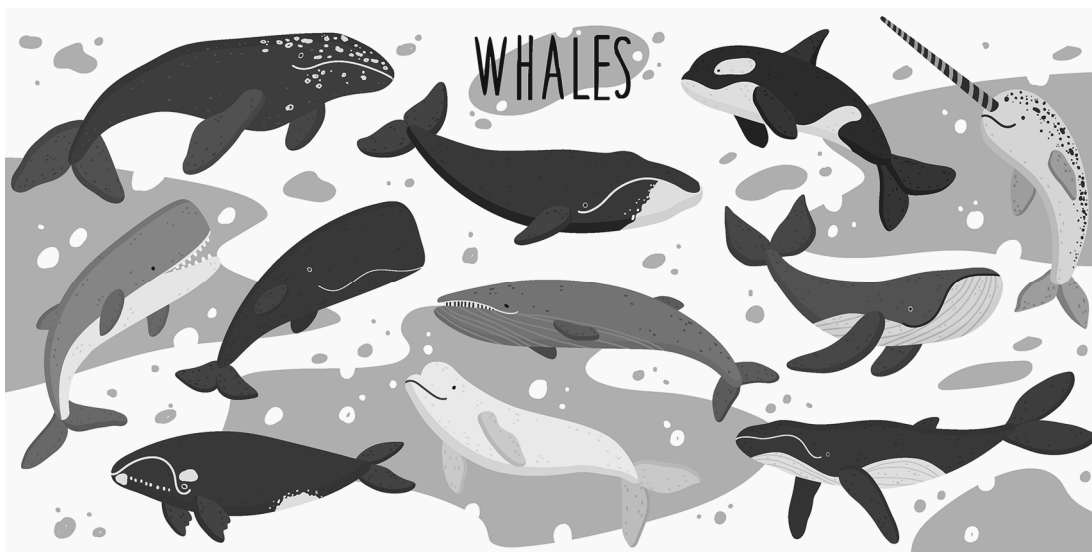


Wild whales can now be 'weighed' with DRONE footage



- 1 In the past it has only been possible to measure the weight of free-living whales if they were dead and out of the water or stranded on a beach. But researchers have released aerial footage of them flying a drone over a mother and baby whale, near Argentina, to work out how much they weigh. They can do this by taking photographs to work out the length, width and height of the animal. This can then be compared to past measurements of the density of that particular species of whale's body, to estimate its volume and weight.
- 2 Doing this makes scientists more able to study what the ocean giants eat, how their bodies change over time and how certain stresses affect their health. "Knowing the body mass of free-living whales opens up new avenues of research," said Assistant Professor Fredrik Christiansen, from Aarhus University in Denmark. "We will now be able to look at the growth of known aged individuals to calculate their body mass increase over time and the energy requirements for growth. We will also be able to look at the daily energy requirements of whales and calculate how much prey they need to consume."
- 3 Professor Christiansen and his colleagues tested their technology on 86 different whales off the coast of Península Valdés, a nature reserve in Patagonia. They used a DJI Inspire 1 Pro, a drone worth about £3,500 and capable of flying more than three miles away from its controller.

dailymail.co.uk, 2019

Tekst 2

- 3p 2 Geef aan of er onderzoek gedaan wordt naar de volgende aspecten.
Omcirkel 'wel' of 'niet' achter elk nummer in de uitwerkbijlage.
- 1 De afstand die een walvis kan afleggen op een dag.
 - 2 De band tussen moederwalvissen en hun kinderen.
 - 3 De effecten van stress op de gezondheid van walvissen.
 - 4 De hoeveelheid calorieën die een walvis nodig heeft per dag.
 - 5 De locaties waar walvissen het vaakst voedsel vinden.
 - 6 De plaats waar moederwalvissen hun jongen baren.

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift, dat na afloop van het examen wordt gepubliceerd.