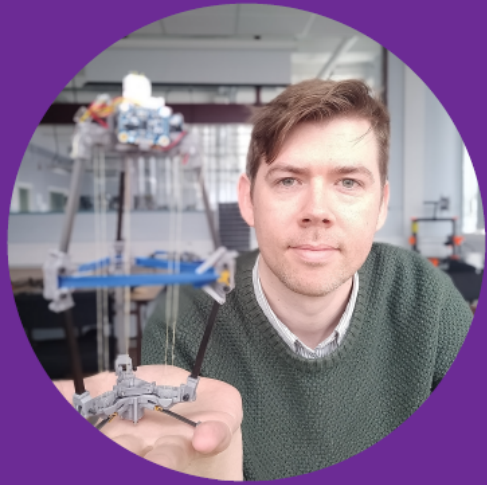


Meet a STEM Professional - Active reading and listening tasks





BEN PARSLEW

SENIOR LECTURER IN
AEROSPACE ENGINEERING

@benparslew

KEYWORDS

Aerospace
Engineering

ABOUT THE TASK

This is an active listening and reading task, that uses the SEEC model to develop understanding of key words. It is designed to inspire pupils to develop questions to ask Anastasia about her career journey to becoming a STEM professional.

ENGAGE



Ask the pupils read the profile in full.

Then read again together identifying any broad themes or comments

Use the SEEC model to develop understanding of key words, and to encourage the pupils to develop questions to ask Anastasia about her career journey to becoming a STEM professional.

SEEC = select, explain, explore, consolidate



<https://youtu.be/F506oUR2Ohs>

ABOUT BEN - SUMMARY

- At approximately 14-15 years old, Ben began his journey to a STEM career
- Ben Liked Maths, Physics and Art – “odd combination”
- He received advice and support from school was that often great scientists were great artists and vice versa
- So he began a career being creative and doing science at the same time
- Ben studied Physics, Maths, Chemistry at A-Level and Aerospace Engineering for Degree – later he earned a Masters and PhD in Aerospace Engineering
- He has a curiosity about and an interest in when birds evolved to fly and how did they flew at that time

MANCHESTER
1824
The University of Manchester



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WATCH
<https://youtu.be/F506oUR2Ohs>

ABOUT BEN

HIS JOB
Ben's job involves working at the University with students who are studying Aerospace Engineering.

Ben was around 14 years old when he realised he really enjoyed Maths, Physics and Art, which he thought might be a strange combination! But actually, many of the great artists are scientists and great scientists are artists. Ben decided he would make a career being creative and doing science at the same time.

He studied Physics, Maths and Chemistry at A Level, then went to university to study Aerospace Engineering followed by a Masters and PhD in Aerospace Engineering.

HIS HOBBIES
Ben enjoys playing pool and snooker, cycling, learning to speak Thai and attempting to bake things!

THE QUESTION BEN WANTS TO ANSWER IS...
When did birds first fly and how did they fly

BEN'S QUESTION FOR YOU...
If you could have a robot animal as a pet, which animal would you choose?

KEYWORDS

Aerospace
Engineering

ACTIVE LISTENING

Access the Collins CoBuild dictionary to help with pronunciation, definitions and synonyms. Visit www.collinsdictionary.com/

1. SELECT

Ben describes himself as an **Aerospace Engineer** – let's unpick this word carefully

The keywords words are likely to affect the pupil's understanding and engagement with Ben's profile. The terms may not be part of the prior knowledge.

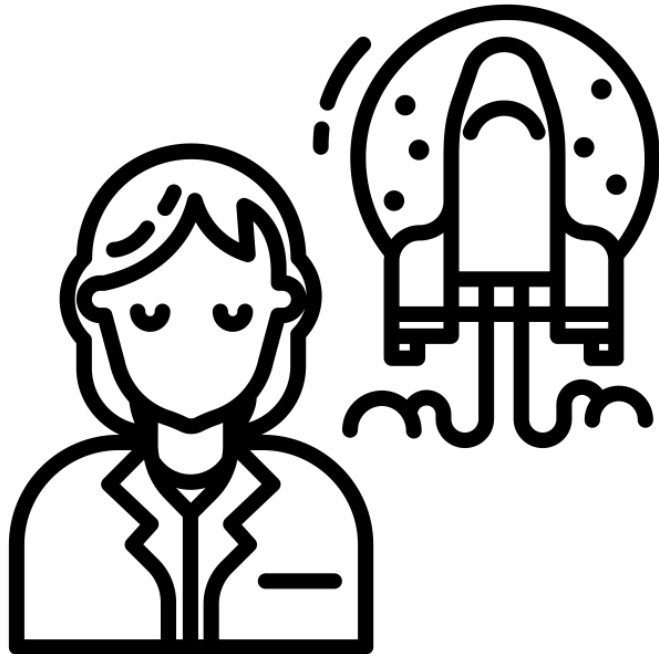
Focus on unpicking these words carefully.

2. EXPLAIN

- **Say** – Tell the pupils to repeat the words carefully pronouncing all the syllables
- **Write** - Ask the pupils to write the words checking their spelling is correct
- **Definition** – tell the pupils that it is an area of technology and industry concerned with both aviation and space flight. Aerospace Engineering is an area of engineering that is concerned with engineering of both aircraft and spacecraft.
- **Ask** – Invite the pupils to give examples of using these words which will support them to clarify meanings and allow you to identify any misconceptions or misunderstandings

Aerospace Engineer

Aerospace



Created by Icongeek26
from Noun Project

3. EXPLORE

Etymology is finding out about where the word comes from. In this part of the task, pupils explore the etymology of the keywords.

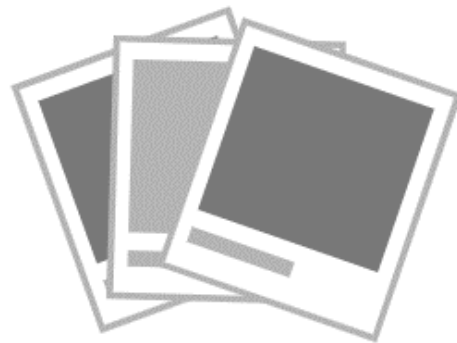
Aerospace is a compound word

Aero – (*Noun*) from the root word air and used when forming compound words such as aerospace and aeroplane

Space – (*Noun*) A continuous area or expanse which is free, available or unoccupied. In everyday language we commonly use it to refer to the physical place beyond the earth's atmosphere. E.g. the astronaut went in to space. (*Verb*) it can also be a period of time e.g. she needed space to think. and the 3D extent to which events and object have relative time and direction. E.g. the cones were spaced equally.

Explore further examples and questions from the pupils relating to the keywords.

Images could be shown or drawn that link with the word.



4. CONSOLIDATE

- **Test and learn** – revisit the keywords at regular intervals until you are sure there is a depth of understanding. Use some of the ideas already tried in other sections of the SEEC model as a quick quiz or reminder.
- **Research and record** – find out more about these words – what else can you find out about or is connected to the word **aerospace**



<https://youtu.be/F506oUR2Ohs>

- Watch Ben's profile once more
- Ask the pupils to explain in their own words what Ben does. Ask them to explain what they understand about by the meaning of the keyword – **aerospace**?
- **Using the keyword in the world** – ask the pupils to use the words **aerospace** to produce questions for Ben.

Use the [Question Maker](#) to support this task.

Question Frame

What you need?

A pair of scissors, a pencil, an object that you're curious about, sticky labels (optional).

How does it work?

- 1 Make a frame out of an old cardboard box or use the printable. Be careful when cutting out the window in the centre.
- 2 Place the frame over an object or image, so that it appears in the window.
- 3 Observe what it looks like and describe what you can see.
- 4 Now, think about questions you have and jot them on a sticky note around the side of the frames.
- 5 Select the question(s) you wish to share.



5. COLLATE Questions for Ben

First name	Gender	Age	Question

Email at least 10 questions **together with** up to 10 photos of the pupil's work using the Question Maker to fascinate@manchester.ac.uk.

We will aim to get answers to as many as possible using a pre-recorded film with Anastasia or as a live Question & Answer session. You can also tweet Ben @benparslew