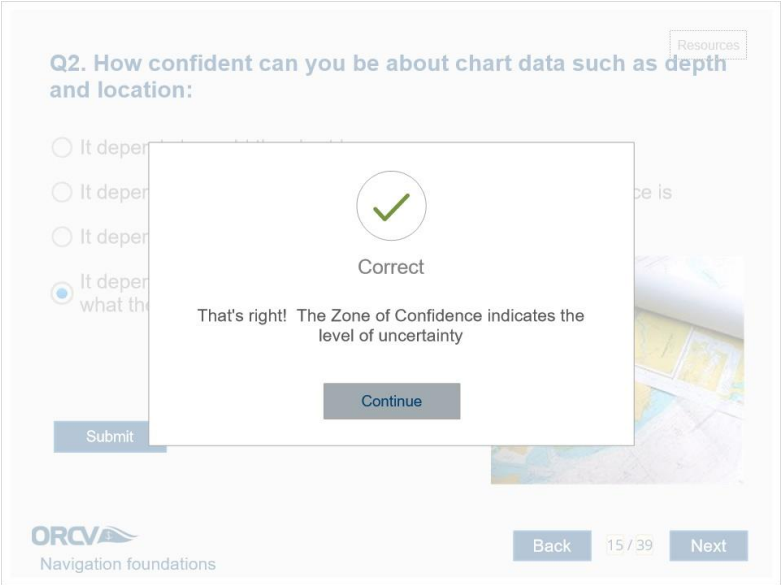
Feedback when correct:

That's right! The Zone of Confidence indicates the level of uncertainty

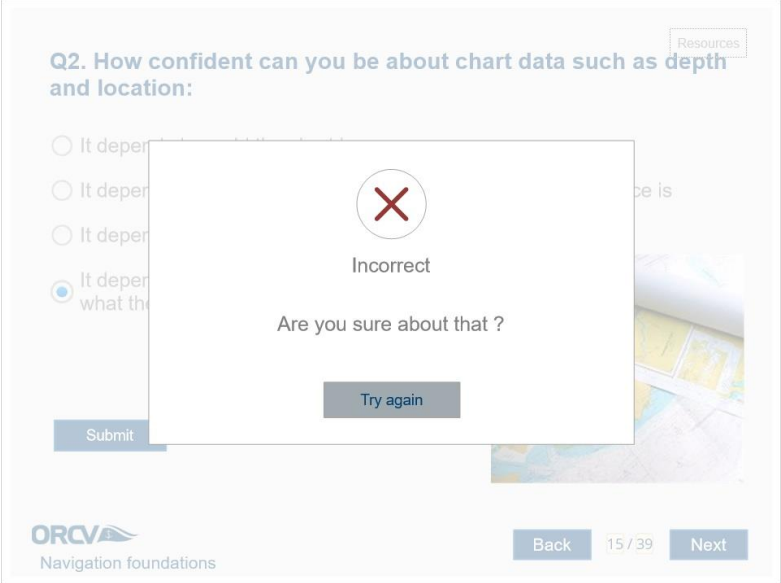
Feedback when incorrect:

Are you sure about that ?

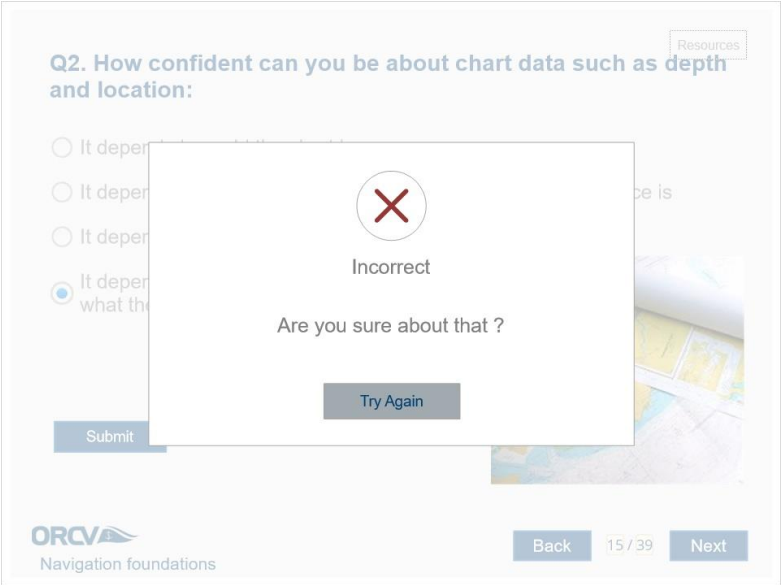
Correct (Slide Layer)



Incorrect (Slide Layer)

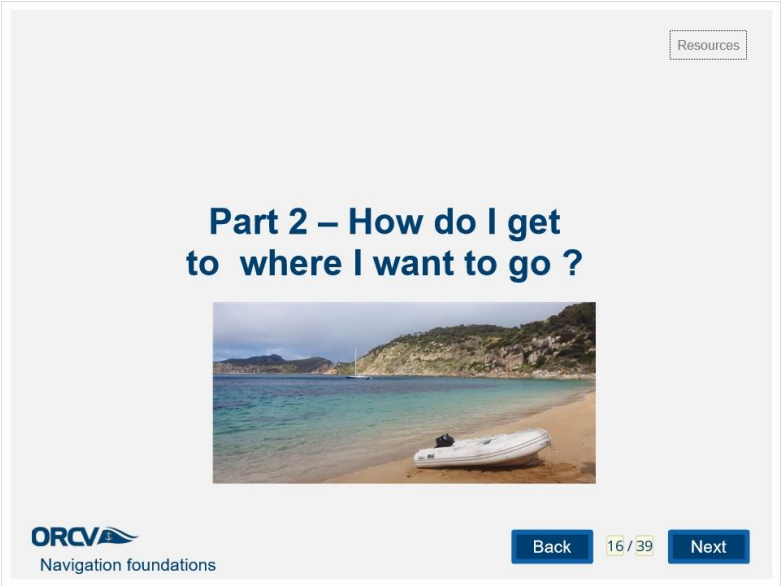


Try Again (Slide Layer)

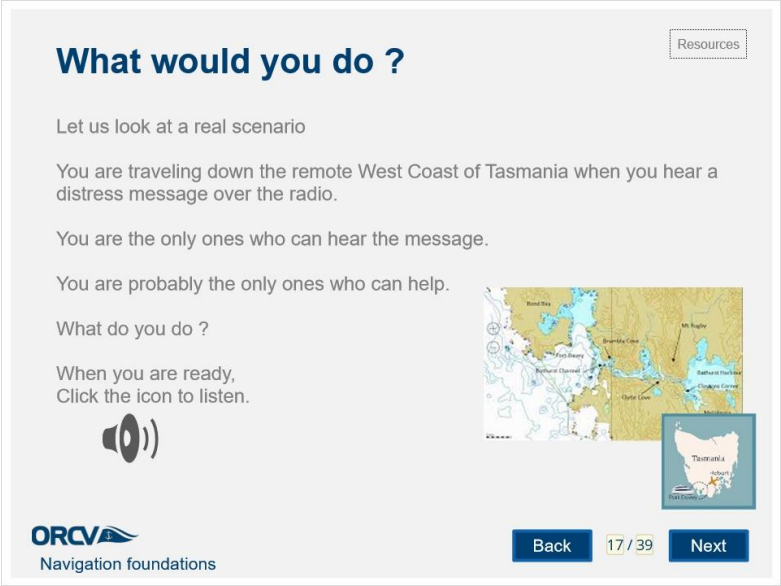


1.16 Part 2 – How do I get

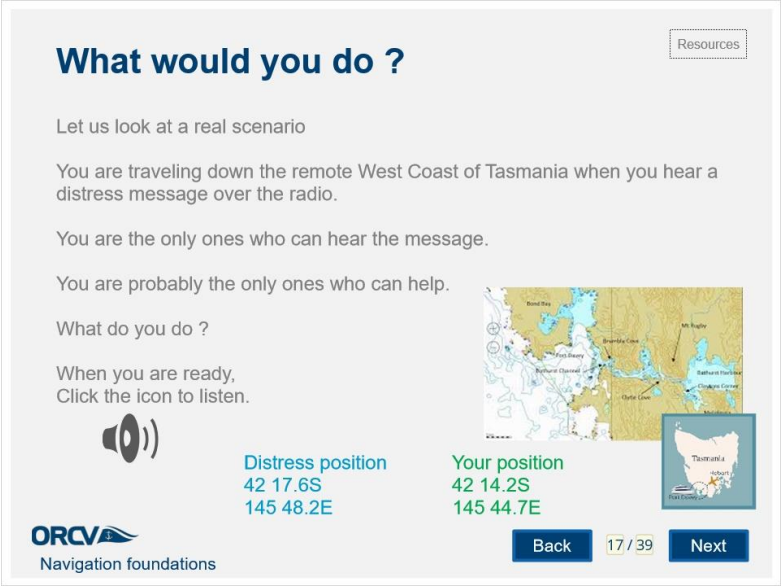
to where I want to go ?



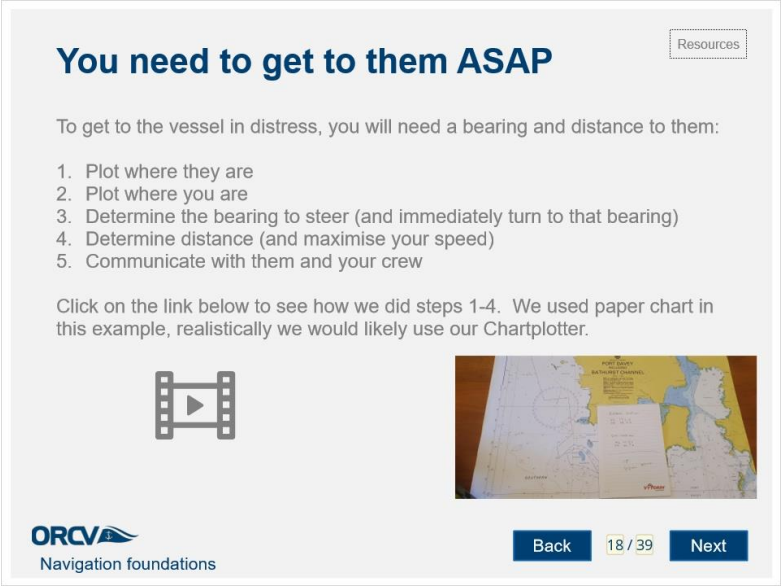
1.17 Mayday



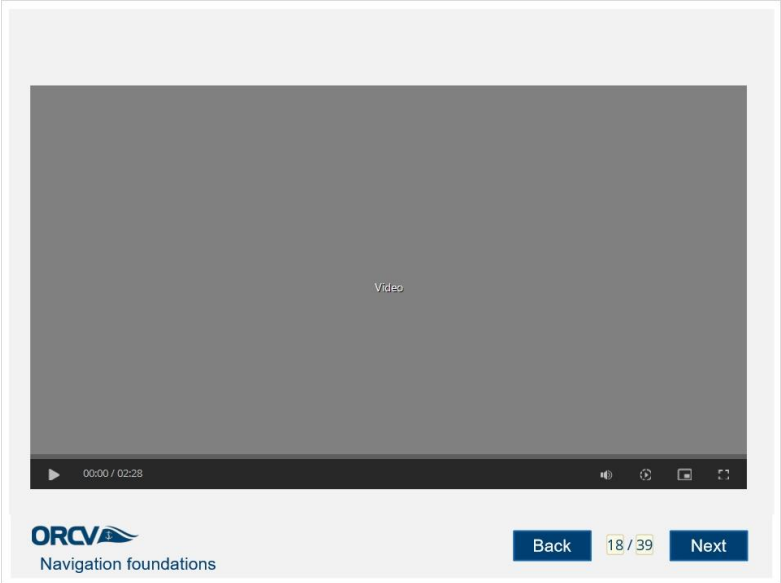
Position (Slide Layer)



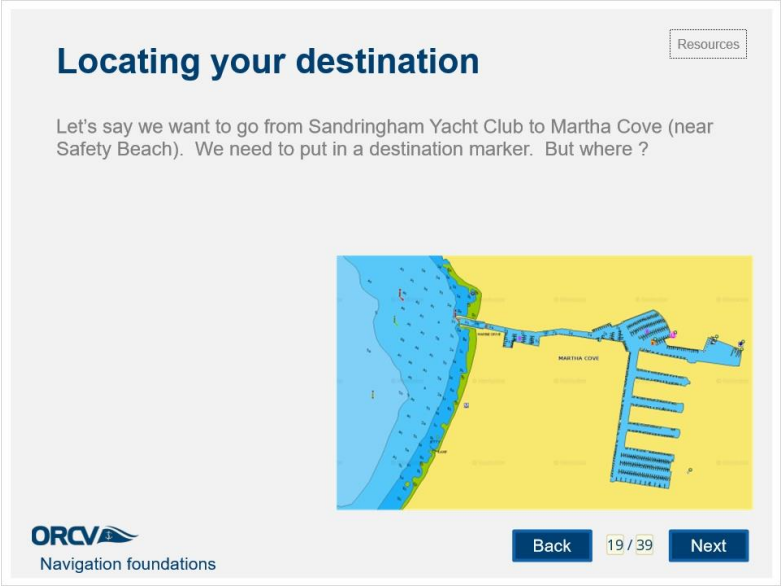
1.18 Bearing and distance



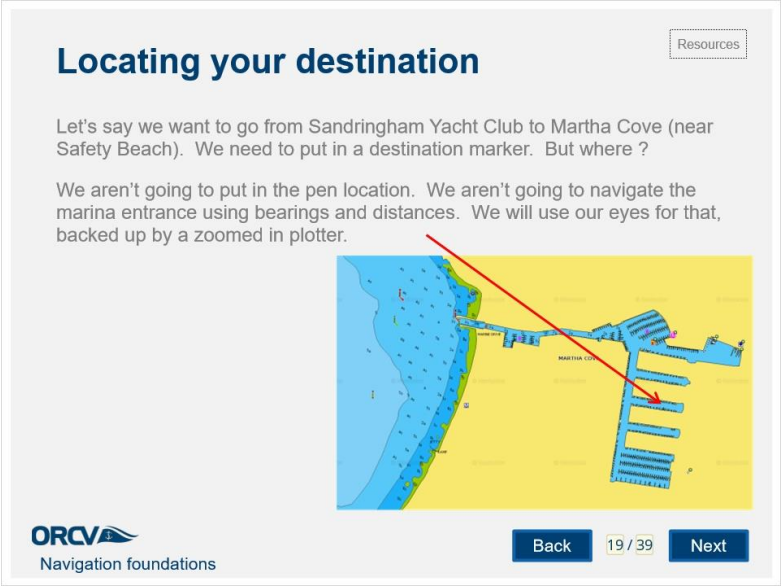
Video (Slide Layer)



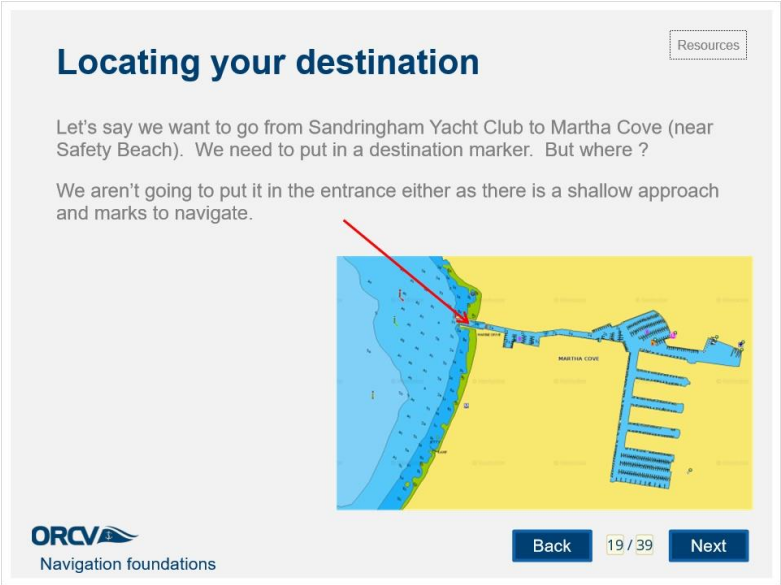
1.19 Locating destination



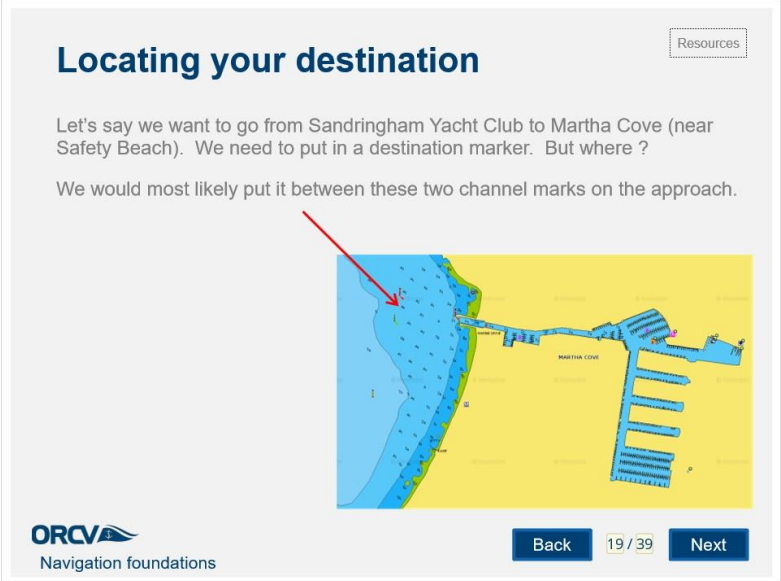
L1 (Slide Layer)



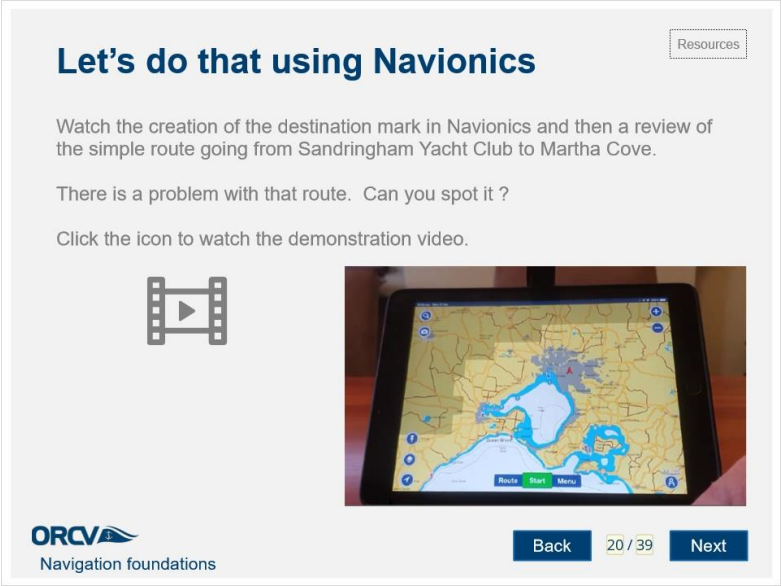
L2 (Slide Layer)



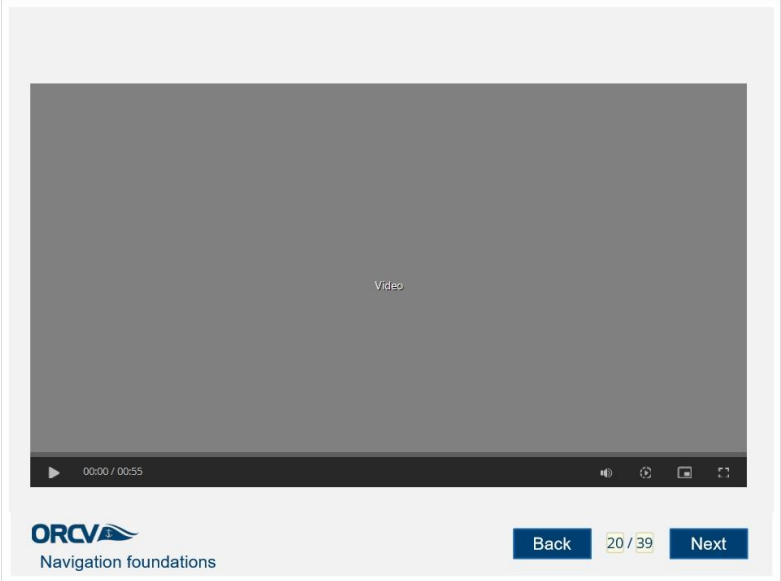
L3 (Slide Layer)



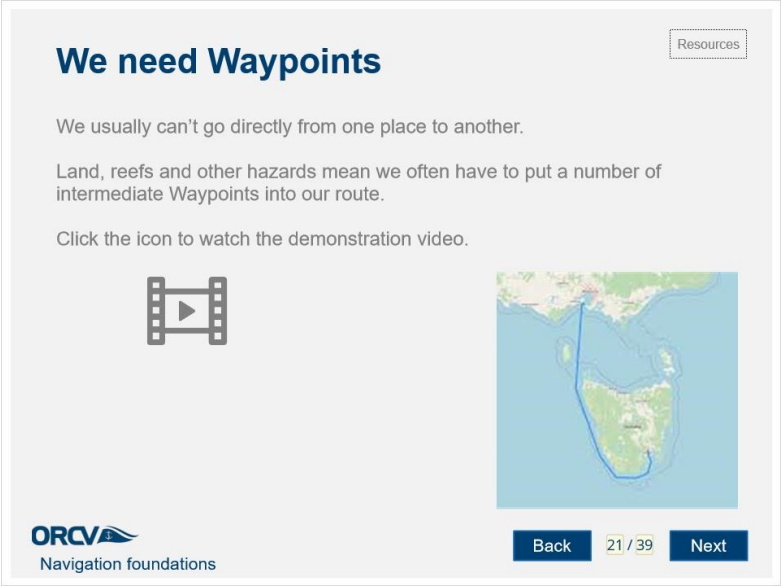
1.20 Navionics demo



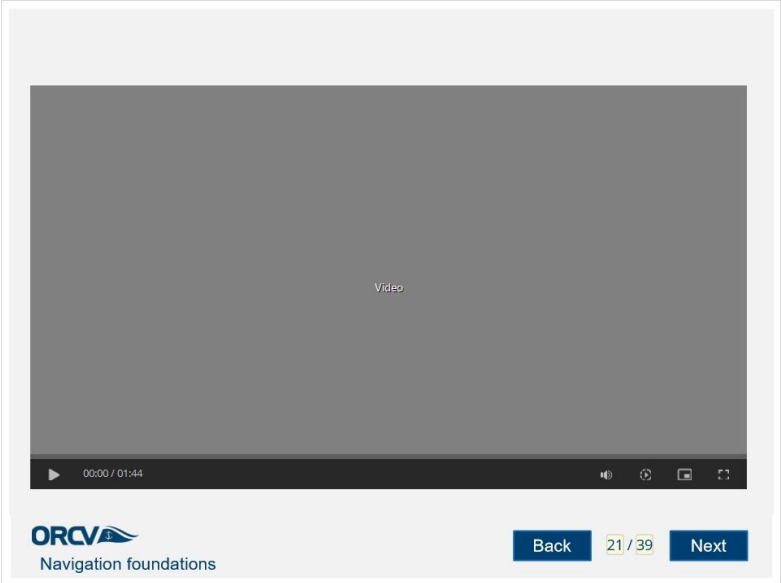
Video (Slide Layer)



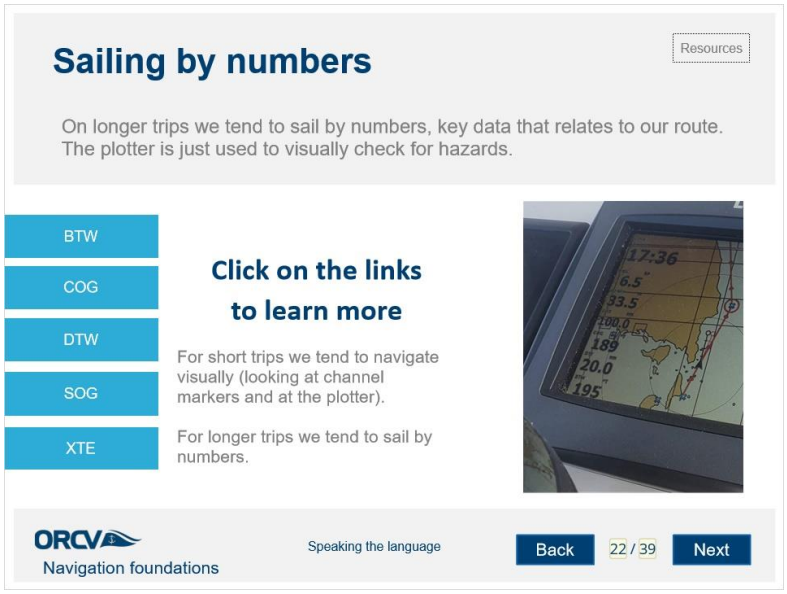
1.21 Waypoints Navionics demo



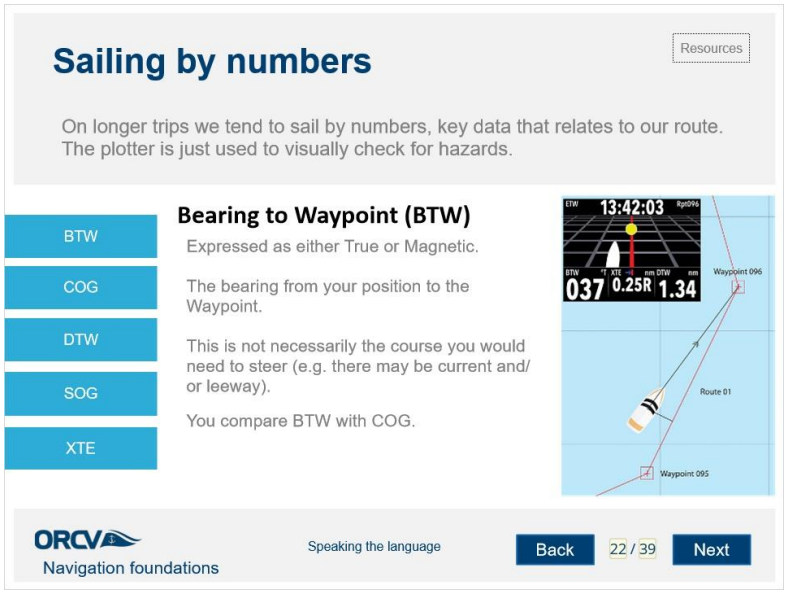
Video (Slide Layer)



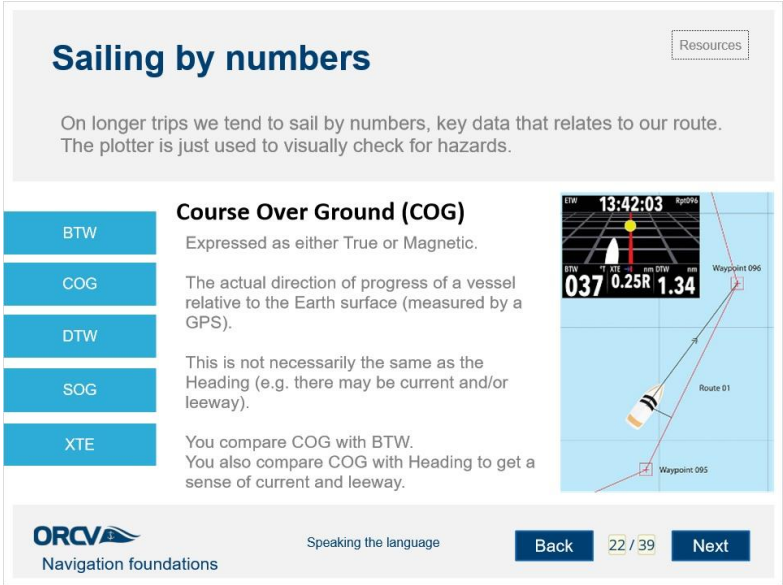
1.22 Sailing by numbers



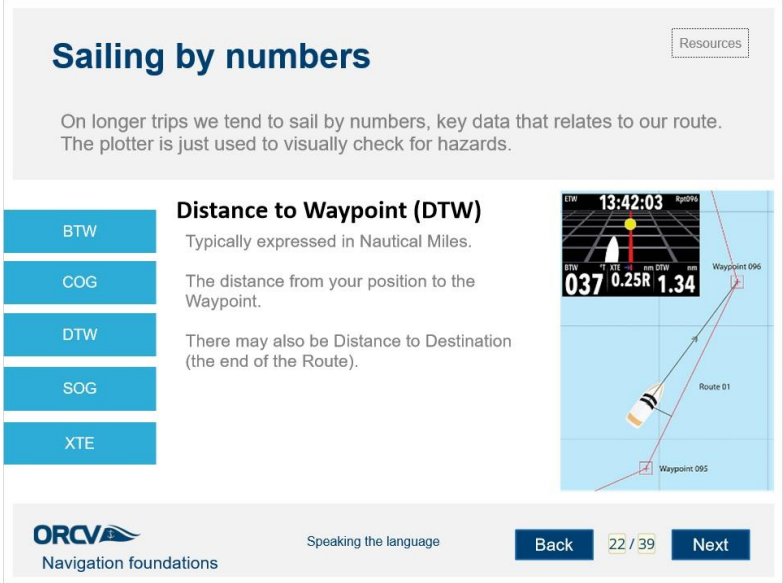
Tab A (Slide Layer)



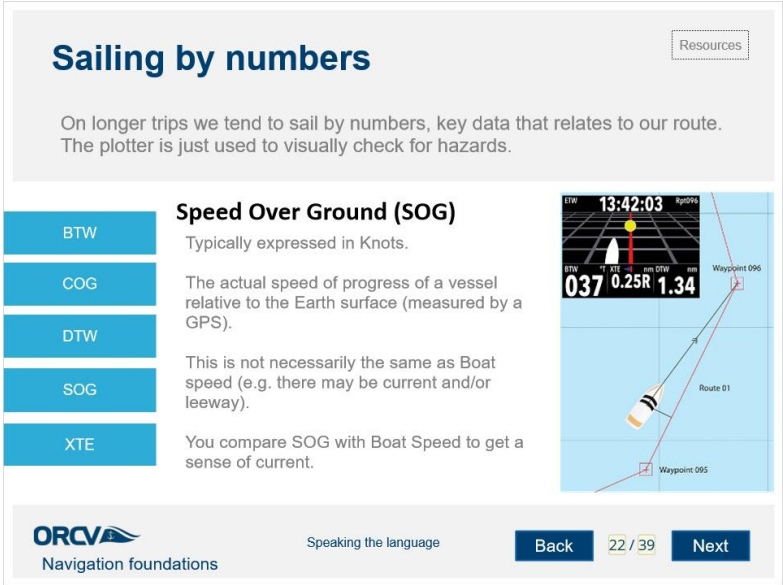
Tab B (Slide Layer)



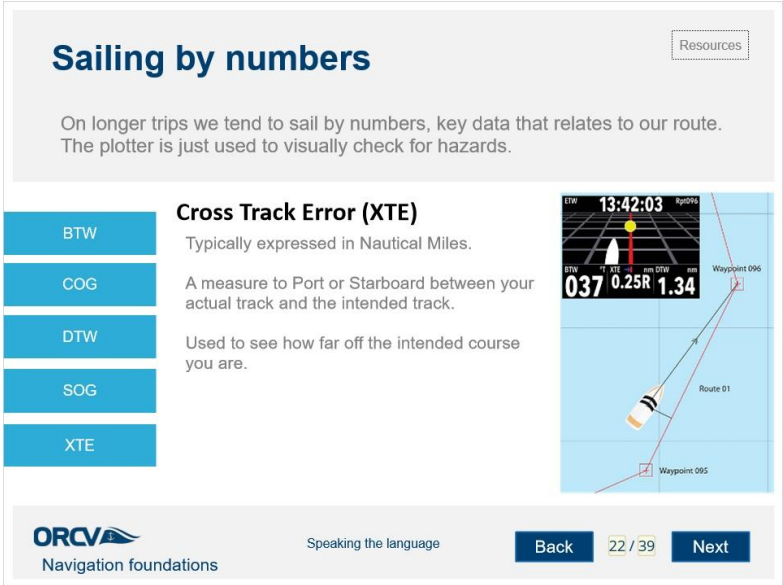
Tab C (Slide Layer)



Tab D (Slide Layer)

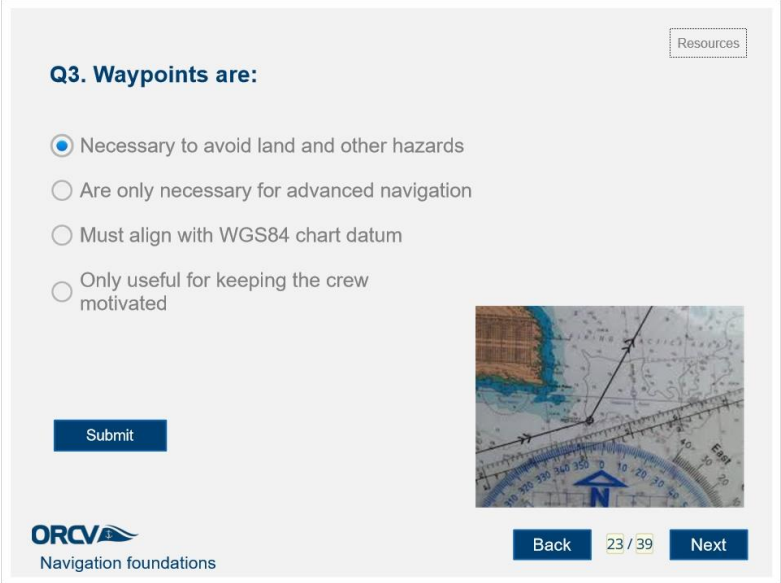


Tab E (Slide Layer)



1.23 Q3. Waypoints are:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
X	Necessary to avoid land and other hazards
	Are only necessary for advanced navigation
	Must align with WGS84 chart datum
	Only useful for keeping the crew motivated

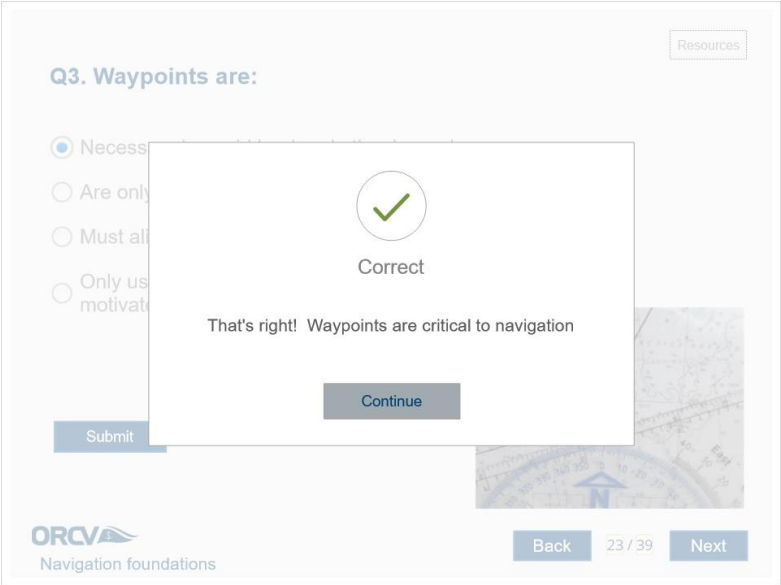
Feedback when correct:

That's right! Waypoints are critical to navigation

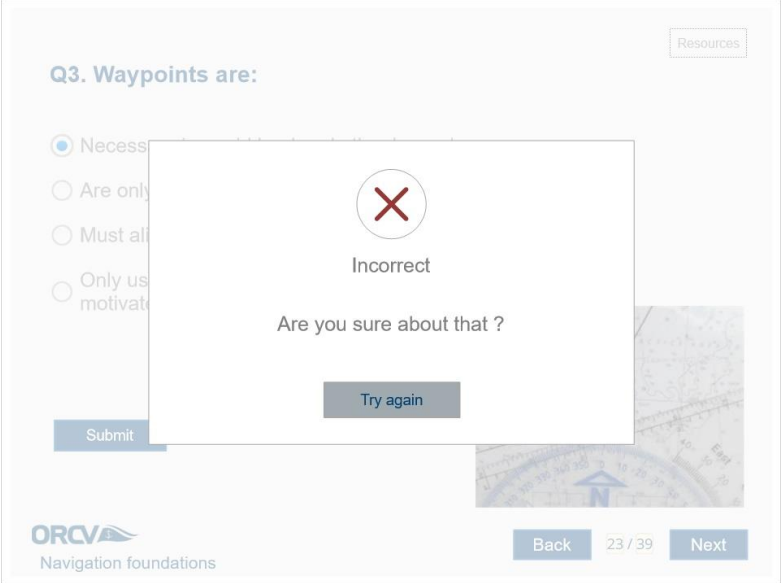
Feedback when incorrect:

Are you sure about that ?

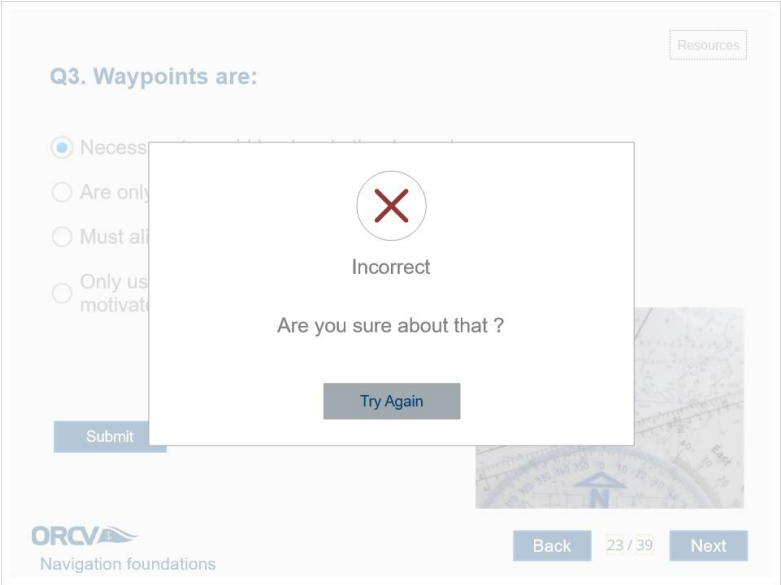
Correct (Slide Layer)



Incorrect (Slide Layer)

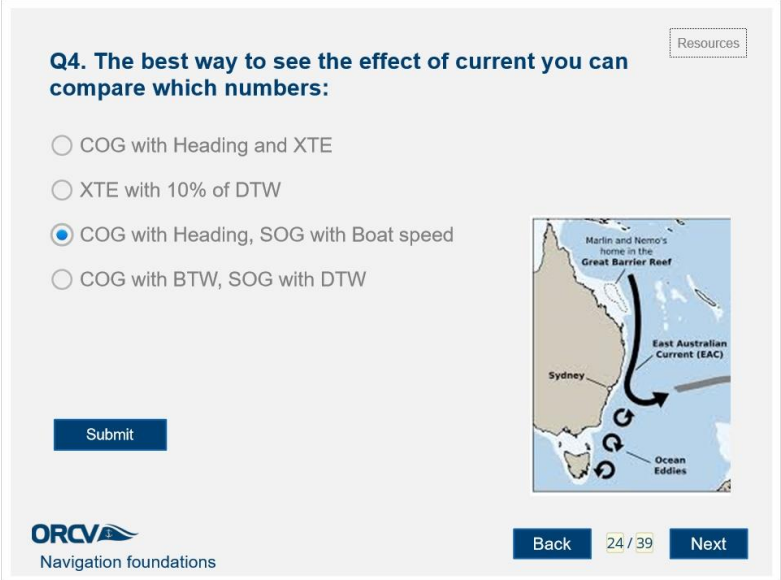


Try Again (Slide Layer)



1.24 Q4. The best way to see the effect of current you can compare which numbers:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
	COG with Heading and XTE
	XTE with 10% of DTW
X	COG with Heading, SOG with Boat speed
	COG with BTW, SOG with DTW

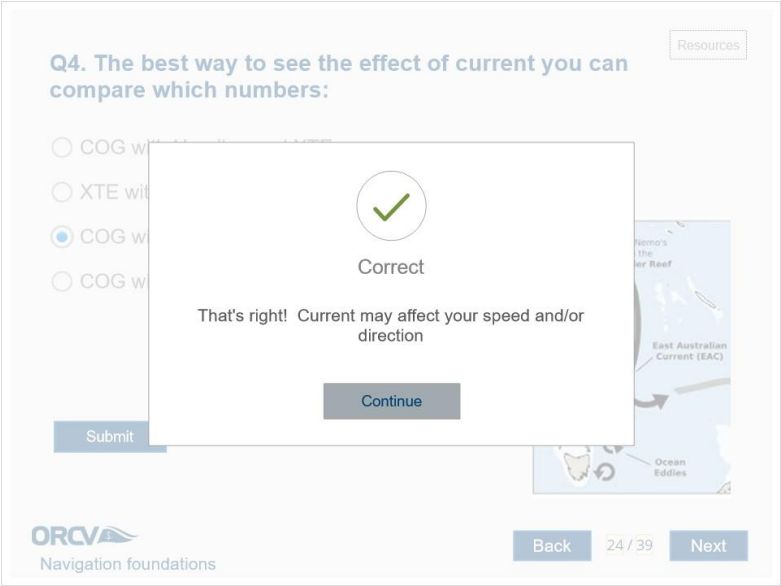
Feedback when correct:

That's right! Current may affect your speed and/or direction

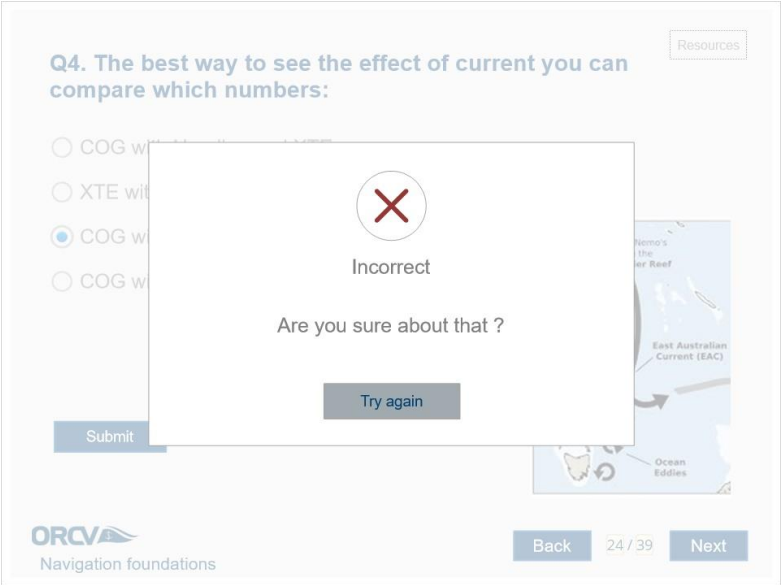
Feedback when incorrect:

Are you sure about that ?

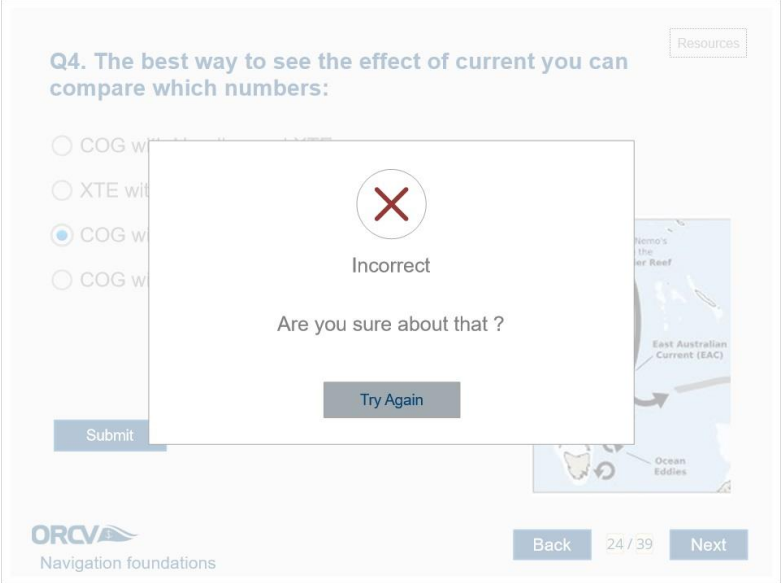
Correct (Slide Layer)



Incorrect (Slide Layer)

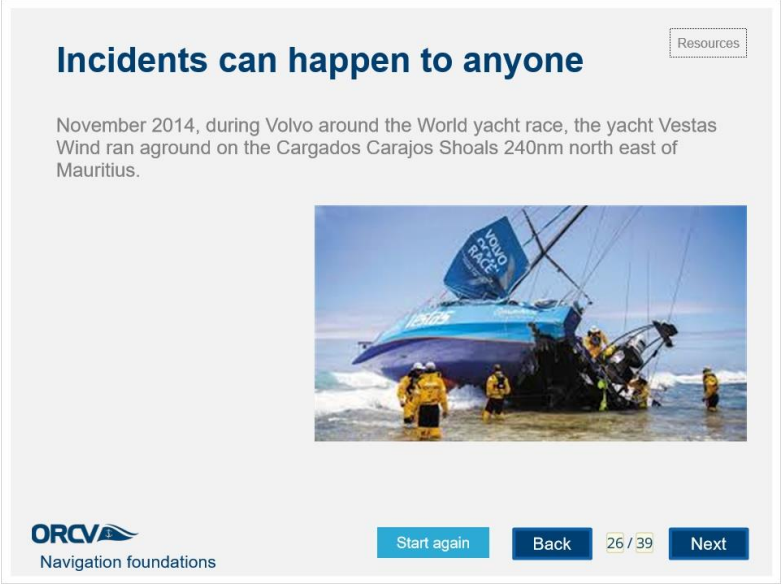


Try Again (Slide Layer)



1.25 Part 3 – How do I avoid hazards ?

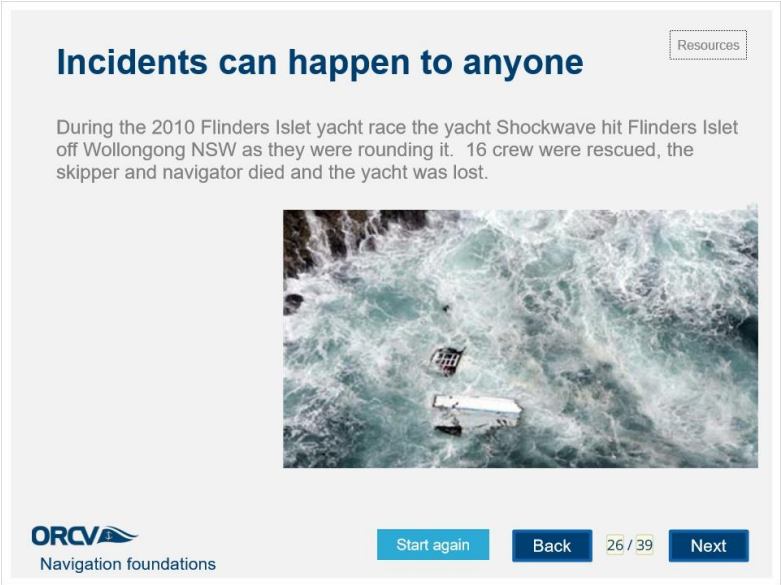
1.26 Incidents



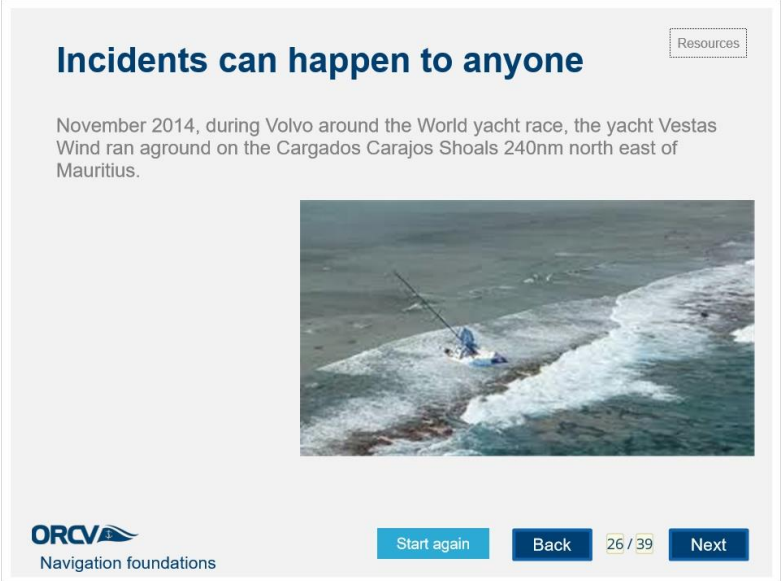
L1 (Slide Layer)

L2 (Slide Layer)

L3 (Slide Layer)



L4 (Slide Layer)

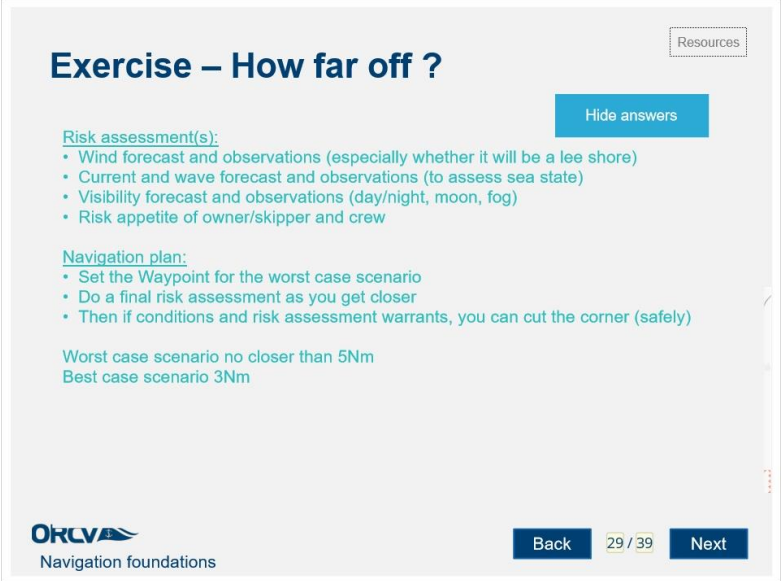


1.27 Is the risk worth it ?

1.28 Navigation and Weather

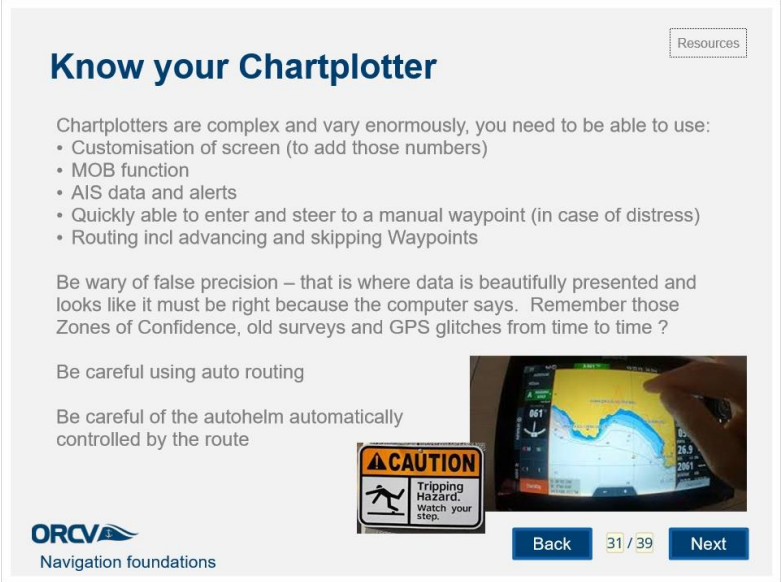
1.29 How far off ?

Answers (Slide Layer)



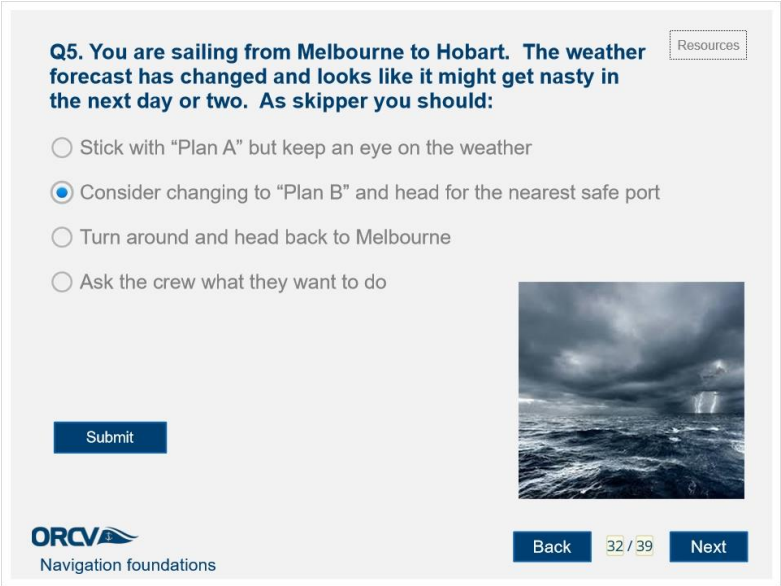
1.30 Plan for “what if” too

1.31 Know your Chartplotter



1.32 Q5. You are sailing from Melbourne to Hobart. The weather forecast has changed and looks like it might get nasty in the next day or two. As skipper you should:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
	Stick with "Plan A" but keep an eye on the weather
X	Consider changing to "Plan B" and head for the nearest safe port
	Turn around and head back to Melbourne
	Ask the crew what they want to do

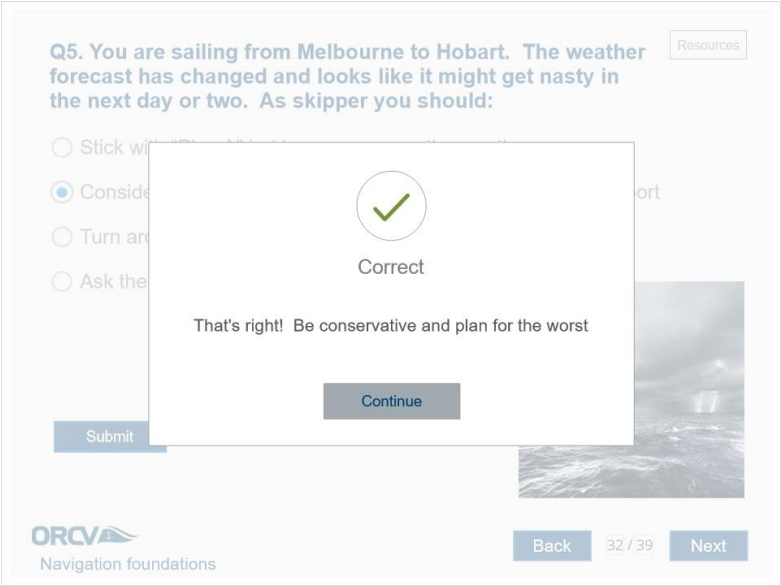
Feedback when correct:

That's right! Be conservative and plan for the worst

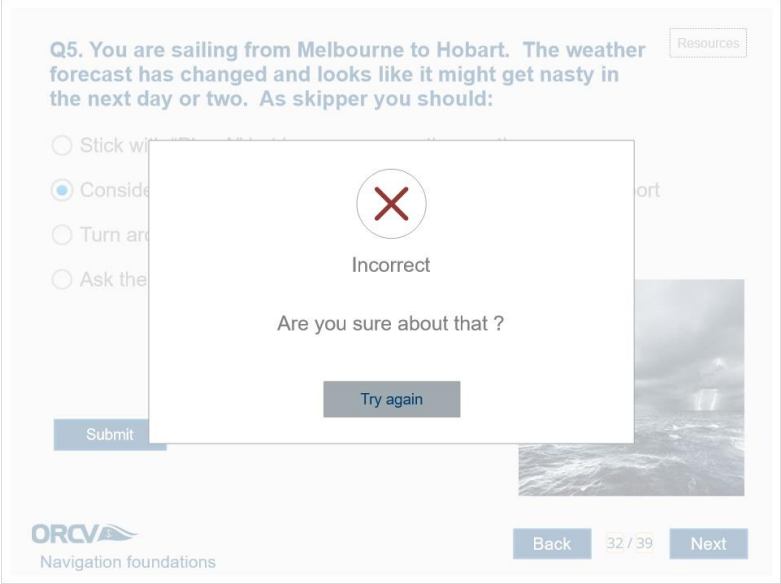
Feedback when incorrect:

Are you sure about that ?

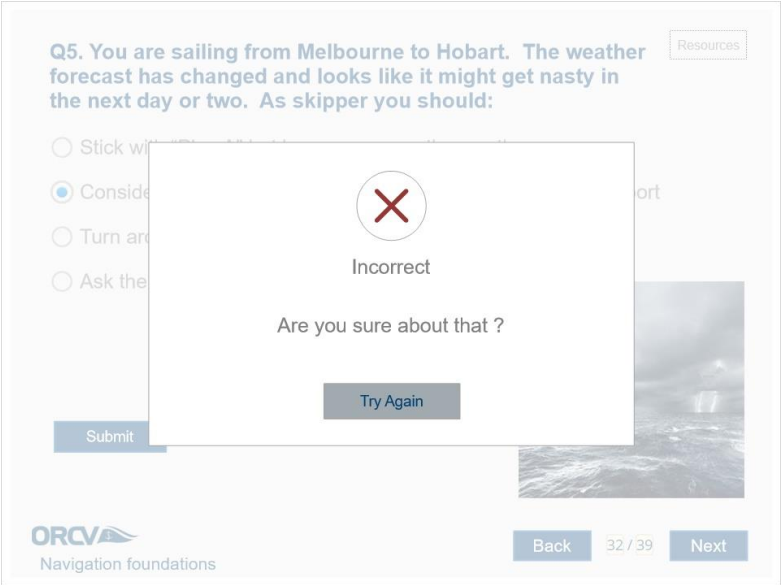
Correct (Slide Layer)



Incorrect (Slide Layer)

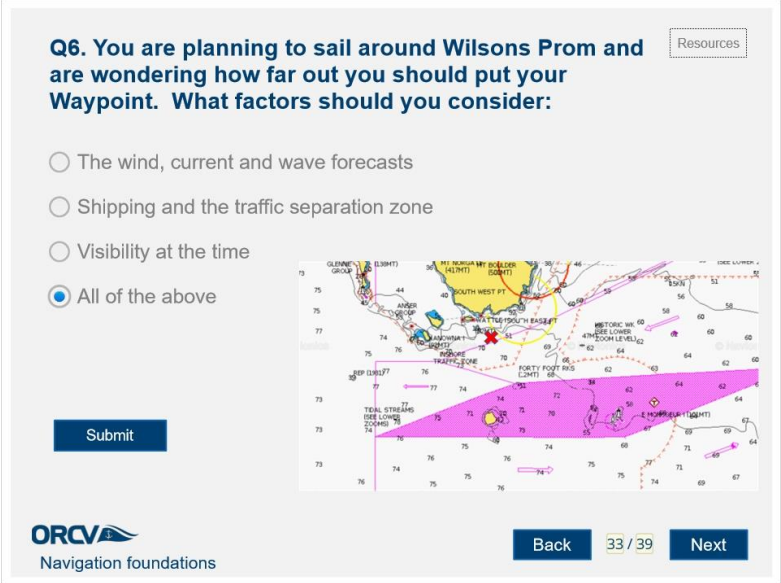


Try Again (Slide Layer)



1.33 Q6. You are planning to sail around Wilsons Prom and are wondering how far out you should put your Waypoint. What factors should you consider:

(Multiple Choice, 0 points, unlimited attempts permitted)



Correct	Choice
	The wind, current and wave forecasts
	Shipping and the traffic separation zone
	Visibility at the time
X	All of the above

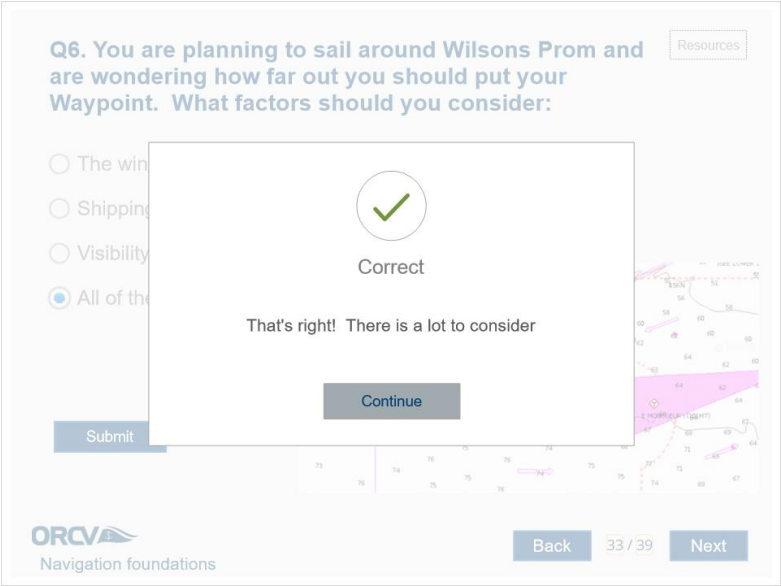
Feedback when correct:

That's right! There is a lot to consider

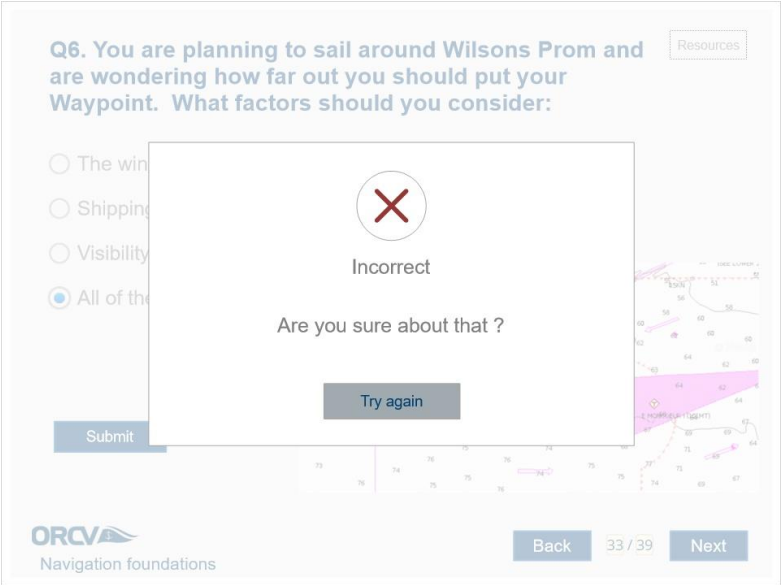
Feedback when incorrect:

Are you sure about that ?

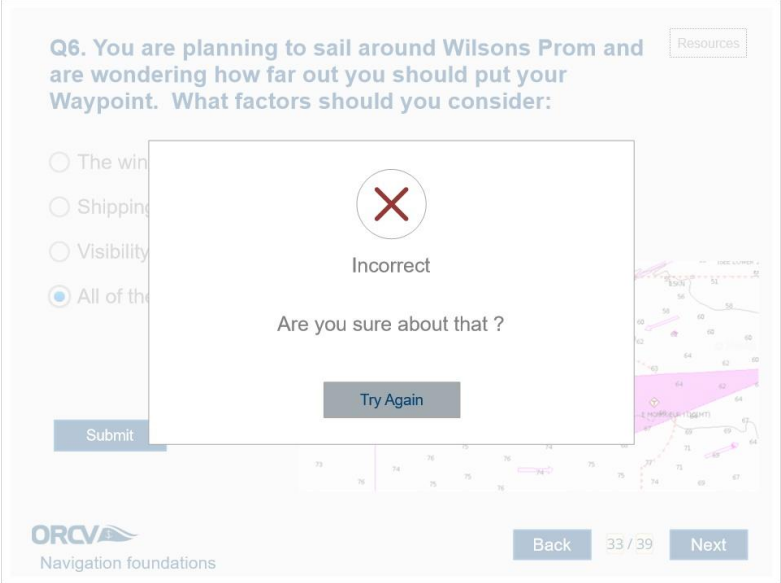
Correct (Slide Layer)



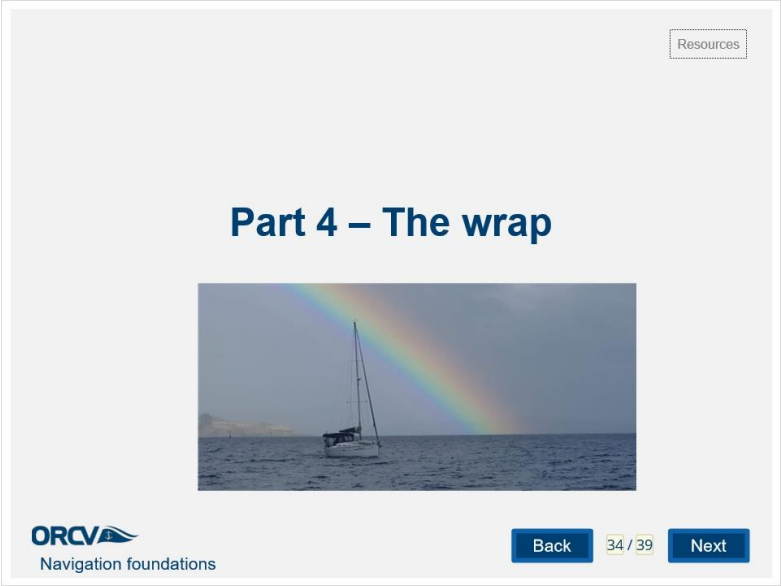
Incorrect (Slide Layer)



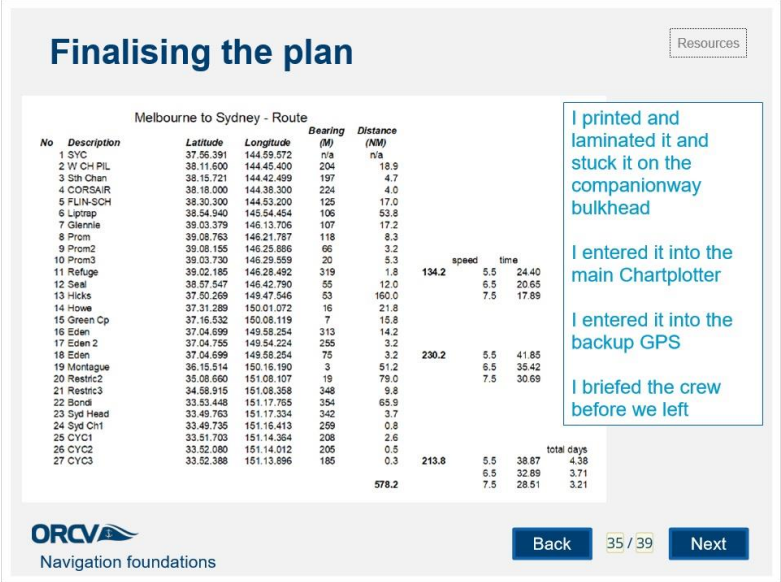
Try Again (Slide Layer)



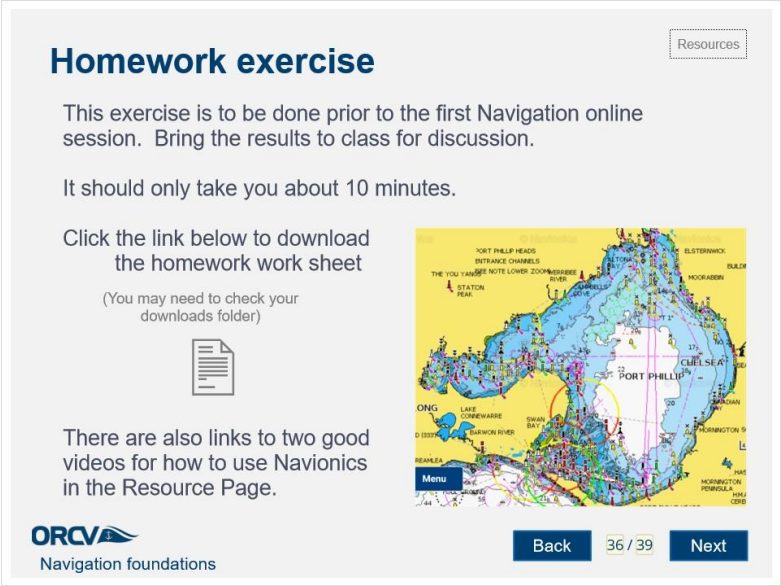
1.34 Part 4 – The wrap



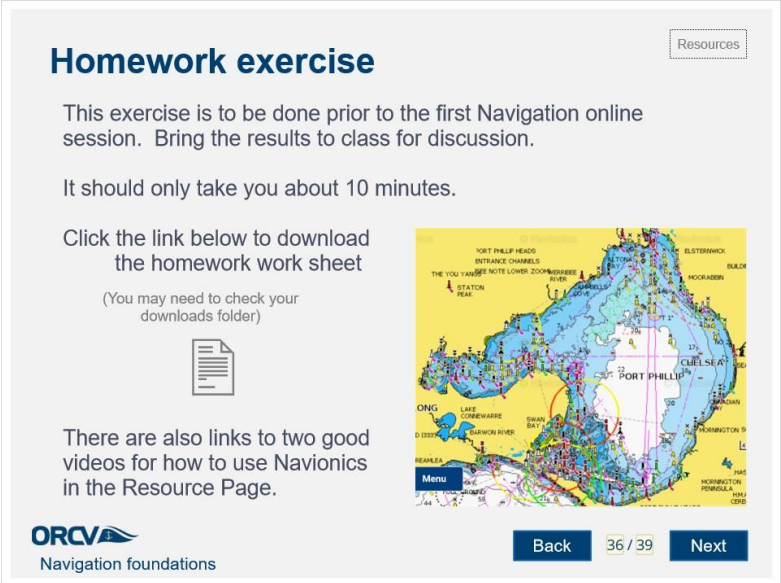
1.35 Finalising the plan



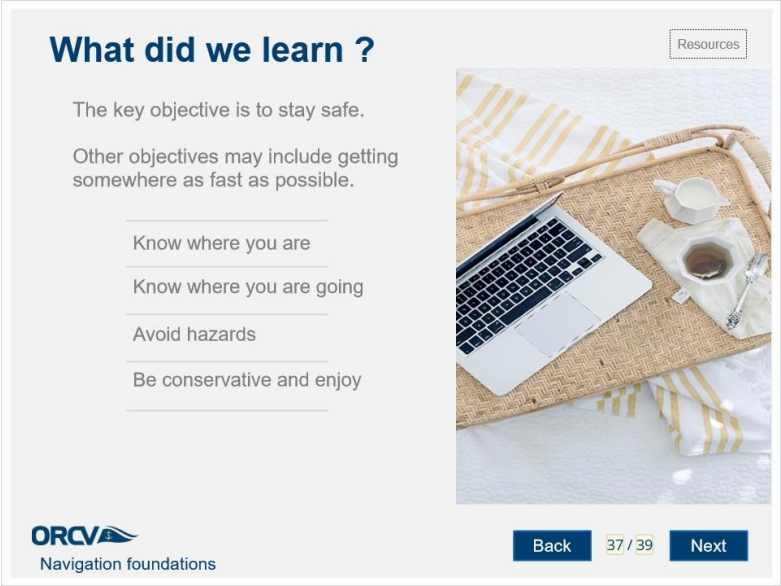
1.36 Homework exercise



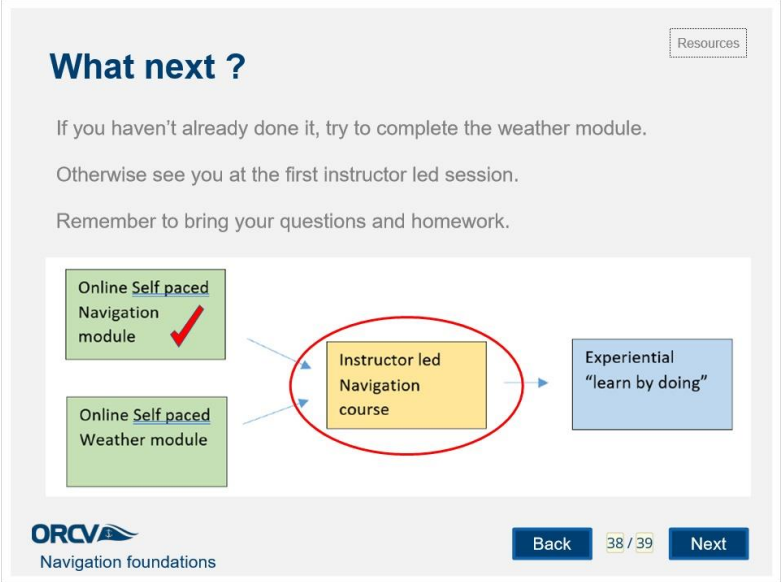
Worksheet (Slide Layer)



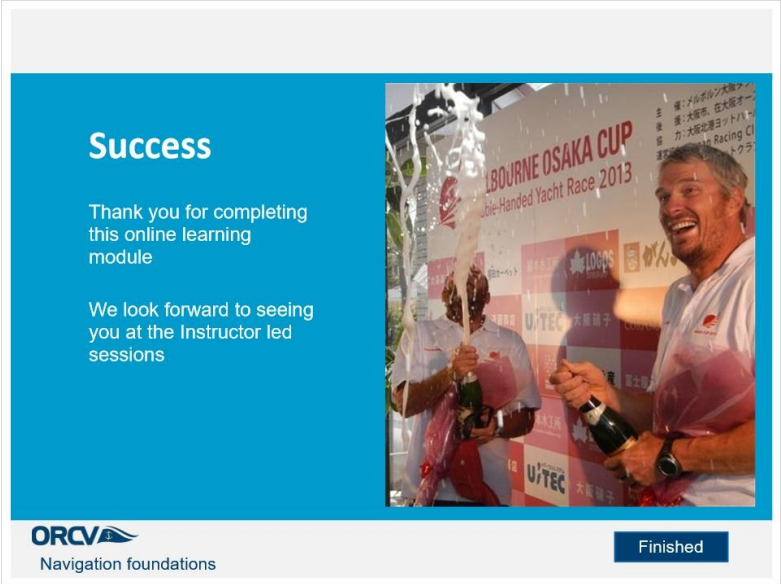
1.37 What did we learn ?



1.38 What next



1.39 Success



Notes:

2. General

2.1 Resources