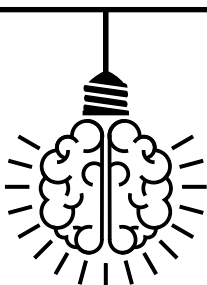




Learning notes

Enhance your understanding of this editions content



Discover ideas, activities and opportunities to learn more about the science, technology, engineering, maths and careers covered in this edition of Catalyst magazine.

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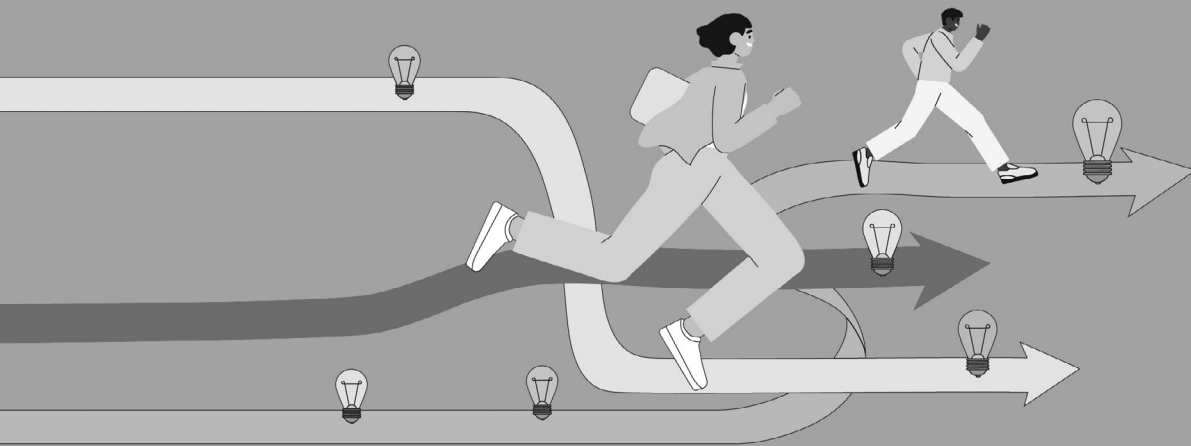
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Learning notes

For Students

1

The Logistics Careers for You!

Linked Article: **All articles**

Learning about careers in logistics can open a whole world of potential career opportunities that you might not normally discover. The best place to start discovering the many opportunities open to you is through the **Generation Logistics Hub**.

In this career-led learning note you can look at some of the roles that might interest you, learn about the companies reliant on logistics and discover how rewarding working in this sector can be. Logistics companies utilise developing technology and systems to improve their productivity and to invest in ways to support sustainability and improve their impact on the environment, all the while making sure we as consumers have what we need in the right place at the right time, and at the right price.

Whether you start in a warehouse planning demand for Christmas, develop AI led systems, plan supply routes across the world, programme robots or manage finance. These roles within logistics have one overriding factor – they all need people like you.

Learning Task:

Carry out research into the companies below and select three you would like to work for and identify a career or role you would be interested in having at each of them. Make notes to help you choose the company and roles as there is a lot to think about.

- ASDA
- CEVA Logistics
- Culina Group
- DHL
- GXO
- Kinaxia Logistics
- Marshall Fleet Solutions
- Maritime Transport Ltd
- Maersk
- Prologis
- SEGRO
- St Modwen
- Tesco
- Wincanton

Having made your initial choices think about:

- What qualifications you will need
- What skills might you need
- What career path will best fit – apprenticeship, university, straight to work etc
- Estimate potential salary in your first year, in five years and then in ten
- What potential career progression would be open to you
- What training is given
- What are the employee benefits?
- What are the company's social responsibilities, do they fit with your own

If you struggle to find some of the answers, you could look up existing jobs being offered by clicking through each sponsor's logo on the Generation Logistics website to their career's pages.

Compare your findings across the three companies. Are there any key differences? Are they similar? Which one really appeals now that you know more?

Take your learning further:

Having selected one of the roles and companies as your career choice, consider:

- Preparing your first draft CV to gather information about yourself that would interest a potential employer
- Practicing application letters or filling in application forms
- Talk to family, friends, school careers lead or teachers about career opportunities and your ideas
- Learn as much as you can about the job, role or industry you want to be in once you leave school, college or university

For more information about career opportunities in logistics visit Generation Logistics: www.generationlogistics.org





Learning notes

For Teachers

For Students

2

Developing Real World Context - Mini Market Deliveries

Linked Article: [All articles](#)

In this mathematical activity taken from the activity suite from Generation Logistics, students will assess information to calculate the most effective delivery route for a lorry driver over the course of his weekly delivery schedule in Cumbria.

Learning Task:

Using the information provided, students should calculate a delivery schedule from Monday through to Saturday. Showing not only the schedule they devise but any calculations they must make.

The driver must start and end his working day in Penrith and visit a combination of four stores every day. Kendal must receive a daily delivery; all other stores cannot have no delivery on two consecutive working days.

Daily Delivery Constraints:

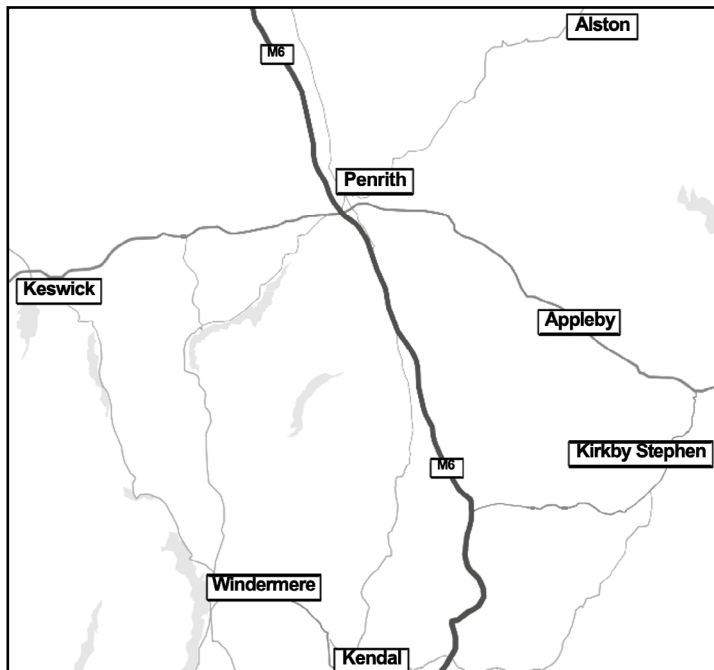
- The driver cannot exceed 8 hours working time.
- Before the start of his journey in Penrith, he spends 45 minutes checking the paperwork and the lorry is correctly loaded.
- The driver spends 45 minutes at each store unloading their delivery.
- He must take a 30 minute break at lunchtime – time unspecified.
- Upon returning to Penrith, he must empty the lorry of returns which takes a further 45 minutes.

The table shows the time in minutes taken to drive between locations.

Time taken (minutes)	Alston	Appleby	Kirkby Stephen	Kendal	Windermere	Keswick
Penrith	36	21	35	39	54	26
Alston		44	58	70	78	54
Appleby			18	44	55	38
Kirkby Stephen				40	52	51
Kendal					16	54
Windermere						38

Use the table to calculate a schedule.

Store/Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Alston						
Appleby						
Kirkby Stephen						
Kendal						
Windermere						
Keswick						



Take your learning further:

Explore the complete suite of activities produced by Generation Logistics. This task is from Mini Market Activity 1.

You can find the full activity and the two companion tasks which are free to download here: <https://www.stem.org.uk/rxjfgk>

There are two other challenging activities in this collection available here: <https://www.stem.org.uk/cxjfgo>

And find out more about careers in logistics by downloading the Generation Logistics Careers Booklet: <https://www.stem.org.uk/rxjebg>

Additional resources for teachers and careers leads are available on the Generation Logistics Education Hub: <https://educationhub.generationlogistics.org/>



Learning notes

For Teachers

For Students

3

Word Searching Your Way to Logistical Skills

Linked Article: [All articles](#)

Logistics is about understanding the needs of customers and being able to plan effectively, ensuring products and materials can be transported safely and efficiently from one place to another. Getting an item from point A to point B and so on, is a complex and challenging process that needs a broad range of skills and knowledge. Requiring a team of individuals working together on a carefully orchestrated plan.

Thinking through every step needed, planning the journey, identifying potential risks and finding solutions.

Learning Task:

Understanding logistics starts with building up a knowledge base and by developing your own logistical capabilities. In this activity we challenge you to develop your skills starting with a word search game.

On the next page, spend a few minutes finding the 25 words relating to logistics. Words run horizontally, vertically and diagonally, backwards and forwards but always running in a straight line.

Take your learning further:

What does 'logistics' mean? Cambridge Dictionary provides two definitions, both are equally correct:

- The careful organisation of a complicated activity so that it happens in a successful way
- The process of planning and organising to make sure that resources are in the places where they are needed, so that an activity or process happens effectively

Use a dictionary or thesaurus to find definitions for these key words:

- Commerce:
- Inventory:
- Strategy:
- Refrigeration:
- Supply chain:
- Unit:

Create a sentence for each word within the context of logistics.

Words to find:

Aircraft	Economy	Load	Packaging	Supply chain
Buy	Employment	Logistics	Refrigeration	Technology
Commerce	Environment	Lorry	Route	Transport
Customer	Global	Maritime	Shipping	Unit
Digital	Inventory	Order	Strategy	Warehouse

E	S	U	O	H	E	R	A	W	G	L	O	B	A	L
M	T	D	E	M	I	T	I	R	A	M	Y	U	M	E
P	R	I	S	H	I	P	P	I	N	G	B	A	P	C
L	O	G	I	S	T	I	C	S	R	B	T	A	B	O
O	P	I	R	Y	G	O	L	O	N	H	C	E	T	N
Y	S	T	E	O	L	Y	U	I	R	K	J	I	N	O
M	N	A	M	L	U	T	G	U	A	E	N	N	E	M
E	A	L	O	B	E	I	T	G	L	Y	D	G	M	Y
N	R	E	T	L	T	F	I	Y	O	G	R	R	N	I
T	T	I	S	A	A	N	E	C	R	E	M	M	O	C
Y	N	O	U	R	G	R	E	F	R	D	G	E	R	T
U	H	C	C	S	U	P	P	L	Y	C	H	A	I	N
S	T	R	A	T	E	G	Y	W	L	O	A	D	V	U
E	I	N	V	E	N	T	O	R	Y	H	O	U	N	O
A	K	N	O	I	T	A	R	E	G	I	R	F	E	R

Take your learning further still:

1. Practice your logistical planning skills by creating your own word search:
2. Create a grid measuring 15 by 15 – you can go bigger
3. Find 20 to 25 interesting / unusual words that appear in this edition of Catalyst Magazine
4. Make sure the collection of words has broad letter usage and are of varying length, have at least five words over ten letters long
5. Plan where the words will be placed in the grid
6. Add letters to the blank spaces, avoid making additional or unintended words

Things to think about:

- Create a list of the words, noting which article the words appear in
- What method will you use to create your word search
- How often will words use the same letter space in the grid
- Find the least and most used letters to help you plan which letters will be used in the blank spaces, remember the letters Q, X and Z are seldom used and are easy to find.
- How challenging do you want your word grid to be
- Test your word grid with family and friends, do you need to make any changes
- Create an answer version with the words identified

In planning and testing your word search you have started to understand the basics of logistics and to develop vital skills. You have developed your ability to communicate, to conduct careful and considered planning, improved your eye for detail, enhanced your organisational skills and ability to recognise key information.

To really challenge your planning skills, take the words from your word search and create a crossword puzzle. You will need to carefully plan how each word will interact with the other words and include definitions. For a bigger challenge see if you can develop a cryptic crossword version.



Powered by STEM Learning, Destination STEM aims to support young people into STEM careers. This student orientated platform provides support, advice, guidance and opportunities to help young people explore pathways into STEM careers, develop skills and connect with STEM employers.

STEM Ambassadors

Catalyst contributors are inspiring STEM role models, and you can meet people like them. Many are part of the STEM Ambassadors programme.

STEM Ambassadors are volunteers from industry and university from across the UK, who support young people and educators by providing talks, mentoring and engaging STEM activities.

You can bring the power and inspiration of STEM Ambassadors to your classroom, free of charge:

- Visit the STEM Ambassador website www.stem.org.uk/stem-ambassadors
- Use the STEM Ambassador app (search STEM Teacher on your app store).
- Reach out to our STEM Ambassador Partners across the UK www.stem.org.uk/about-us/our-network/sah

Further information

We hope you enjoy Catalyst Magazine, a science journal for young people aged 14-18 and their educators. Every edition has a supportive set of learning or teaching notes to enhance the educational experience to be gained from the content. In addition to the current magazine we have a large archive collection and a series of webinars from contributors.

Find out more about Catalyst, the archive collection and Catalyst Magazine Live: www.stem.org.uk/secondary/careers/catalyst-magazine

If you have any feedback, or ideas for topics you'd like to see covered in future editions please email: catalyst@stem.org.uk

Join us on X [@STEMLearningUK](https://twitter.com/STEMLearningUK)

Thank you for your interest in Catalyst Magazine.