

What makes a good introduction?

HOW TO USE THIS RESOURCE

You will need to copy and cut out one set of the four introductions (Student J, K, L and M) for each table or group. Ask your students to rank the introductions from best to worst. They should look closely at each one to find the differences between them. Challenge them to find the subtle differences between the mid-range answers.

Feedback as a whole class. You might want to focus the discussion on how concise the writing is and how quotes and references are used. Get your students to write their own list of 'Top Tips for Introductions' that they can refer to in the future, then collect the cards back in. Point out that each of these introductions only mentions one hypothesis, whilst a real NEA would need more.



COASTAL MANAGEMENT - Student L

Hypothesis 1: The beach gradient will be steeper on the managed beach.

The groyne traps sediment and stops longshore drift from happening. Longshore drift is a process of transportation that happens because of the waves. The swash comes up the beach at an angle because of the wind. The backwash goes straight back out to sea by the easiest route possible as it is pulled by gravity. The sediment is moved along the beach with the swash and the backwash. The groyne is a coastal management method that stops this natural process. The sediment is stopped by the groyne and cannot be moved along the beach. This means that the sediment builds up on one side of the groyne and a beach is retained.

Larger sediment is more likely to be stopped by the groyne. Larger sediment is able to form a steeper beach than smaller sediment. This is because the backwash percolates between the larger pieces of sediment and so cannot move the material so efficiently. Therefore I expect the beach gradient to be steeper on the managed beach where the larger sediment has built up between the groyne.



COASTAL MANAGEMENT - Student K

Hypothesis 1: The beach gradient will be steeper on the managed beach.

Groyne is a type of coastal defence. "They are built to control longshore drift by trapping sediment to create higher and wider beaches which will then also dissipate wave energy," (Skinner et al, 2016). This means that the groyne will stop the natural processes and make a steeper beach where they are used for coastal management. This links into the coastal systems and landscapes topic.

The sediment will build up on one side of the groyne. The larger sediment is more likely to be stopped by the groyne than the smaller sediment. "The larger the size of the material, generally the steeper is the gradient of the beach (around 10 - 20°)," (Skinner et al, 2016). The water percolates through the large gaps between the large pieces of sediment so it cannot move the material so efficiently. Therefore I expect the beach gradient to be steeper on the managed beach than the unmanaged beach.



COASTAL MANAGEMENT - Student M

Hypothesis 1: The beach gradient will be steeper on the managed beach.

Groynes are used to manage the beach at Hornsea. They are “designed to interrupt longshore drift and catch sediment as it moves along the coastline, thus widening a beach” (coolgeography.co.uk). The groynes will therefore stop the natural processes and make a bigger, steeper pile of sediment on the managed section of the beach.

This study links to section 3.1.3.4 of the specification - Coastal management. Human intervention in coastal landscapes. Traditional approaches to coastal flood and erosion risk: hard and soft engineering.

The groynes are more likely to stop larger sediment than smaller sediment. The larger sediment is able to form a steeper beach. This is because “water rapidly percolates through shingle, so the backwash is somewhat limited in its ability to transport material back down the beach” (Skinner et al, 2016). This means that I expect to find a steeper beach gradient on the managed section of the beach at Hornsea.



COASTAL MANAGEMENT - Student J

Hypothesis 1: The beach gradient will be steeper on the managed beach.

At Hornsea the Holderness Coast is defended by wooden groynes which maintain a beach that is wide and “relatively steep” (Boyes, Barnard and Elliott, 2017). These groynes interrupt the natural process of longshore drift, in which sediment gradually moves along the beach in a zigzag motion with the swash and backwash (BBC Bitesize website, last accessed 15/6/22). This links to section 3.1.3.2 of the specification, systems and processes, because the groynes are interfering with the natural process. The study will also investigate the impacts of hard engineering, which features in section 3.1.3.4 of the specification, coastal management.

Larger pieces of sediment are more likely to get stopped by groynes than small ones. This is significant at Hornsea as the beach is made up of sand and shingle (Visit East Yorkshire website, last accessed 15/6/22). Whilst the sand may pass easily between wooden boards of the groyne, the shingle will be trapped. Larger sediment like shingle can form a steeper beach because water can easily percolate through it, meaning that the backwash cannot move the sediment very effectively (Skinner at al, 2016). Therefore I expect that the beach gradient will be steeper on the managed sections of the beach at Hornsea.

We would not recommend using this activity with any students who are likely to use the beach at Hornsea as their location for their actual independent NEA investigation. These examples refer to the AQA specification.