



# MAKE YOUR DESTINATION, A CAREER IN RAIL.

## SECONDARY TEACHER PACK

CAREERS

RAIL

STEM

FUTURE

## Green Challenge

In this pack you will find: an explanation of the destination rail green challenge, an in depth break down of each of the 3 challenges to choose from, a suggested session plan, score sheet and winners certificates.

The secondary challenge is split into 2 sessions. In the first session students learn about Talgo and Hydrogen Fuel trains before splitting off into teams and starting their challenges. In the second session there is time to prepare a presentation before presenting their ideas to the class. The presentations are scored by the teacher to decide on a winning team.

There are 3 challenges: route planning, designing a marketing campaign and a design and prototype challenge. Each focuses on a different area of the rail industry. Either you as the teacher can choose one challenge for the whole class to complete or you can leave it up to the teams to decide which of the challenges they would like to tackle. Each challenge also has a master engineer challenge, completing this will earn teams an extra 5 points!

Don't forget to use the Ambassador videos! 4 Ambassadors from the rail industry in your area have each answered 15 questions exploring their careers. Some of the questions have been embedded into the PowerPoint presentation. You can also access all of the questions at the following link:  
[www.learnbydesign.co.uk/destination-rail-resources](http://www.learnbydesign.co.uk/destination-rail-resources)

Brought to you on behalf of



### The Route Planning challenge:

#### Subject links:

geography, maths

#### Equipment required:

- Route planning challenge packs (1 per team)
- It is advisable to have extra map sheets available so that students may try out different routes!
- Pencils
- Rulers
- String may be useful to measure the length of the routes.

The route planning challenge is all about map reading skills and budgeting. In their teams, students must first plot the two stations they are given grid references for before then drawing a route between them.

Students must then work out how much money they have spent before justifying why they have chosen to plan the route in this way.

**Master engineer challenge:** what are the 6 figure grid references of your two stations?

DESTINATION RAIL

#DestinationRail

Developed by  
**LEARN**  
bydesign



# MAKE YOUR DESTINATION, A CAREER IN RAIL.

## The Marketing Campaign Challenge:

### Subject links:

English, art

### Equipment required:

- Marketing campaign challenge packs (1 per team)
- A3 paper
- Colouring pens/pencils
- If possible, allow students access to the internet so that they can research Talgo's new Hydrogen train

The marketing campaign challenge uses students creativity and persuasive writing skills to develop different aspects of a marketing campaign.

The team must create a press release and a storyboard for an advert to encourage passengers to travel on the new hydrogen train!

**Master engineer challenge:** create a social media post to announce the opening of the hydrogen train!

## The Design and Prototype Challenge

### Subject links:

design technology, art

### Equipment required:

- Design and prototype challenge packs (1 per team)
- A3 paper
- Scissors
- Tape
- Colouring pens/pencils
- **You may provide other materials for building the prototype such as card, paper straws, lollipop sticks etc.**

The design and prototype challenge aims to encourage students to think about all of the different aspects of designing the interior of a train carriage, from the size of the carriage to the space a wheelchair user requires. Students will plan out their design before creating it using the materials supplied.

**Master engineer challenge:** is your model to scale? What are the dimensions of your carriage?

### Session 1

5 minutes	Introduce the challenge and Talgo's new hydrogen train
10 minutes	Get students into teams and allow them to pick a rail themed team name
5 minutes	Explain each of the challenges and allow the teams to pick out which one they would like to complete. (if you prefer you can choose one challenge and have all students complete the same one)
40 minutes	Teams work on completing their challenges

**If you wish you can give the teams a chance to continue working on their challenges as homework.**

### Session 2

5 minutes	Remind students that they have 20 minutes to complete their challenge and to prepare their presentation of their ideas to the class
20 minutes	Challenge work continues, teams prepare presentations
25 minutes	Each team presents their work to the class, Teacher fills out score sheet
10 minutes	Ambassador questions (on powerpoint or following link: <a href="http://www.learnbydesign.co.uk/destination-rail-resources">www.learnbydesign.co.uk/destination-rail-resources</a> ) Scores are added up and winners announced!

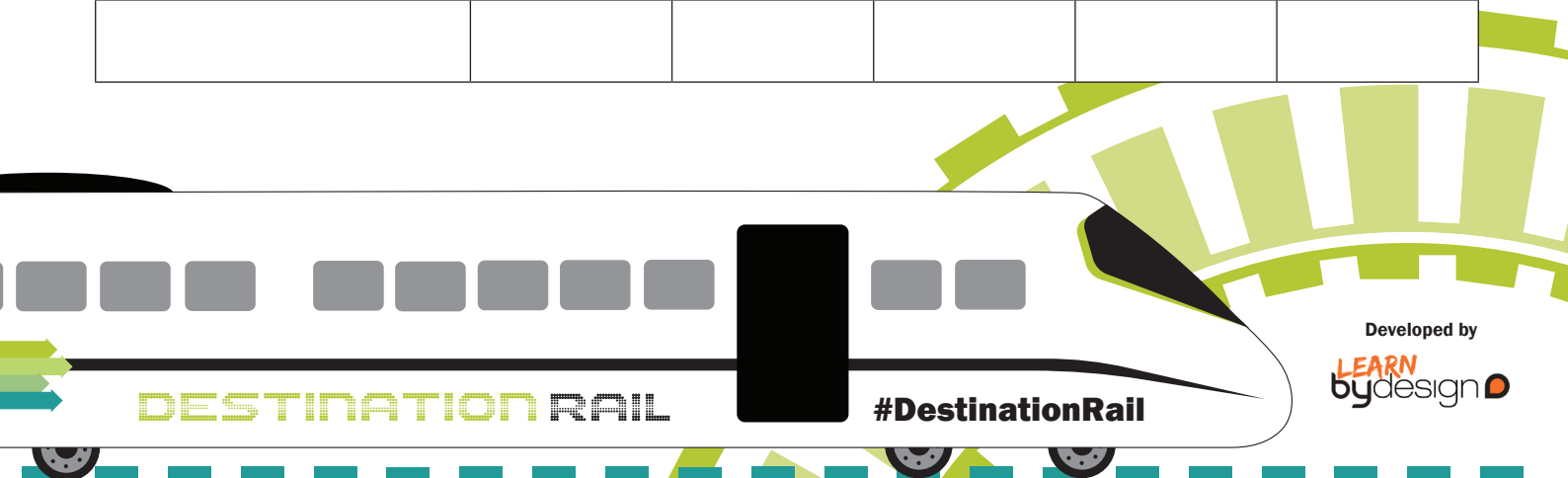


**MAKE YOUR DESTINATION,  
A CAREER IN RAIL.**



## The Route Planning challenge:

Team Name	Presentation skills/10	Budget /10	Justifications /10	3 figure grid ref/5	Total



Developed by  
**LEARN**  
bydesign



**MAKE YOUR DESTINATION,  
A CAREER IN RAIL.**



## The Marketing Campaign Challenge:

Team Name	Presentation skills/10	Press release /10	Advert /10	Social media/5	Total



Developed by  
**LEARN**  
bydesign

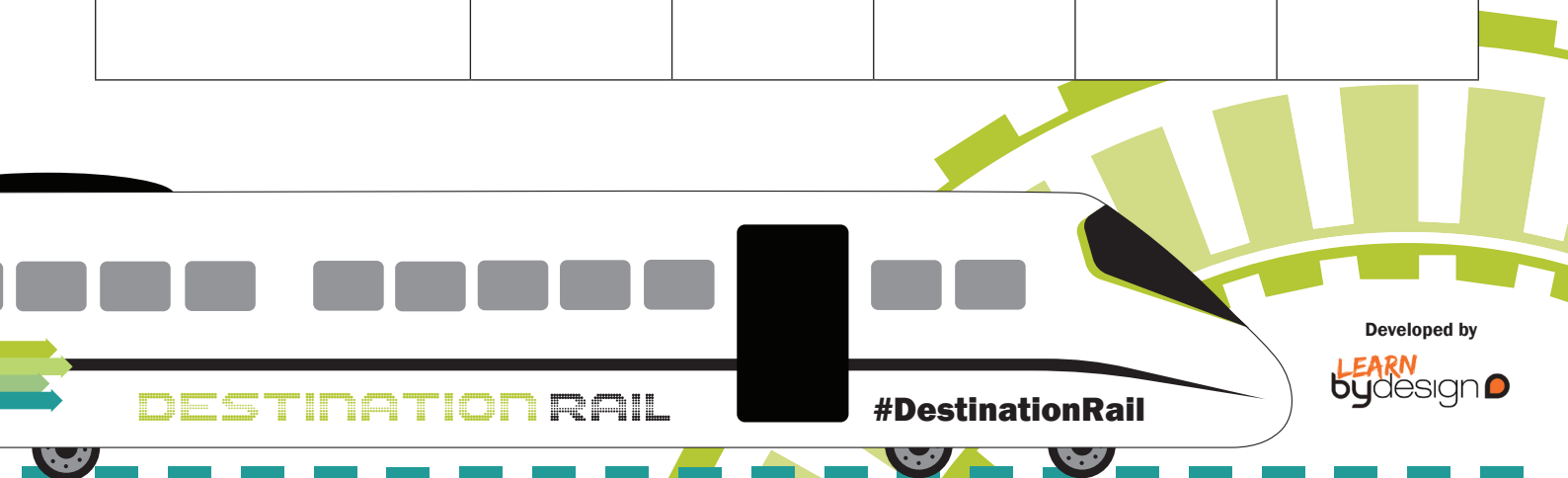


**MAKE YOUR DESTINATION,  
A CAREER IN RAIL.**



## The Design and Prototype Challenge:

Team Name	Presentation skills/10	Aesthetics /10	Innovation /10	To scale /5	Total



## The Route Planning challenge:

[illegible]

## The Marketing Campaign Challenge:

[illegible]

## The Design and Prototype Challenge

[illegible]



**MAKE YOUR DESTINATION,  
A CAREER IN RAIL.**

CAREERS

RAIL

STEM

FUTURE

This is to certify that

from team

has **won** the

**DESTINATION RAIL**

***Green Challenge***

