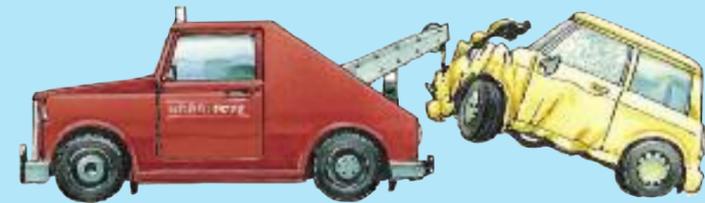


My first picture encyclopedia

MACHINES



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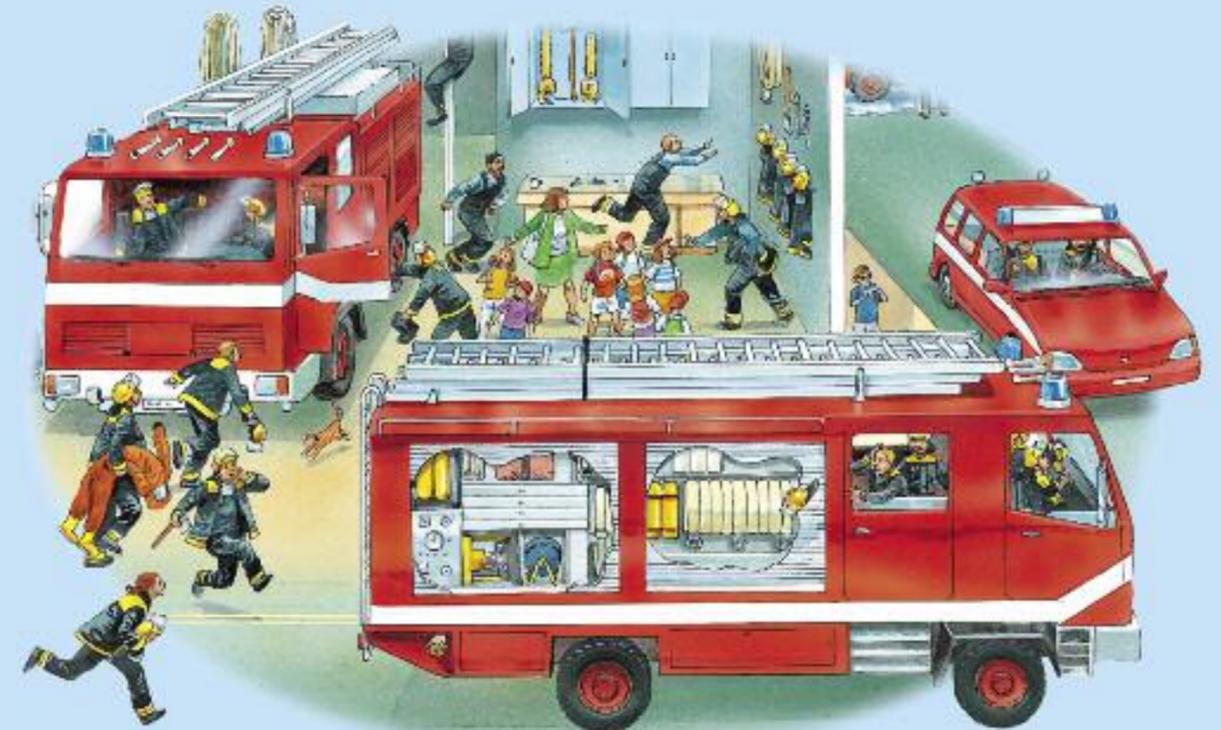
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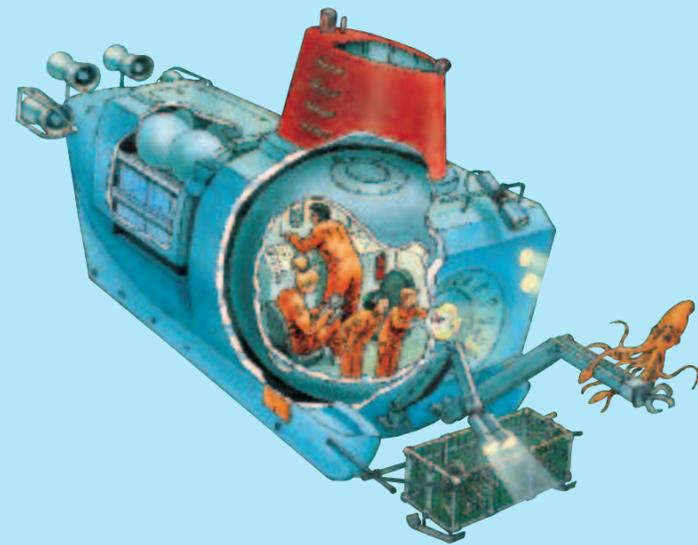
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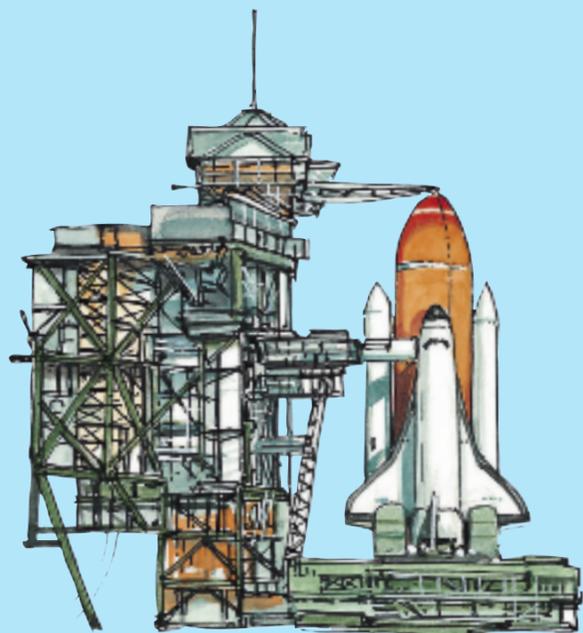
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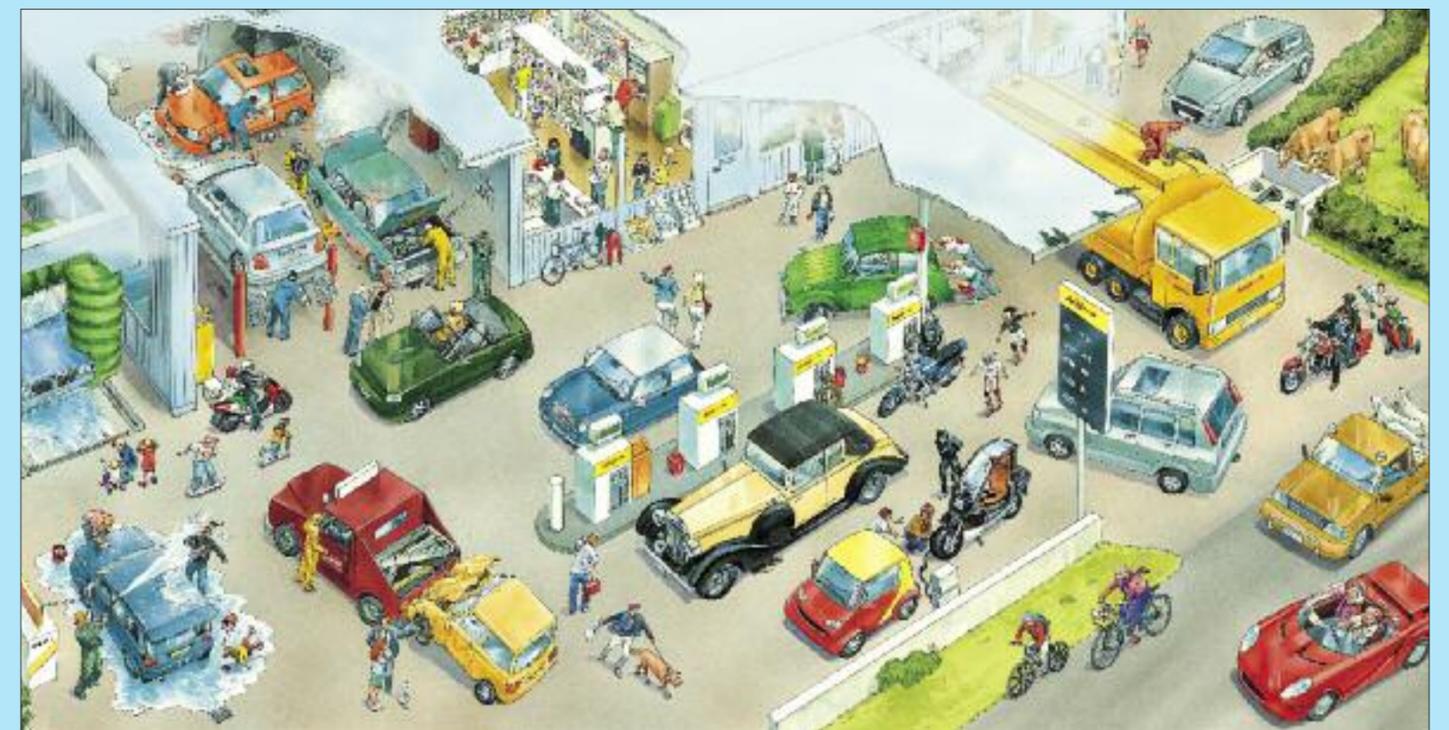


Introduction



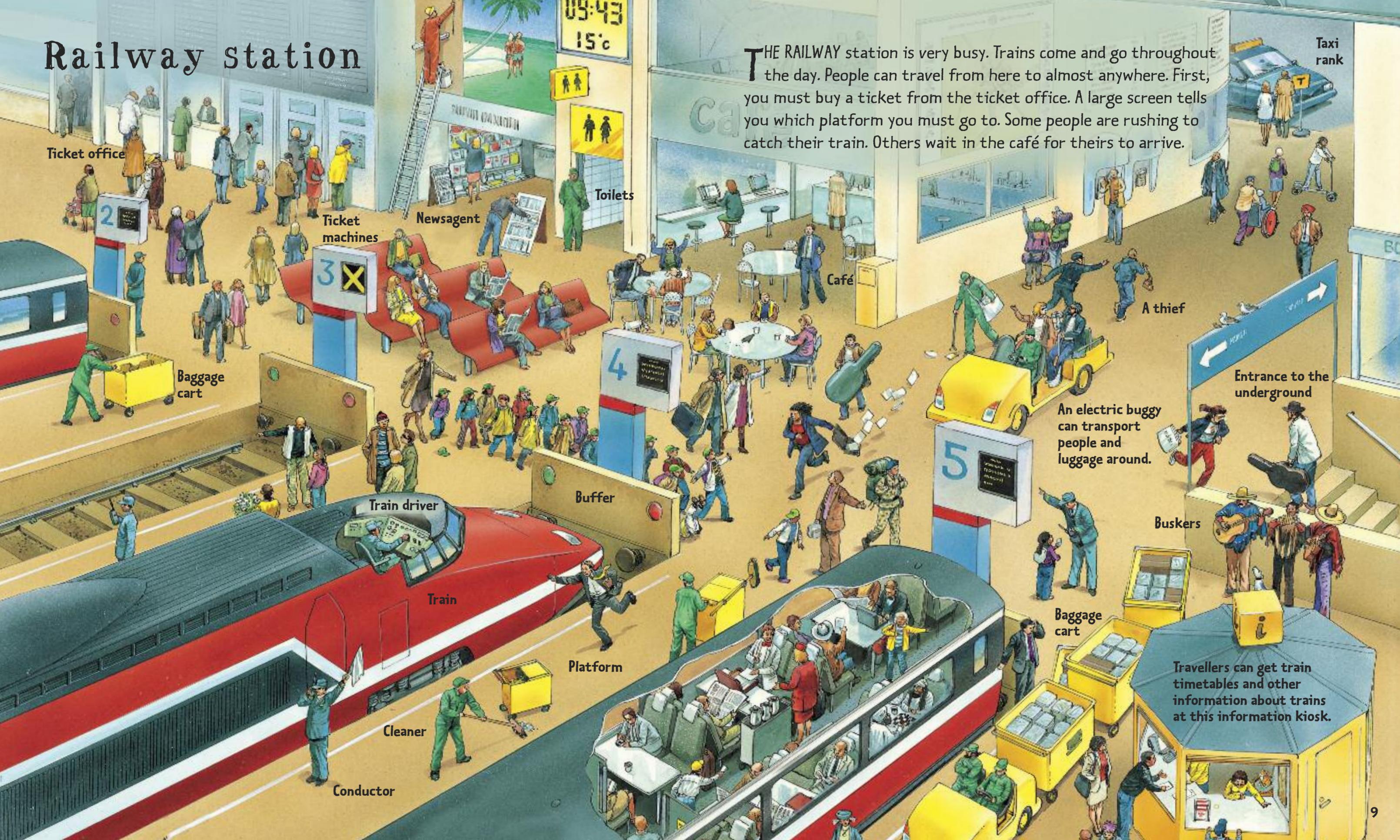
THIS BOOK will show you the machines we use to help us in our daily lives. Watch the people at the airport, find out what happens on a building site or join the astronauts about to blast off into space.

Each double page has a big, colourful illustration with lots of things to look at. If you want to find out more, turn to the back of the book where you will discover many interesting facts in the glossary!



Railway station

THE RAILWAY station is very busy. Trains come and go throughout the day. People can travel from here to almost anywhere. First, you must buy a ticket from the ticket office. A large screen tells you which platform you must go to. Some people are rushing to catch their train. Others wait in the café for theirs to arrive.



Ticket office

Ticket machines

Newsagent

Toilets

Café

Taxi rank

Baggage cart

A thief

Entrance to the underground

An electric buggy can transport people and luggage around.

Buskers

Train driver

Buffer

Train

Platform

Baggage cart

Cleaner

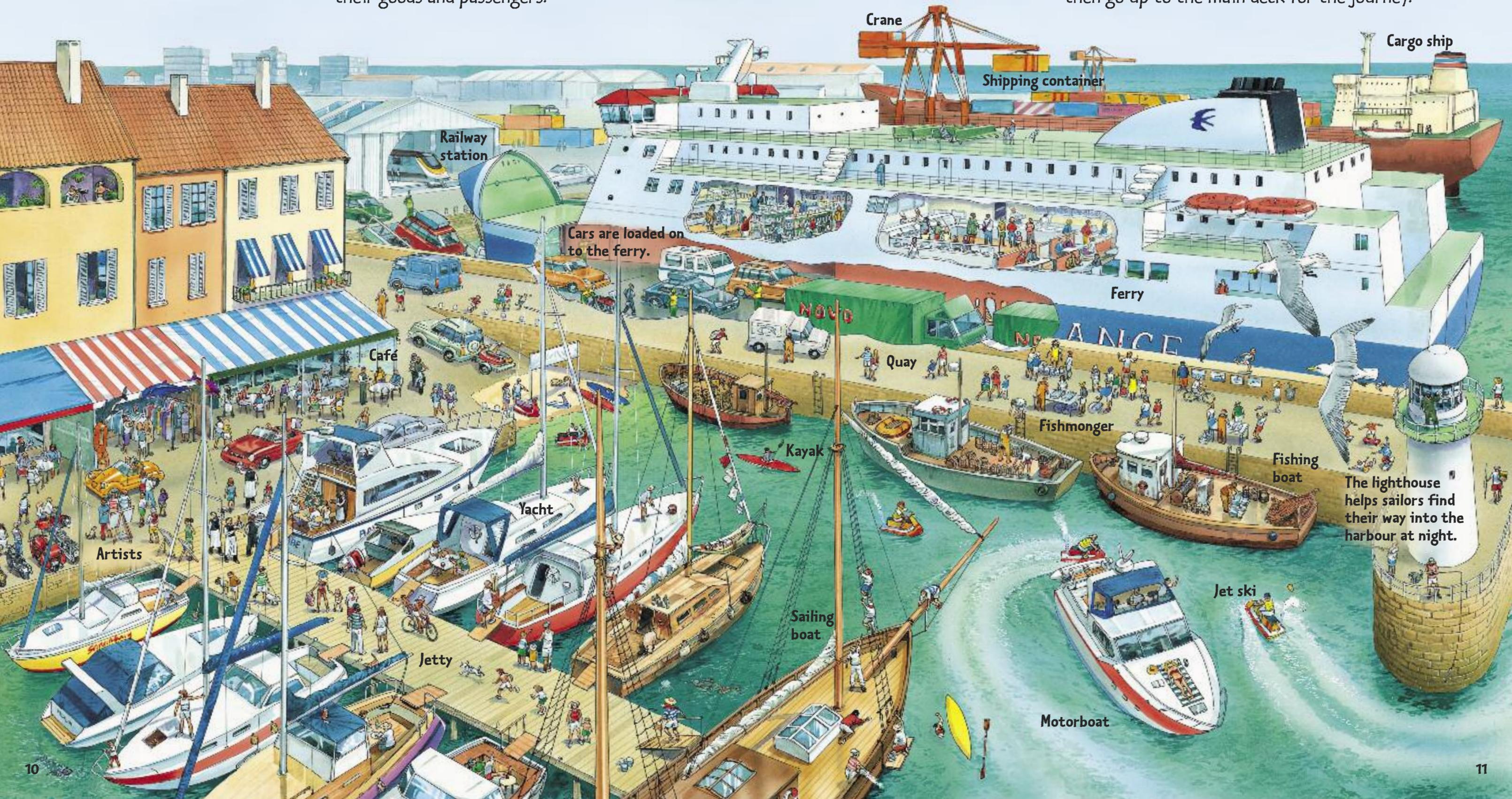
Conductor

Travellers can get train timetables and other information about trains at this information kiosk.

Harbour

A HARBOUR is a place where ships can dock in calm waters. Here they can load and unload their goods and passengers.

Some passengers are boarding a ferry which will take them overseas. They drive their cars on board, then go up to the main deck for the journey.



Crane

Cargo ship

Shipping container

Railway station

Cars are loaded on to the ferry.

Ferry

Café

Quay

Fishmonger

Fishing boat

The lighthouse helps sailors find their way into the harbour at night.

Kayak

Yacht

Artists

Sailing boat

Jet ski

Jetty

Motorboat

Garage

Mechanics can fix cars that have problems.

Some people take their car to the car wash. Giant rollers and a spray of water are used to clean the cars.

Shop

A GARAGE is more than just a place where you can fill up your car with petrol. You can visit the shop, pump up your tyres, wash your car—or buy a new one! If your car breaks down, you can bring it to the mechanic. A recovery truck has just brought another car to the workshop to be repaired.

Cyclist filling her bike's tyres with air

Petrol pump

Motorcycle

This car has been in an accident. The recovery van has brought it to be repaired.

Air pump

Jet wash

Cyclists

Petrol tanker

Building site

A crane is used to lift steel beams into position.

LOTS of workers and machines are needed on a building site. A crane hauls heavy parts into place. Concrete is pumped to the upper floors. Bulldozers clear away the rubble. The architects check that the new building is safe and stable.

Using a sander to smooth down the concrete floors

Carpenter

Scaffolding

Steel beam

Architects

Drilling

Pile driver

Bulldozer

The revolving drum on this lorry keeps the concrete moving so that it does not set.

Dumper truck

Concrete pump

Bulldozer

Airport

TO TRAVEL by aeroplane you have to go to an airport. When you arrive, you must go to the check-in desk. Here, your tickets are checked. You hand in your luggage so that it can be loaded on to the plane. Then you go through security and wait in the departures lounge for your flight to be called.

Take-off

Control tower

Runway

Lift

Film star

Escalator

Passport control

Metal detector

Scanner

Security staff check people's bags before they board the aircraft.

Information desk

Changing money

Check-in desks

Shop

Departures board

Fire station

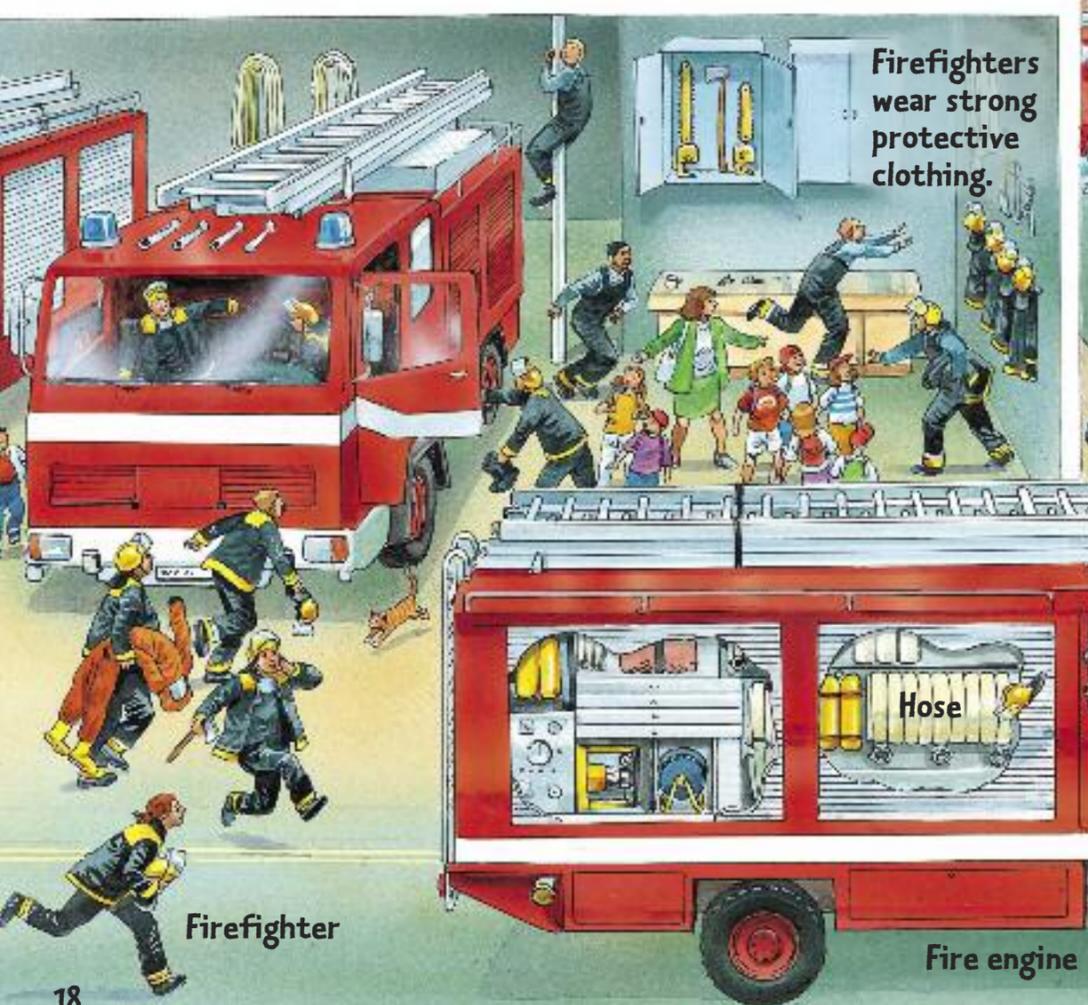
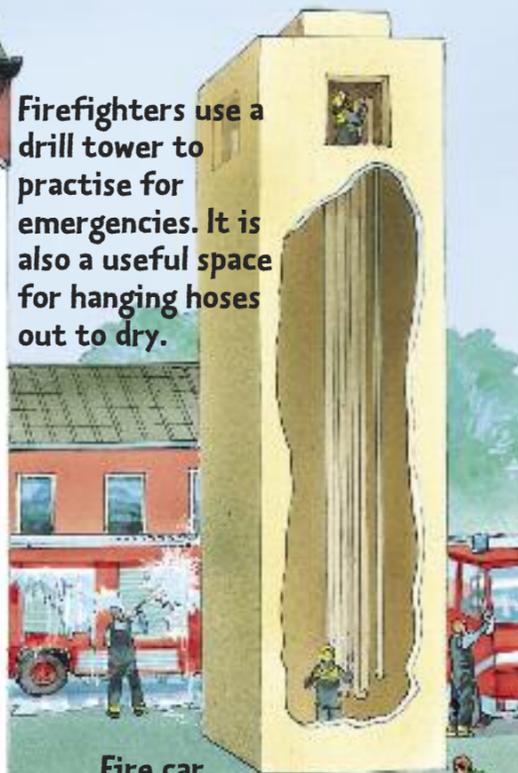
AT THE FIRE STATION, the alarm has sounded. There is a fire in a house nearby. The firefighters quickly put on their uniforms and rush to their vehicles.



To save time in emergencies, the firefighters slide down a pole instead of using stairs.

Control room

Firefighters use a drill tower to practise for emergencies. It is also a useful space for hanging hoses out to dry.



Firefighters wear strong protective clothing.

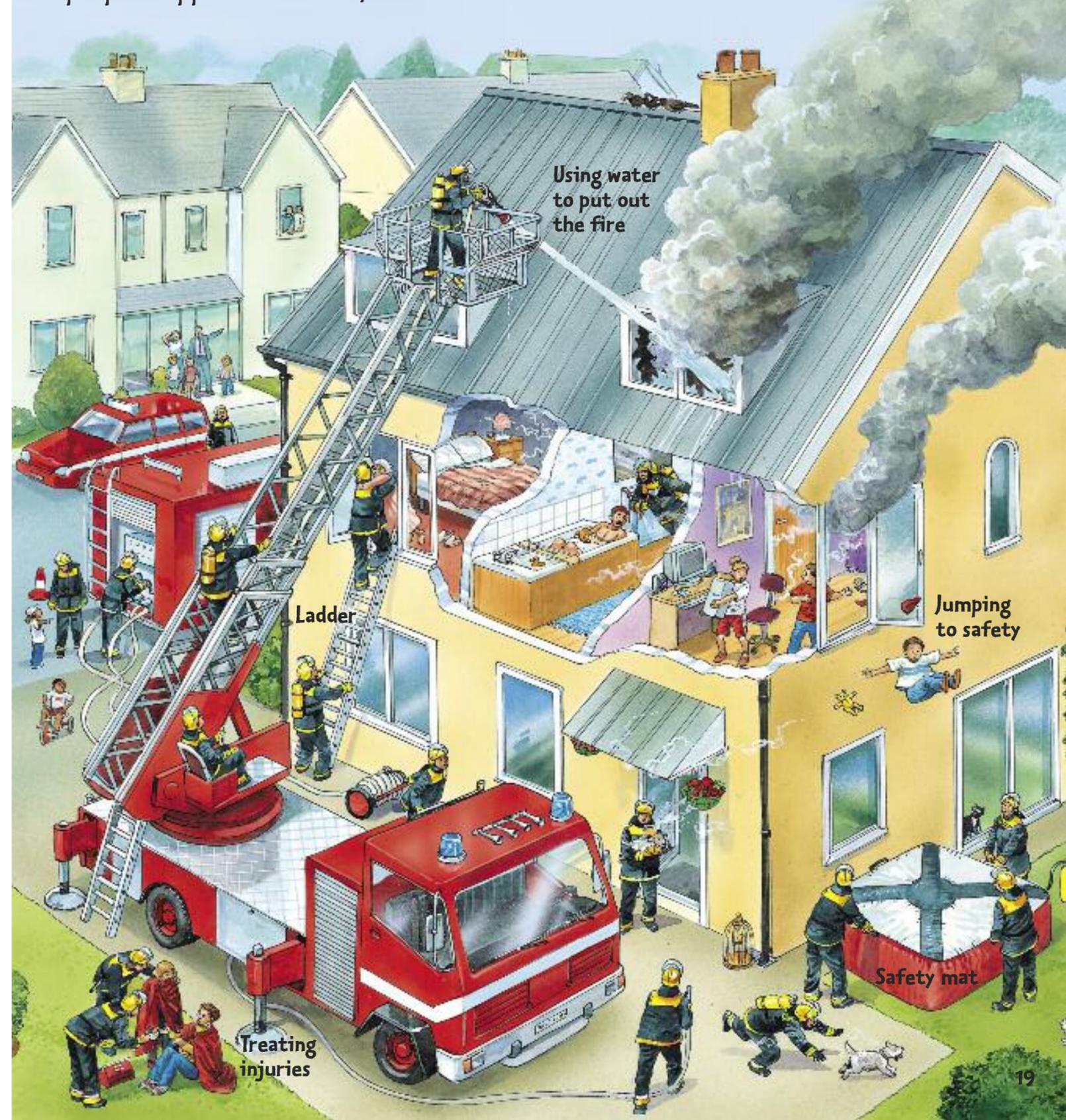
Fire car

Hose

Firefighter

Fire engine

Soon after they arrive at the fire, the firefighters put it out using a hose. They use their ladders to reach people trapped inside. Everyone is rescued!



Using water to put out the fire

Ladder

Jumping to safety

Safety mat

Treating injuries

Newspaper office

MANY people work around the clock to produce a newspaper. Journalists write articles, then the editors select the best stories and photographs. The paper is printed and folded. Finished copies are then loaded on to vans. They are delivered to shops and newsagents to be sold the next morning.

Editorial meeting

Choosing pictures

Photographer

Journalist

Courier

Print operator

Paper

Delivery lorry

Forklift truck

Newspapers are printed using four different coloured inks: blue, red, yellow and black.

Stacks of newspapers for delivery

Printing press

Conveyor belt

School children learn how newspapers are produced.

Film studio



Extras have minor roles.

Camera tracks

Lighting

THE ACTORS put on costumes and make-up. Filming starts when the director calls "Action". He tells the actors how to speak and when to move. The story in this film took place more than 200 years ago. The set in this studio has been built to look like an old town. It seems almost real!

Film editor

Sound editor

Costume designer

Make-up artist

Sound boom

The assistant cameraman operates the clapperboard.

Cameraman

Director

Sound technician

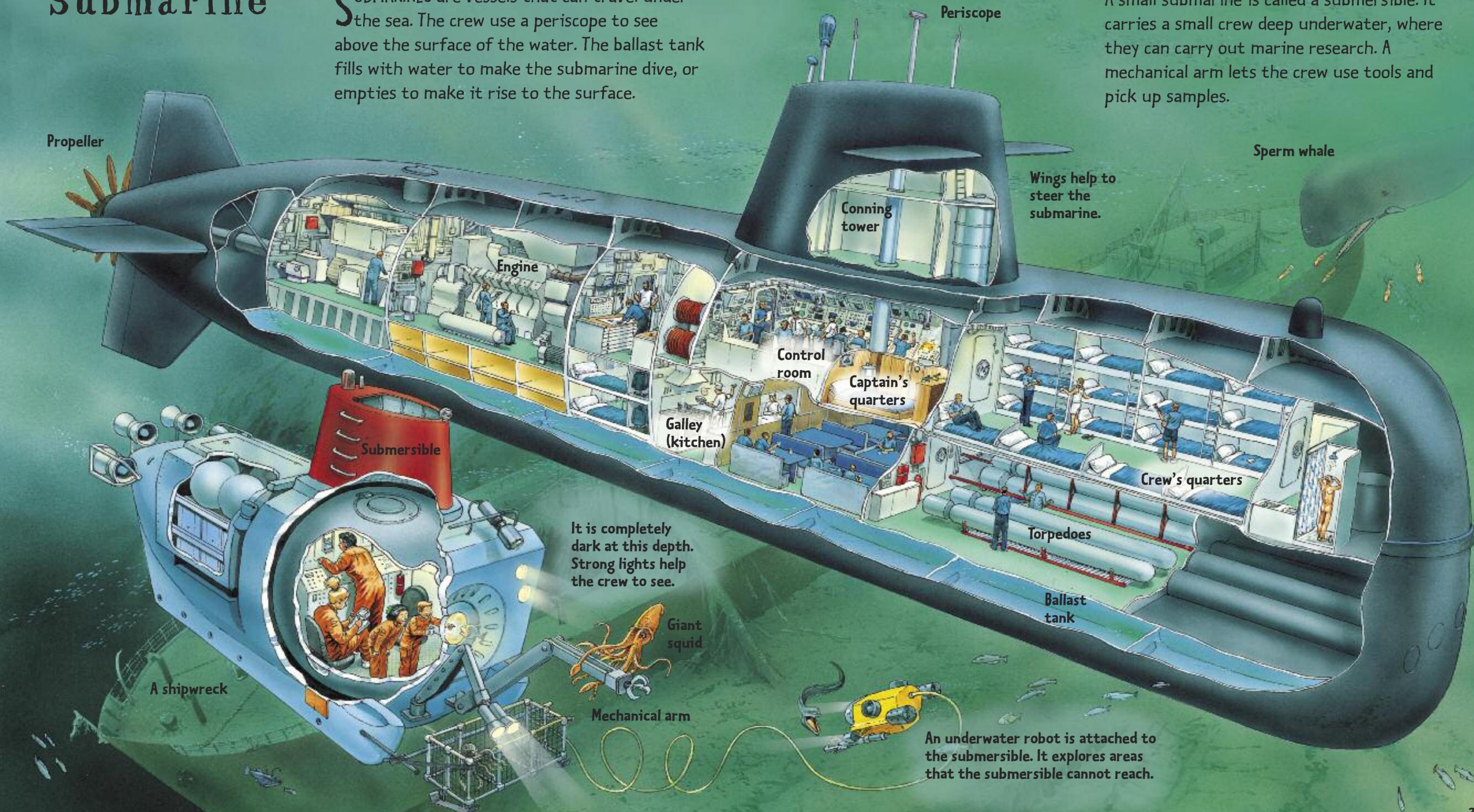
Crane

The person in charge of lighting can make the set look like day or night.

Submarine

SUBMARINES are vessels that can travel under the sea. The crew use a periscope to see above the surface of the water. The ballast tank fills with water to make the submarine dive, or empties to make it rise to the surface.

A small submarine is called a submersible. It carries a small crew deep underwater, where they can carry out marine research. A mechanical arm lets the crew use tools and pick up samples.



Propeller

Periscope

Sperm whale

Wings help to steer the submarine.

Conning tower

Engine

Control room

Captain's quarters

Galley (kitchen)

Crew's quarters

Submersible

Torpedoes

Ballast tank

It is completely dark at this depth. Strong lights help the crew to see.

Giant squid

Mechanical arm

A shipwreck

An underwater robot is attached to the submersible. It explores areas that the submersible cannot reach.

Spacecraft

The crew and technicians enter the shuttle by crossing a bridge.

Observation deck

The launch suit keeps the astronaut healthy during lift-off and when the spacecraft returns to Earth.



The shuttle is controlled from the flight deck.

The astronaut is strapped in.

Mid deck

The shuttle carries cargo, such as space probes and satellites, in the payload bay.

The main part of the shuttle is called the orbiter.

The external fuel tank supplies the shuttle's engines during take-off.

THE SPACECRAFT is on the launch pad. The astronauts are getting ready to travel into space. Powerful rocket engines will fire the shuttle upwards at high speed. The spacecraft will carry a new satellite in its payload bay. While the shuttle is in space, everything is weightless. The astronauts will float around if they are not strapped down!

Fuel booster

News reporter

Pelican

Fuel booster

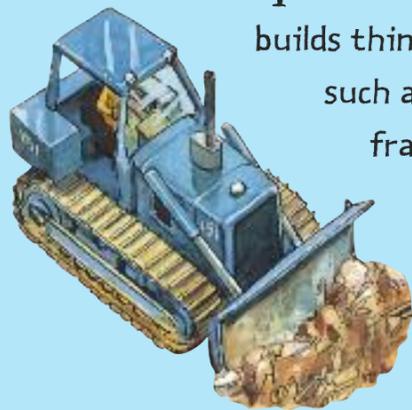
Glossary

Architect: a person who plans and designs buildings. Architects supervise the construction of a building from start to finish.



Astronaut: a person who travels into space. Outside their spacecraft, astronauts wear special suits that keep them warm and allow them to breathe.

Bulldozer: a large, powerful vehicle used to demolish old buildings and clear areas for new ones. It shovels up rubble and earth and pushes it out of the way. It has caterpillar tracks around its wheels so that it can drive over rough ground.



Carpenter: a person who builds things out of wood, such as tables, door frames and floorboards.

Cargo: the goods that are carried on a ship, plane or lorry.

Crane: a tall machine used to lift building materials, such as steel beams.

Ferry: a boat for transporting passengers and vehicles across a stretch of sea or river.

Fire engine: a vehicle driven by firefighters. It carries a supply of water and a hose for putting out fires. It also carries other equipment, such as ladders and special clothing, in case the firefighters have to go into a burning building.

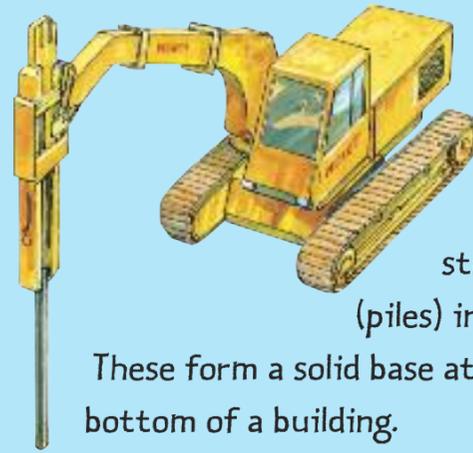
Journalist: a person who gathers information for a newspaper, magazine or television channel.



Launch pad: the place where a rocket or space shuttle takes off from.

Mechanic: a person who fixes broken engines and other machinery.

Passport: a document that shows who you are and what country you come from. You may need your passport to travel abroad.



Pile driver: a machine used to push strong supports (piles) into the ground.

These form a solid base at the very bottom of a building.

Printing press: a machine that transfers text and pictures on to paper. Some printing presses can produce more than 1000 newspapers a minute.

Satellite: a device that has been launched into space and orbits (circles) the Earth. Satellites give us information about the weather. They can also relay television programmes and phone calls and help with navigation on the roads.

Quay: a stone structure where ships can dock to load and unload. They are often very busy places.



Space shuttle: a spacecraft that can carry people and cargo into space and back to Earth again.

Studio: a room where films, television programmes or radio shows are recorded. Some studios are extremely large, as they have to contain huge sets and large items of filming equipment.

Tanker: a ship or lorry that is used to carry liquid cargo, such as oil or milk.

Technician: a person who operates or repairs technical equipment, such as a camera or part of a spacecraft. Technicians must have special training in how to use this equipment properly.



Train: a vehicle that runs on rails. Trains are made up of several carriages joined together and pulled by a locomotive engine.

Underground: an underground railway system. Many large cities have an underground, with lots of trains carrying passengers to all parts of the city.

Yacht: a boat powered by the wind. They are mainly used for pleasure or for racing.

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