

Trucks vs. Tanks:

KS1 D&T Workshop

A great chance to get up close and better understand the vehicles used by the Army. This workshop not only allows the children to explore the specialities of the tanks and trucks used by REME, but also allows them to have a chance to build their own truck in small teams. This is a Design and Technology workshop that also encourages communication skills and teamwork.

Aims and Outcomes

- To learn the difference between tracked and wheeled vehicles.
- To learn why the Army uses trucks and tanks to do their job.
- By the end of the session, pupils will understand the basic features of vehicles and what materials they are made of.
- Pupils will work in teams to make their own vehicle that performs a specific function.

Sample Timetables

Timetables can be tailored to suite your classes requirements, please talk to our Education Officer for more details.

One class timetable (maximum of 34 pupils plus adults)

Time	Duration	Task
9:45 - 10:00	15 min	Arrival, cloakroom and toilet visit
10:00 - 10:10	10 min	Brief by museum staff member
10:10 - 10:40	30 min	Explore the museum with tasks in small groups
10:40 - 10:45	5 min	Evaluate
10:45 - 10:50	5 min	Plan
10:50 - 11:20	30 min	Build
11:20 - 11:50	30 min	Test & evaluate
11:50 - 12:00	10 min	Tidy
12:00 - 12:30	30 min	Lunch*
12:30 - 1:45	75 min	Explore the museum with curricula quiz in groups*
1:45 - 2:00	15 min	Depart and goodbye*

*optional extra, time can be adjusted to suit your class requirements.

Two class timetable (maximum of 68 pupils plus adults)

Time Team A	Tasks Team A	Task Team B	Time Team B
9:45 - 10:00	Arrival, cloakroom and toilet visit		9:45 - 10:00
10:00 - 10:10	Brief by museum staff member		10:00 - 10:10
10:10 - 10:40	Explore the museum with tasks in small groups	Self led exploration of the museum with a curricula quiz. Also optional visit of memorial gardens in museum grounds.	10:10 - 11:55
10:40 - 10:50	Evaluate & Plan		
10:50 - 11:20	Build		
11:20 - 11:50	Test & evaluate		
11:50 - 12:00	Tidy		
12:00 - 12:30	Lunch		12:00 - 12:30
12:30 - 14:20	Self led exploration of the museum with a curricula quiz. Also optional visit of memorial gardens in museum grounds.	Explore the museum with tasks in small groups	12:30 - 13:00
		Evaluate & Plan	13:00 - 13:10
		Build	13:10 - 13:40
		Test & evaluate	13:40 - 14:10
		Tidy	14:10 - 14:20
14:20 - 14:30	Depart and goodbye		14:20 - 14:30

Proposed Workshop Schedule

Briefing (10 min)

Firstly, a nice hello from the staff to start the session. Then talk about what REME are and their role in the Army.

With the aid of images, warm up the group with a discussion on the vehicles. Mention that they will see them all in the museum. Questions that could be asked:

- What is a truck? (has big wheels) What is a tank? (has tracks)
- Which has tracks? Which has wheels? Which has an engine?
- How long is the truck in the picture? (10.50 m)
- How heavy is the tank? (62 tonnes or 62,000 kg or 62,000,000 g or 7 schools or 112 year 2 classes!)

The session aims and objectives will be discussed followed by what the pupils will be doing next.

Explore (30 min)

In small groups with adults the pupils go and find the vehicles they need to look at then undertake the tasks needed in their workbooks. There will be small tasks to do:

- Find out the basics of how trucks work.
- Find out the basics of how tracks work.
- Explore why trucks have big wheels.
- Explore why tanks have tracks.
- Count the number of tracked and wheeled vehicles.

To complete these tasks the pupils will be drawing from sections of the D&T and Maths curriculum.

Evaluate (5 min)

After returning to the classroom we will discuss the vehicles we saw and what we learnt about them.

Can anyone tell me why tanks are good at their job?

Can anyone tell me what is bad about tanks?

Plan (5 min)

They are split into 3 and are tasked to build a vehicle to a specific specification. They will be told how it will be marked. They have to talk together for a few minutes so they know what they need to do as a group. Build a truck that has a frame, wheels and axles. The trucks are to carry small wooden vehicles. They must build fair and keep their areas tidy.

Build (30 min)

The small teams will be given their Thinker Toy to work with and given the time to build and test their vehicles. After 10 minutes, I will walk around and check that they are progressing well and provide encouragement where needed.

Test (30 min)

Each team will demonstrate their vehicle and be marked by the class on how they met their goal. We give points for: number of blocks carried, team work, did the vehicle work and bonus points for any added features.

The pupils themselves decide what score each team gets. This could be done on a smart board or white board.

Tidy (10 min)

Finally the groups will be asked to break down their vehicle and tidy their areas.

Key Curriculum areas covered

KS 1 D&T

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.