11 Transport

11.1 Describing how things work

GRAMMAR: Prepositions: position and movement

VOCABULARY: Size and dimensions

1. a. Shanghai and Pudong b German and France c. Beijing and Shanghai
2. a. running on the track b. running above the track c. No levitation

1 **a** **Work with a partner. Look at the title of the article and photos. What can you say about Maglevs?**

b **Read the article and answer the questions.**

1 Which two places are connected by the Maglev line?
2 What's the main difference between Maglevs and normal trains?
3 What's the best thing about Maglev technology?
4 What's Maglev's main disadvantage?

3. a. It's modern and hi-tech
b. It's fast and economical
c. It's expensive and difficult

4. a. The technology is difficult
b. The train is complicated
c. The track is expensive

c **Underline the correct words so that the sentences are true.**

1 To get to the airport, you need to go *into/out of* the centre of Shanghai.
2 To get to the airport, you get *on/off* the Maglev at Longyang Road Station.
3 The track takes a direct route. It goes *across/around* the city.
4 The track is at a high level. It goes *under/over* the streets of Shanghai.
5 The Maglev travels just *below/above* the track.
6 The Maglev is lifted *up/down* by magnetic force.
7 The Maglev is pushed *along/through* the track by magnets.

430 KM/H 'MAGLEV' AIRPORT SHUTTLE TAKES OFF IN SHANGHAI

When you get on the train at Longyang Road Station in Shanghai, you know it won't be long before take-off – and not just because you're going direct to Pudong International Airport. Thanks to the city's new 'Maglev' train, you don't have to wait to get on a plane before you leave the ground – you take off before you come out of the station.

Maglev is short for 'magnetic levitation'. The system was developed by the German firm Transrapid. The train is lifted off the track, to a height of about 1 cm, by electromagnets. It's then pushed along the line by the same magnetic force, up to its maximum speed. The advantage of 'flying' above the track is that there's no need for wheels or other moving parts, which use a lot of energy. This means the train can travel extremely fast: up to 430 km/h. If Maglev technology is economical to run, however, it's not cheap to build. The cost of the 30 km track across Shanghai was a huge $1.2 billion.

Will Maglev change the future of train travel? Clearly, costs need to come down before long-distance tracks are built. But many believe the technology will take off because of its high-speed potential. Travelling the full length of Germany or France, for example, would take just over two hours on a Maglev.

Prepositions: position and movement

The Maglev travels **above** the track.
The train is lifted **up** by magnetic force.
You get **off** the train at the airport.

···› Grammar reference 11.1 and 11.2

d Grammar practice ···› Page 104, Exercise 1.

LIVEWORKSHEETS

e **Work with a partner. Say as much as you can about what these things do and how they work. Use prepositions from 1c.**


helicopters


submarines

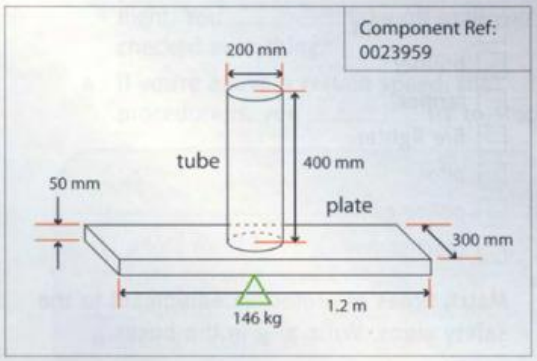

hovercrafts


car ferries


spaceships

2 **a** **Look at the drawing of a component from a high-speed train. With a partner, fill in the gaps with the dimensions.**

1 Length of plate: It's *1.2 m* long.
2 Width of plate: It's ..... wide.
3 Thickness of plate: It's ..... thick.
4 Height of tube: It's ..... high.
5 Diameter of tube: It's ..... wide.
6 Total weight: It weighs ..... .



b ▶▶ 71 **Lindsey Gamble, an engineer, is giving a presentation at a conference on rail transport technology. She's talking about high-speed train design. Listen and answer the questions.**

1 What's the first dimension train designers have to look at?
2 What's the problem with standard rail tracks?
3 Why aren't trains very economical?

c **Can you complete these sentences from the conversation? Underline the correct words.**

1 How *long/wide* is the track? What's the distance between the rails?
2 The *height/weight* of the train is also limited by the width of the track.
3 So, for better stability, a *wide/narrow* track is better.
4 To help the train stay on the track, you make it quite *heavy/light* ...
5 Just look at the big, *thick/thin* pieces of steel used in trains ...

d ▶▶ 72 **Listen and check your answers.**

e **Vocabulary practice ···› Page 104, Exercise 2.**

1 a. the width of the train
b the width of the track
c. the height of the train
2 a. they're quite narrow
b. they're quite heavy
c. they're quite wide
3. a they're quite wide b they're quite narrow c they're quite heavy

f ▶▶ 73 **PRONUNCIATION Listen and repeat the words. Are the underlined sounds the same or different?**

			the same	different
1	wide	width	☐	☑
2	narrow	shallow	☐	☐
3	height	weight	☐	☐
4	around	through	☐	☐
5	length	depth	☐	☐
6	thickness	less	☐	☐

3 **Communication practice 31. Student A ···› Page 87. Student B ···› Page 93.**

4 **Take it in turns to describe an object in the room for your partner to guess.**

A It's about thirty centimetres wide. It's two and a half metres above the floor.
B Is it the clock?

USEFUL LANGUAGE

What's the length/width/height/thickness?
How long/wide/high/thick is it?
Is the track short/narrow/low/thin?
What's the weight of the train? Is it light/heavy?

LIVEWORKSHEETS

UNIT 11

1 Fill in the gaps.

over	under	out	around
above	along	through	off

1 To get *out* of the building, go _____ the doors opposite reception.
2 Drive _____ this road for two kilometres – the station is on the right.
3 We drove all _____ the city yesterday but couldn't find the office.
4 Don't forget to get _____ the train in Birmingham.
5 The bridge goes _____ the A204 road near the town centre.
6 The Eurotunnel goes _____ the English channel.
7 A hovercraft flies just _____ the water.

2 Match the pairs to make sentences.

1 The motorway	a very light.
2 The train track	b about 1,000 kilograms.
3 The height of the bridge	c is 1.2 metres wide.
4 The weight of this car is	d is about 145 miles long.
5 This laptop weighs only 1.2 kilos. It's	e is only 3.2 metres.

LIVEWORKSHEETS