

Metro Futures



A Joint Careers Project
by North Tyneside Learning Trust
and Nexus



for Years 3 and 4

National Curriculum Links

Here are the links to the National Curriculum that this Curriculum Box can cover. Please note that, depending on the activities that you decide to do, different objectives may be covered in different ways.

Geography – Main Focus

- Study UK counties, cities, regions, physical features, land use and changes over time.
- Understand key aspects of physical and human geography.
- Use maps, atlases, globes and digital/computer mapping.
- Use eight points of the compass, four/six figure grid references, symbols and keys.
- Use a range of methods to study Environmental impact on the local area.

Art

- Use sketchbooks to collect, record and evaluate ideas.
- Improve skills in drawing, painting and sculpture, using various materials.

Design Technology

- Communicate design ideas in various ways.
- Use a wider range of tools and materials.
- Develop products fit for purpose.
- Evaluate existing products and improve own products.

History

- Local history study.

Computing and ICT

- Create a range of digital products.
- Use technology safely, respectfully and responsibly

English – Spoken Language

- Ask relevant questions.
- Articulate and justify own ideas.
- Participate actively in conversations.
- Take part in discussions, presentations, performances, role-plays, improvisations and debates.
- Keep listeners interested.
- Communicate effectively using appropriate register.

Maths - Measurement

- Measure and calculate with metric units (Y3)
- Add/subtract money in context (Y3)
- Convert between units of measure (Y4)
- Estimate, compare and calculate different measures (Y4)

The Task

The Tyne and Wear Metro is the busiest urban rail system outside London, carrying 40 million passengers a year, and has used the same fleet of trains since it opened in 1980. At that time Metro was considered cutting edge, both in terms of technology and the features offered to passengers. But after nearly 40 years of service its train fleet will soon need to be replaced.

Nexus, (the public body which owns and manages Metro) is putting together a £1 billion bid to upgrade the train fleet, infrastructure and signalling system.

Your task is to.

Design a new Metro train which reflects the aspirations and needs of people across the community, and throughout their lives.

Your presentation may want to include:

- A 3D model of your train,
- Budget costings (the numbers could be adapted to your class rather than using £1bn)
- Design layout: What finishings and materials will you use? what space will you leave for seating/luggage/cycles etc? The Train must also meet Rail Vehicle Accessibility Requirements (RVAR) **You can not alter the height & length of train**
- Any additional features you wish to include such as: wi-fi and plug sockets
- Identification of the task force who would be needed to complete the task.
- Digital Media presentations (including iMovies, photos, videos, etc) to support the presentation.

Your presentations will need to be ready to present to Nexus from Nexus at the agreed time.

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Your contact for this project is:

Name: _____

Contact Details: _____

Project Management – who will we need?

Role	Why we will need them? What skills do they use ?
Project Manager	
Designer	
Marketing	
Customer Relations Officer	
Health and Safety	
Media Relations	

Example Template 1

Example Template 2

This Certificate
is awarded to

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For completing
the Metro Futures / North Tyneside Learning Trust
Train Design Project Challenge



Possible Curriculum Ideas

Useful Links

- **metrofutures.org.uk**
 - **ITV news story – 25 March 2014:**
<http://www.itv.com/news/tyne-tees/2014-03-25/metro-line-could-be-extended-to-metrocentre-washington-and-silverlink/>
 - **Evening Chronicle – 26 March 2014:**
<http://www.chroniclelive.co.uk/news/north-east-news/metro-push-300m-new-train-6872372>
 - **Evening Chronicle – 14 July 2016:**
<http://www.chroniclelive.co.uk/news/north-east-news/metro-upgrade-expansion-plans-what-11615476>
 - **ITV News – 19 July 2016:**
<http://www.itv.com/news/tyne-tees/2016-07-19/metro-plans-get-the-green-light-from-authority-chiefs/>
 - **BBC News – 19 July 2016:**
<http://www.bbc.co.uk/news/uk-england-tyne-36840798>
 - **Evening Chronicle – 20 July 2016:**
<http://www.chroniclelive.co.uk/news/north-east-news/1bn-plan-improve-metro-approved-11637441>
- Rail Vehicle Accessibility Requirements RVAR
- <http://www.legislation.gov.uk/uksi/1998/2456/contents/made>

Image Credits

Metro map -

http://www.newcastlegateshead.com/dbimngs/nexus_tyne_and_wear_metro_map_large.jpg

Metro map – red extension -

http://news.images.itv.com/image/file/365359/image_update_img.jpg

Metro map – proposed design -

http://ichef.bbci.co.uk/news/624/cpsprodpb/6739/production/90452462_mediaitem90452461.jpg

Metro image -

<http://i4.chroniclive.co.uk/incoming/article6872429.ece/ALTERNATES/s615b/JS34106449.jpg>

Metro front cover image -

<https://metrofutures.org.uk/>