

Activity E

Collecting and checking



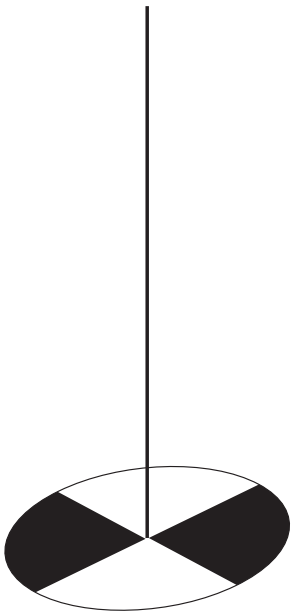
The Cape Farewell scientists took samples and readings whilst they were on their voyage. In video clip 4, *Measuring the oceans*, you see them use five measuring techniques. They analyse some of their results on board the ship. You will watch the clip three times to find out about the techniques they use.

First viewing

A Watch the video clip for the first time.
 Look out for the five techniques that the oceanographers use.

C Make a table like the one below.
 You should include five techniques:
satellite images, plankton net, optical sensors, Niskin bottle and Secchi disk.

Technique	Description	What the oceanographer does	What it captures or measures	What it tells us	How it works
<i>Satellite image</i>	<i>Images of ocean</i>	<i>Orders image</i>			



Second viewing

D Watch the video for the second time. Use a pencil to make notes in the first two columns of the table. These have been started in the table above.

E In groups, discuss the different techniques and fill in the rest of the table.

Third viewing

F Watch the video a third time to check your table. You can make changes to your table during and after the clip.

Question 1

The oceanographers repeat all their measurements. Why do you think they do this?

Question 2

The oceanographers analyse some of their samples on board ship. Why is this a good idea?

Question 3

The measuring techniques all use standard apparatus and methods. All oceanographers use the same methods around the world. Why is this important?

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	Description	What the oceanographer does	What it captures or measures	What it tells us	How it works
Satellite image	<i>Images of ocean taken from satellite way above the Earth.</i>				
Plankton net		<i>Drags it behind the ship to trawl for plankton.</i>			
Optical sensors			<i>Spectrum from sky and spectrum from surface.</i>		
Niskin bottle				<i>The zooplankton and phytoplankton at that depth.</i>	
Secchi disk					<i>The chlorophyll in phytoplankton absorb blue light. So the Secchi disk disappears at a lower depth through a green filter depending on how much phytoplankton is in the water.</i>