Construction of Buildings

Bearbeitet von Hansjörg Frey, Birgit Kirchen, Birgit Rogge, Evelyn Schimpf

1. Auflage 2015. Taschenbuch. 132 S. Paperback ISBN 978 3 8085 7988 6 Format (B x L): 17 x 24 cm Gewicht: 277 g

schnell und portofrei erhältlich bei



Die Online-Fachbuchhandlung beck-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Technical English

Construction of Buildings

Bearbeitet von: Lehrern an Beruflichen Schulen

Lektorat: Hansjörg Frey, Dipl.-Ing.

VERLAG EUROPA-LEHRMITTEL Nourney, Vollmer GmbH & Co. KG Düsselberger Straße 23 42781 Haan-Gruiten

Europa-Nr.: 79886



Autorenverzeichnis

Kirchen, Birgit, Dipl.-Ing. (FH), Studienrätin, Hilden Rogge, Birgit, Dipl.-Lehrerin, Pritzwalk Schimpf, Evelyn, Realschullehrerin, Untergruppenbach

Leitung des Arbeitskreises

Frey, Hansjörg, Dipl.-Ing., Göppingen

Bildbearbeitung

Zeichenbüro Irene Lillich, Schwäbisch Gmünd Verlag EUROPA-Lehrmittel, Abteilung Bildbearbeitung, Ostfildern

1. Auflage 2015

Druck 5 4 3 2 1

Alle Drucke derselben Auflage sind parallel einsetzbar, da sie bis auf die Behebung von Druckfehlern untereinander unverändert sind.

ISBN 978-3-8085-7988-6

Alle Rechte vorbehalten. Das Werk ist urheberrechtlich geschützt. Jede Verwertung außerhalb der gesetzlich geregelten Fälle muss vom Verlag schriftlich genehmigt werden.

© 2015 by Verlag Europa-Lehrmittel, Nourney, Vollmer GmbH & Co. KG, 42781 Haan-Gruiten http://www.europa-lehrmittel.de Umschlaggestaltung: Blick Kick Kreativ KG, 42653 Solingen Layout und Satz: tiff.any GmbH, 10999 Berlin Druck: Konrad Triltsch Print und digitale Medien, 97199 Ochsenfurt-Hohestadt

Vorwort

- Inhalte Das Buch Construction of Buildings Technical English ist wie das Buch Bautechnik nach Lernfeldern – Grundbildung aufgebaut. In beiden Büchern werden die Grundlagen der Ausbildung im Berufsfeld Bautechnik beschrieben. Die englischen Namen und Begriffe für die am Bau beteiligten Personen, die Baustoffe und ihre Verarbeitung, für Unfallverhütung, Gefahrenzeichen und Handhabung in der Sicherheitstechnik sowie für fachmathematische Grundlagen sind in englischer Sprache aufgezeigt. Fremdsprachenkenntnisse der vorherigen Schulen werden vorausgesetzt. Deshalb wurde auf Grammatik verzichtet.
- Ausstattung Alle Kapitel des Buches sind in vier Abschnitte gegliedert. Dies soll die Arbeit mit dem Buch erleichtern.

Die **introduction** (Einführung) soll einen kurzen Überblick über die Inhalte des Kapitels geben.

Die contents (Inhalte) umfassen in kurzen Texten technische Abläufe und Zusammenhänge. Die darin vorkommenden englischen Fachbegriffe sind am Ende des Textes in einer wordbox mit der deutschen Übersetzung zusammengefasst. Damit entstehen textnahe, kleinere Vokabeleinheiten zum Lernen und Nachschlagen.

In den activities (Übungen) können die Fachbegriffe mit den technischen Inhalten gefestigt werden. Dazu gehören textnahe Aufgaben zur Förderung der schriftlichen und der mündlichen Kommunikationsfähigkeit oder Vokabelarbeiten zur Festigung des erarbeiteten Wortschatzes.

Die skills (Fähigkeiten) geben Hilfe zur Kommunikation innerhalb und außerhalb des Berufs.

Ein aus dem Buch herausnehmbares Wörterbuch Deutsch-Englisch und Englisch-Deutsch beinhaltet alle Wörter der wordboxes. Es kann für Klassenarbeiten, aber auch zum leichteren Gebrauch am Arbeitsplatz auf der Baustelle und im Büro verwendet werden.

- Zielgruppe Der Verlag EUROPA-Lehrmittel empfiehlt das Buch Construction of Buildings –Technical English als Fachbuch für Berufsfachschulen, Kollegschulen, Fachschulen, Technischen Gymnasien mit dem Schwerpunkt Bautechnik sowie Techniker- und Meisterschulen. Es eignet sich, zusammen mit dem Fachbuch Bautechnik nach Lernfeldern – Grundbildung, zum Selbststudium z.B. bei beruflichen Auslandseinsätzen.
- Anregungen Verlag und Autoren wünschen den Benutzern des Buches Construction of Buildings Technical English viel Erfolg beim Gebrauch. Für Hinweise und Anregungen sind wie immer dankbar und freuen uns auf den Kontakt mit unseren Lesern. Für Zuschriften nutzen Sie bitte unsere Adresse lektorat@europa-lehrmittel.de

Herbst 2015

Hansjörg Frey

Content

1 Setting up a building site

1.1	Introduction	5
1.2	Crafts and partners on a building site _	6
1.3	Setting a building site	8
1.4	Safety and protective measures	_ 10
1.5	Measuring instruments	_ 12
1.6	Shapes and bodies	_ 13
1.7	Mathematic sings and terms	_ 14

Skills

Introducing oneself	17
Description of how to get	
somewhere	19

2 Developing and founding a structure

2.1	Introduction	22
2.2	Soil and earth-moving machines	23
2.3	Surveying	25
	Performing excavating work	26
2.5	Foundations	27
2.6	Waste water discharge	28
2.7	Paving	30

Skills

Writing a l	ousiness letter and	
an e-mail		32

3 Masonry

3.1	Introduction	38
	Different types of walls	39
3.3	Brick dimensions	40
3.4	Types of masonry bricks	43
3.5	Mortar	48
3.6	Masonry	51
3.7	Tools	55
3.8	Drawings	56
3.9	Scaffolding	58

Skills

Description of buildings	61
History of buildings	62

4 Reinforced concrete construction

4.1	Introduction	66
4.2	Properties of concrete	67
4.3	Fresh concrete	71
4.4	Hardened concrete	77
4.5	Formwork	79
4.6	Reinforced concrete	81

Skills

Reading of technical texts	83
Reading of tender documents	84

5 Wood construction

5.1	Introduction	_ 86
5.2	Parts of a tree and the structure	
	of wood	_ 87
5.3	Economic and ecologic importance	
	of wood	88
5.4	Characteristics of timber	89
5.5	Types of timber	91
5.6	Commercial size and packing	
	of timber	93
5.7	Fasteners	94
5.8	Woodworking joints	95
5.9	Roof constructions	97
5.10	Dormers and roof windows	99
5.11	Tools for timberwork	100
5.12	Process planning	102

Skills

Talking to customers	103
Telephone conversations	106

6 Coating and covering

6.1	Introduction	109
6.2	Plastering	110
6.3	Dry plaster	114
6.4	Screed	_ 116
6.5	Tiles and flagstones	118
6.6	Tools for tiling	121
6.7	Prevention of moisture penetration _	122

Skills

Applying for a job abroad	124
The curriculum vitae (CV)	125

Setting up a building site

1.1 Introduction

Many different craftsmen are involved in the construction work of a building, i.e. civil engineers, bricklayers, carpenters and concrete workers.

To perform construction works properly these people should

- know the characteristics of building materials and working instructions,
- observe work safety regulations,
- be able to prevent damage caused by environmental influences and
- know how to organise and run their own business as well as cope with the combination of all the different trades (Figure 1).

wordbox

performance	Ausführung
civil engineer	Bauingenieur
bricklayer	Maurer
carpenter	Zimmerer/Schreiner
concrete worker	Stahlbetonbauer
working instruction	Arbeitsanleitung
to prevent	vermeiden
working safety	Arbeitsschutz
environment	Umwelt



Figure 1: On a building site

1.2 Crafts and partners on a building site

A lot of people are working on building sites. They are bricklayers, carpenters, concrete workers, building cleaners, chimney sweepers, draftspersons, joiners, roofers, surveyors, plasterers, drywall builders, road construction workers, specialists for road and traffic engineering, water management specialists, tilers, building mechanics, architects, engineers, etc. Of course, there are their partners, too, like the property owners or building contractors, construction managers, etc. Here is a short dialogue between Peter, a foreman on a site, and a reporter about the crafts and partners on a site.

- **Reporter:** Today I am on a building site in Maidenhead. Here I want to know about the different crafts and people involved in construction work and what their tasks are. I am talking to Peter, who is the site manager here. Nice to meet you, Peter.
- Peter: Nice to meet you, John and welcome on our site.
- Reporter: Well, Peter, who are the people working on your site?
- **Peter:** They are bricklayers, at first, carpenters and concrete workers, too. Then there are also the workers of a construction firm.

Reporter: What are the tasks of the bricklayers?

Peter: They have to prepare the foundations, erect walls, supports and everything that is made of concrete. They also set up the building sites, lay sewage pipes and put up the scaffolding.

- **Reporter:** They have to do a lot, indeed. You mentioned the carpenters. But they work with wood. So what are they responsible for on a site?
- Peter: They are responsible for making wooden structures for the walls, ceilings, stairs and roofs. They also prepare the formwork for pouring concrete. Carpenters also perform all the necessary works for heat, moisture, sound and fire protection.
- **Reporter:** That's very interesting. So they are very important for the building site. What else can you tell me about the concrete workers?
- Peter: They prepare the formwork for the walls, prefabricated parts and reinforcements, for example.
- **Reporter:** That's quite a lot that the various craftsmen have to do. And what is the job of the general workers?
- **Peter:** They are responsible for work safety and general works that affect the building or construction site.

Indeed. But these three crafts are only some of those required on a site like this one. So we could talk about them for hours or more, couldn't we?

- **Reporter:** OK. I thank you very much for your information. I wish you much success. Good bye.
- Peter: You are welcome. Good bye.

wordbox

property owner building cleaner chimney sweeper draftsperson	Bauherr Gebäudereiniger Schornsteinfeger Bauzeichner	specialist for road and traffic engineering foreman building contractor	Facharbeiter für Straßen- und Verkehrswesen Vorarbeiter, Polier Bauunternehmer	
joiner	Bautischler	craftsman	Handwerker	
roofer	Dachdecker	concrete	Beton	
surveyor	Vermessungs-	scaffold	Gerüst	
	ingenieur	formwork	Schalung	
plasterer	Stukkateur	reinforcement	Bewehrung	
drywall builder	Trockenbauer	foundation	Fundament	
road construction worker	Straßenbauer	sewage pipe	Abwasserleitung	
tiler	Fliesenleger	to erect	errichten	

activity

1 | On p. 6 you can read a dialogue between Peter and a reporter.

- a) Read this dialogue for yourself.
- b) Find out about the tasks for the different craftsmen.
- c) What are the tasks mentioned in the dialogue. Take a separate sheet. Copy and fill in the blanks.

Table 1 Professions on a site





bricklayers	concrete workers	carpenters
make	make	make
lay	redevelop	make
install	work with	perform

2 | Fill the words into the gaps (Table 1).

architect building owner	carcass • engineer • building firm
 a) can be private persons, trades and industrial companies, public transport companies and public bodies. 	 c) do bricklaying, woodworking, other craftwork such as works
 b) Construction managers can be supported by and 	 turn-key buildings that are given to the

1.3 Setting a building site

This is a drawing of a building site (Figure 1). Here you can find many words for equipment, materials and working areas. Below the picture you can find the list of English and German words for them.

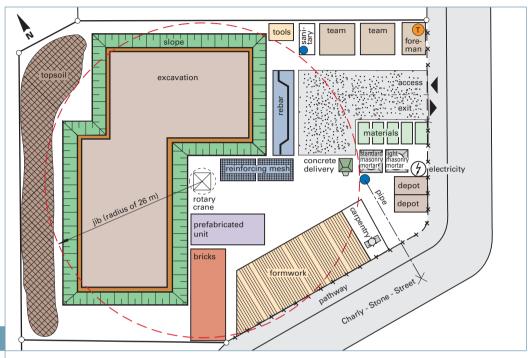


Figure 1: A building site

wordbox			
access	Zufahrt	formwork	Schalung
foreman	Polier	carpentry	Zimmermann
team	Mannschaft	pipe	Ver- und Entsorgungs-
sanitary container	Sanitärcontainer		leitung(en)
tools	Werkzeuge	hydrant	Hydrant
excavation	Baugrube, Aushub	electricity supply	Stromversorgung
slope	Böschung	depot	Magazin
topsoil	Oberboden	light masonry mortar	Leichtmauermörtel
tower crane	Turmdrehkran		(LM)
rotary crane	Drehkran	standard masonry	Mauermörtel (M5)
concrete delivery	Betonübergabe	mortar	
materials	Wertstoffe	jib (radius of 26 m)	Ausleger (r = 26 m)
exit	Ausfahrt	bricks	Mauersteine
Charly-Stone-Street	Karl-Stein-Straße	prefabricated unit	Fertigteil
rebar	Betonstahl	reinforcing mesh	Betonstahlmatte

activity

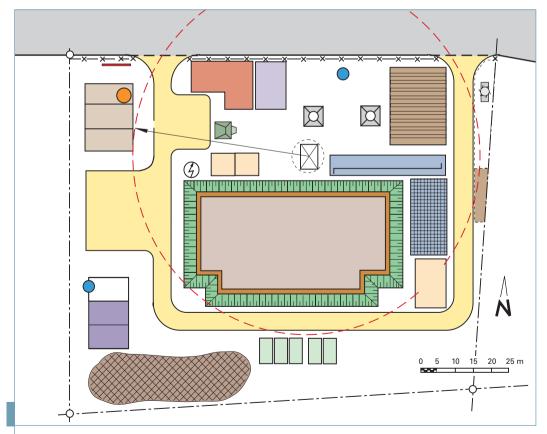
- 1 | Turn to your file and find the right numbers for the equipment, materials and working areas.
- 2 Answer these questions about the picture on p. 8.
 - a) Where will you find the house in future?
 - b) Where can you enter the site?
 - c) What can you see next to the excavation?
 - d) Where can you find the team and the foreman?
 - e) How long is the jib?
 - f) What shape is the excavation of?

- g) Why do you need an excavation?
- h) Where can you find a spade, a hammer and a wheelbarrow on this site?
- i) Why is the tower crane in the centre of the site?
- j) Where is a good position for sanitary?
- k) Why are the materials near the crane?

3 You see a building site (Figure 1). Describe this site to a partner and use the phrases below.

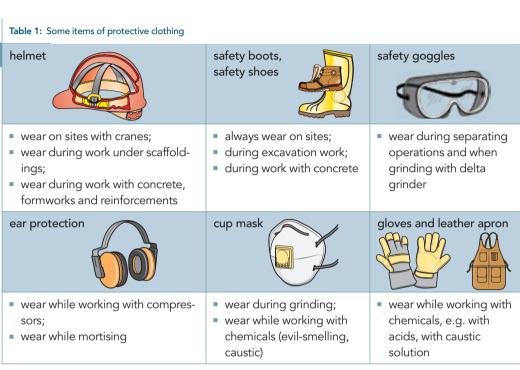
You can use these phrases:

- On the right side of the building there is/ there are ...
- Next to ... you can see ...
- Between ... and ... you will find ...
- Behind the ... there is/there are ...
- In front of the ... there is/there are situated ...
- On the left of ... there is/there are ...



1.4 Safety and protective measures

All the workers on the building site have to take health and safety precautions. Accidents affect the health of the workers, disturb the work on the site and even lead to financial losses. That is why they have to wear the stipulated protective clothing (Table 1).



In addition to improving safety and protection by proper clothing signs play an important role, too. You can divide them into mandatory, prohibition and warning signs (Figure 1). Here are some of them:



Figure 1: Examples of mandatory, prohibition and warning signs

wordbox

employee	Arbeiter	loss	Einbuße
to stipulate	vorschreiben	to affect	beeinträchtigen
scaffolding	Gerüst(e)	excavation	Erdaushub
to mortise	stemmen	to grind	schleifen
caustic	ätzend	acid	Säure
evil-smelling	übel riechend	caustic solution	Lauge
helmet	Schutzhelm	safety boots	Sicherheitsstiefel
safety shoes	Schutzschuhe	goggles	Schutzbrille
ear protector	Gehörschutz	cup mask	Atemschutzmaske
gloves	Arbeitshandschuhe	leather apron	Lederschürze

activity

- 1 | What do the prohibition and warning signs mean (Figure 10/1)?
- 2 State why signs are necessary on a building site.
- 3 Look at the following activities:
 - concrete the site
- mortise concrete
- cut the bricks
- cut concrete (wet and dry)
- work near the crane
- do an excavation
- erect scaffoldings
- work near and on the silo
- use a saw

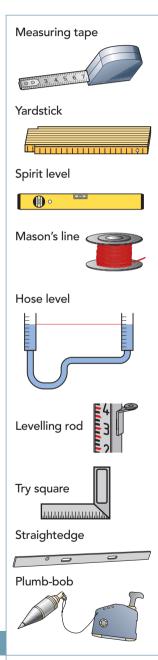
Choose the proper sign for each of them.

4 | Say what the signs below mean. Do it in German or in English. In German start like this: Dieses Zeichen besagt, dass ... and in English: The sign means that ...



1.5 Measuring instruments

Surveying work includes the plan measurements, the height measurements, the surveying of grounds, the building settings, the marking and the escape measurements. These tasks must be performed on a building site. So you have to use special tools for measuring (Figure 1). These can be a measuring tape, a yardstick, a spirit level, a mason's line, a stadimeter, a laser and levelling rods.



Measuring tapes are also used by bricklayers to determine shorter distances with greater precision. You lay it on the ground or stretch it between two points of measurements. You also can check the distance between two points of measurements.

The *yardstick*, or also called folding rule, is a portable tool that all workers carry with them. It is used for measuring smaller lengths, heights or some angles.

The *spirit level* consists of a wooden rod, a tube with a liquid (mostly spirit, not water!) in it and a bubble. It is used for checking the perpendicular and the horizontal of a layer of the brickwork.

A *mason's line* is used together with the spirit level in it. After setting the first layer of a wall this line is stretched from one corner to the other. So the worker can lay the bricks along this line.

A *hose level* is a measuring instrument with two tubes which are connected with a hose. Some horizons can be marked over fairy long distances (of course it depends on the length of the hose). The hose level is used in carcassing where the cutting check has to be marked. The differences in height can be read and marked by the same water level in both tubes. But the hose has to be free of air bubbles!

A *levelling rod* may be one piece or may be sectional and can be lengthened. It is used to measure distances in land surveying and in the construction layout.

A *try square*, or also called angle gauge, is used for setting out, checking or trying right angles in construction.

The *straightedge* is a long, straight board that is used for drawing and testing straight lines and for checking the flatness of surfaces.

A *plumb-bob* is a weight that fastened to a string and is used as a vertical plumb-line. It may be used in surveying to sight a point on the ground that is not visible. It is also used to set the measuring instrument exactly over a fixed point or marker.

Figure 1: Measuring instruments

1.6 Shapes and bodies

You can divide the shapes and bodies in plane shapes and solid shapes. A parallelogram, a triangle or a rectangle, for example, belong to the group of plane shapes. They are 2-dimensional shapes. But a pyramid, a prism, a cylinder belong to the group of solid shapes. They are 3-dimensional shapes.

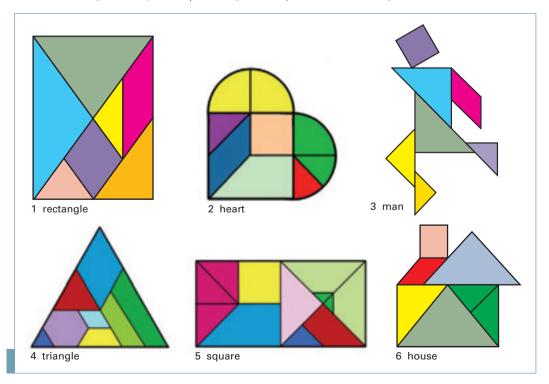
Two-dimensional shapes	Three-dimensional shapes
triangle, rectangle, square, parallelogram, trapezium, pentagon, hexagon, circle, semicircle	quadrangle, prism, tetrahedron, pyramid, cylinder

activity

1 | Draw four plane shapes.

2 Answer these questions in English. Use figures 1 to 6.

- a) How many circles can you find in the figures 1 to 6?
- b) How many squares are there in the second figure?
- c) There are triangles in all figures. How many can you find?
- d) How many semi-circles are there in the heart?
- e) What are the shapes in the first figure?
- f) In what figures can you see parallelograms, trapeziums and rectangles?



1.7 Mathematic signs and terms

On a building site, mathematics is very important. So you have to know the basic rules in mathematics, too. Here are some mathematical signs:

- + means: add/plus
- means: minus/reduced by
- : means: divided by
- · means: multiplied by
- = means: equals

Here are some other terms used in taking measurement (Table 1):

Table 1: Terms used in mathematics

Linear measures	Square measures	Cubic measures
1 line = 2.12 mm 1 inch = 2.54 cm 1 foot = 30.48 cm 1 yard = 91.44 cm 1 mile = 1.609 km	1 square inch = 6.45 cm^2 1 square foot = 929.03 cm ² 1 square yard = $8.361.26 \text{ cm}^2$ 1 square mile = 2.59 km^2	1 cubic inch = 16.387 cm ³ 1 cubic foot = 0.028 m ³ 1 cubic yard = 0.765 m ³
	1 mm ² = square millimetre 1 cm ² = square centimetre 1 dm ² = square decimetre 1 m ² = square metre	1 cm³= cubic centimetre1 dm³= cubic decimetre1 m³= cubic metre

wordbox

surveying (work)	Vermessungsarbeiten	plan measurement	Lageplan	
height measurement	Höhenmessung	building setting	Bauabsteckung	
escape measurement	Sicherungsmessung	yardstick	Gliedermassstab	
measuring tape	Bandmaß	mason's line	Fluchtschnur	
spirit level	Wasserwaage	hose level	Schlauchwaage	
stadimeter	Nivielliergerät	intersecting point	Schnittpunkt	
to survey	einmessen	boundary point	Grenzpunkt	
levelling rod	Fluchtstab	perpendicular	Lot, lotgerecht, senk-	
position point	Aufnahmepunkt		recht	
brickwork	Mauerwerk	difference in level	Höhenunterschied	
survey of the ground	Aufnahme von	horizontal circle	Horizontalkreis	
	Geländeflächen	inaccessible	unzugänglich	
land surveying	land surveying Landvermessung		Bezugslinie	
to sight	festlegen	cutting check	Meterriss	
	(in Gedanken)	goal	Ziel	
baseline	Grundlinie	to mark	markieren	
accurate	genau	bubble	Luftblase	
groundplan	Grundriss			

activity

1 | Read the text about measuring instruments on p. 12.

- a) Find out all the information given for the use of each measuring instrument.
- b) Take an extra sheet. Draw a chart and fill in the information. Divide the chart into two rows with the information about the tool and the usage of each of these tools.

2 Here is a text about measuring and marking tips:

The goal of this method is to draw a line that is exactly perpendicular to the baseline. Decide where you want the perpendicular line to cross the baseline and make a mark. That is point "A". Now measure out the same distance on each side of this mark along the baseline and name them point "B" and point "C". In general, you will get more accurate results with a longer distance between the points. Draw a circle from the points "B" and "C" with the same radius but it should be longer than the distances AB. The circles cross into two points "D" and "E". Draw a line through "D", "A" and "E". The resulting line between "A" and "D" will be at exactly 90 degrees to the baseline.

- a) Now ask your partner to draw this figure according to your instructions.
- b) Explain this tip in your own German words to your partner.
- 3 Give other measuring and marking instructions in English to your partner.
- 4 A house with a garage is to be built. Draw a building plan at the scale of 1:200. Calculate the area of the property and the area built on. For this building make a plan of the site facilities at the scale of 1:200 and make arrangements for traffic safety. To do so use your book (Bautechnik nach Lernfeldern) p. 50.
 - a) Make a technical drawing of the planned building.
 - b) Think about the working space in the excavation around the planned building.
 - c) Define the space for the rotary crane.
 - d) Draw the position of the service and disposal pipes.
 - e) Make a chart for the traffic signs and the other signs. To do so use p.7, p. 10 and p. 11.

5 | Convert the following measures. Use table 14/1.

a)	4 inches =	_ cm	j)	4 square inches	=	cm ²
b)	4 yards =	m	k)	8,361.26 cm ²	=	square yards
c)	10 foot =	m	I)	1 cubic inch	=	cm ³
d)	14 miles =	_ km	m)	929.03 cm ³	=	cm ²
e)	6 lines =	mm	n)	2,800 m ³	=	cubic feet
f) -	4 yards =	m	0)	4.5 square miles	=	km²
g)	180 cm =	foot	p)	2.5 cubic yards	=	m³
h)	36 miles =	_ km	k)	6 cubic yards	=	m³

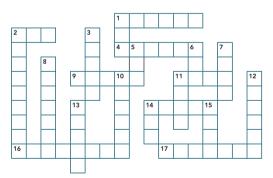
1 Setting up a building site

6 Write down mathematical tasks and work out the results.

In words	In numbers	Result
Eighteen minus ten equals		
Nine multiplied by eight equals		
Two hundred plus eighty minus two equals		
Six hundred multiplied by twenty equals		
One hundred ninety plus one equals		
Five point six minus four equals		
Five hundred divided by five equals		
Ten point zero three plus one equals		
Six plus eight minus zero point eight equals		
Four hundred forty-four multiplied by two equals		
Six point eight seven minus zero point eight seven multiplied by five		
Seventy divided by ten equals		

7 | Take an extra sheet and write down the solutions to the tasks below.

Down: 1 forty divided by four · 2 twelve plus ten minus five · 3 twenty-four divided by three · 5 fifteen divided by three minus four · 6 one hundred divided by fifty · 7 three multiplied by four minus twelve · 8 forty-five divided by three · 9 thirty-one minus twenty-eight · 10 three multiplied by three plus two · 11 sixty divided by twelve · 12 four multiplied by twenty · 13 eighty divided by two · 14 nought plus ten minus four · 15 twenty-one divided by three plus two



Across: 1 thirty-six divided by three · 2 seven multiplied by two minus eight · 4 sixteen divided by eight minus two · 9 thirty-one minus twenty-eight · 11 forty-four divided by eleven · 14 ten plus eleven minus fourteen · 16 four multiplied by four plus three · 17 one hundred and forty divided by two

6 Find out the words for traffic signs on a building site and match them to the signs below. Take an extra sheet and write down the numbers of the signs and the words.

А LLVEHICLESPROHI В Т ΕD NOSTOPP INGORSTAND NGA RTQWEZOPZT IL KJHGFDMBN O O P U S A D N E J M L S P O K U T B V G ULANSPEEDL IMITGT UOWQE G W E D R T Z U I O P L K I O M O P S V R HAMENWORKINGSDFPGHJKL S Y X C V A B N M U K L O P A D H O P L K U H G F D S R A D E A D E N D R O A D Y X



Introducing oneself

Here is an example how someone can introduce himself.

I am John, John Taylor. I live in Birmingham, UK, in a block of flats with my parents. I am 17 years old. In my free time I like making models, going to parties with my friends and, of course, to the disco where I meet a lot of my friends too. There we talk about our work, our apprenticeship, what happened on the site that week, and so on. In my spare time I also play football in a very famous sports club. I am the goalkeeper. My job is to prevent the opposite team from scoring.

As I often have to work on weekends I haven't got so much time to see my friends, go to parties or go away to watch to football matches.

Well, but I want to talk about myself and my search for a job. First, at the age from six to ten I went to primary school in Birmingham. Later I attended the secondary school here in Birmingham as well. I stayed there for six years. I enjoyed some subjects like physical education, handicraft, chemistry and sometimes physics. During this time I learned making models. One of my teachers got me interested to do that. I joined a model-making club. There we were able to build different models of different materials. I used to make models of clay and gypsum. I needed time to learn that, but I was really patient.

So, when the time came to look for a job and to apply for it I asked my teacher what to do. He ad-

vised me to try some jobs involving handicraft skills or jobs on building sites. I love being outdoors, working outside and doing something with my hands. I am good at working accurately and precisely. I also like working together with other people. So we went to the job centres and looked through catalogues where all the jobs on a building site are described. There are quite a lot, I'd say. You see, the problem is that choosing the right one is not easy! I looked at the job profiles I was interested in. So I could apply to become a joiner, a bricklayer, a plasterer and even a tiler. During my last year at school, a very big building firm not far from Birmingham has invited me for a job interview and this company offered me an apprenticeship as a plasterer. I was successful and I got this job I really wanted.

In this job I have to work with different materials such as gypsum, stucco, plasterboard, different fittings and so on. I am enjoying my apprenticeship very much. But school, the theoretical training I don't like that so much. Nevertheless I have to learn what is the best material, which material I can use for high quality and so on. Therefore I go one day a week to an educational institution and prepare for my Technical Certificate. Four days in a week I work in my firm and learn everything I need for my qualification. I hope I can get my National Vocational Qualifications. After three years with a good Technical Certificate I can work in my firm, improve practical knowledge and earn good money for me.

		rd		
\ A7	\mathbf{n}		\mathbf{n}	v.
			U.	\sim

primary school	Grundschule	fittings	Beschläge, Armaturen
secondary school	Oberschule, Realschule,	rosette	Rosette
	Sekundarschule	National Vocational	Nationale berufliche
9-year elementary	Hauptschule	Qualifications	Ausbildung
school		Technical Certificate	höherer beruflicher
grammar school	Gymnasium		Abschluss
handicraft	Handwerk	apprenticeship	Ausbildung
stucco	Stuck	to apply	bewerben
gypsum	Gips	joiner	Tischler, Schreiner
clay	Ton, Lehm	tiler	Fliesenleger
plasterboard	Gipsplatte	plasterer	Stuckateur

Description of how to get somewhere

To find things or get to places you must give directions. Here are some useful phrases (Table 1).

Table 1: Giving directions				
German	Picture	English		
geradeaus gehen		go straight on/ walk straight ahead		
links abbiegen		go left/turn left		
rechts abbiegen		go right/turn right		
die Straße überqueren		cross the street		
an etwas vorbeigehen		go past/walk past/ pass the		
bis zur Ampel gehen/ fahren		go to the traffic lights		
zwei Straßen weiter		go to the second block		
Ausfahrt		exit		
Einfahrt		access road		
Kreuzung		crossroads/crossing		

Sometimes the roads around a building site are affected by the construction work. This work may involve laying pipes, measuring out sites or work with a crane. Barriers have to be planned, put in place and have to be removed afterwards. So the planners have to work very carefully. They should consider the width of the traffic lanes which should be of at least 5.50m in width. To regulate the traffic near the building site, the planners have to consider some traffic signs. These traffic signs and markers can warn drivers and tell them what to do.

Here are some traffic signs you will find on roads but also on sites mostly in Great Britain where the traffic is on the left lane.

Table 1: Traffic signs and traffic markers

Signs	English meaning	Signs	English meaning
∇	Yield right of way		No overtaking
	Men working	0	All vehicles prohibited
STOP	Stop		Danger
	Road narrows		Rough surface
	Two-way traffic	Queues likely	Traffic jam Queues likely ahead
	Traffic signal ahead	2 m	Width limit. Width in meters. Often with a sign indicating the distance in meters.
70	Speed limit 70 km/h (42 mph)		No stopping or standing
	Roundabout, traffic circle		Traffic merging from left ahead
	Dead end street		Traffic cones
	Detour direction sign		Obstruction marker

activity

1 | Translate the following sentences into English.

Ich überquere die Straße und biege rechts ab. Du gehst am Kino vorbei. Er geht bis zur Kreuzung geradeaus. Wir biegen links ab. Gehe an der Schule vorbei und immer geradeaus.

2 Look at the map of the City of London (Figure 1). You are at Trafalgar Square. How do you get to

- a) Westminster Abbey?
- b) Piccadilly Circus?
- c) Wellington Arch in St. James Park?
- d) Selfridges?

Give your directions in English



Figure 1: In the heart of London

- **3** | a) Work together with a partner. Pick a place in the map, but don't tell your partner. Lead him to your secret place, starting from Trafalgar Square. Can he figure out your destination?
 - b) Now change roles. Let your partner lead you to his secret place.