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ENGLISH FOR CONSTRUCTION

ANH VĂN CHUYÊN NGÀNH XÂY DỰNG

KHOA XÂY DỰNG

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UNIT 1 TEAMWORK

- 1.1 Roles and responsibilities
- 1.1.1 Speaking
- a. Look at this illustration. Say what the people's jobs are and what they do

b. Work in pairs. Explain what your jobs is and what you do.

Example like this

I'm a ... I work for ...

My company ...

I'm responsible for

..



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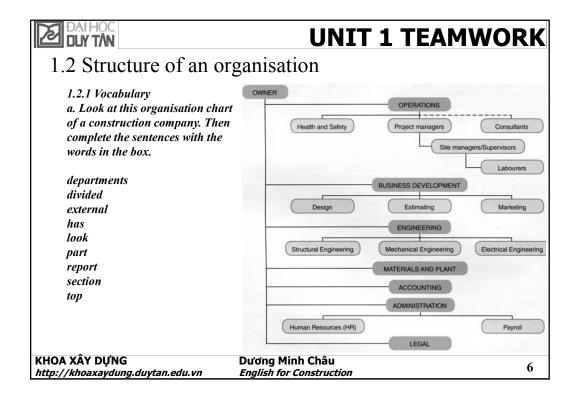
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UNIT 1 TEAMWOR	K
esponsibilities	
iptions with the people in the illustration in 1.1.1	
. I work for a concrete supplier. We deliver concrete to	0
all over the country.	
This is my apprentice.	
Today I'm painting a steel staircase.	
I control access to the site. I'm responsible to the site	
My company is responsible for the whole project.	
. We're visiting the site to ask some questions.	
ity guard; Driver; Reporters; Electrician; Painter	
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	riptions with the people in the illustration in 1.1.1 I work for a concrete supplier. We deliver concrete to all over the country. This is my apprentice. Today I'm painting a steel staircase. I control access to the site. I'm responsible to the site. My company is responsible for the whole project. We're visiting the site to ask some questions. ity guard; Driver; Reporters; Electrician; Painter

UNIT 1 TEAMWO	RK
1.1 Roles and responsibilities	
1.1.3 Listening	
Two reporters are visiting Martin Karp from Karp Construction. Lister	1
and complete the conversation below (track 02)	
M: So how can I help you?	
S: Well, we'd like some(1) information about the project.	
M: OK, I can ask my(2) to send you some details. We sen	ıt
out a press release a couple of weeks ago.	
S: Yes, we have a copy of that, thank you. We're interested in finding of	out
more information about the people working here. How many	
(3) do you have on site? What do they do? Where are they	7
from? Are they all local people?	
M: Oh, that depends on what's happening. As you can imagine, this is	
quite a(4) business, so we have different(5) a	nd
(6) coming in and out all the time.	
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DAI Học DUY TÂN	UNIT 1 TEAMWOR	RK
1.1 Role	es and responsibilities	
1.1.3 Lister		
S: OK.		
	answer your question, I'd say we usually have about 100 people on site. And they're m this area.	e
A: And you	u're in charge of the site?	
M: Well, ye	res, my company - actually, my father's company - is the(7) for the	
	e co-ordinate all the subcontractors and make sure things stay on schedule and stay	
	lget. I report to the(8), Sabina Tom.	
	and your father is Kasper Karp?	
M: Yes, tha	at's right. Sometimes, on bigger projects, we work in a consortium with other	
	(9) and(10).	
	you tell us something about?	
M: Excuse	e me, I've just seen Mr Lang. He's walking through the gate. He represents the	
 	(11), and I have a meeting with him and Anna Black in a few minutes' time	
S: Anna Bl		
	works for the(12), DKI Cement. They're supplying all the cement for the	
	st a moment, please. My assistant, Robert Lane, will answer any further questions y	ou
have.	·	
S and A: T	hank you.	
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DAI HOC DUY TÂN	UNI	T 1 TEAMWORK
1.2 Structure of an or	ganisation	
1. Our company has a simple s	tructure. At the	is the Kasper Karp, the owner.
2. There are seven	The department head	ds report to the owner.
3. Operations consists of a Hea	lth and Safety	and all the project managers.
4. The site managers and super	visors	directly to a project manager.
5. Business Development is _	into three	ee sections: Design, Estimating and
Marketing.		
6. Engineering also	three sections: Stra	actural, Mechanical and Electrical.
7. There are different depar	tments which	after materials and plant,
accounting, administration and lega	1.	
8. Sometimes we have	consultants to	help with special jobs. They are
not of the compa	ny.	
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ĐẠI HỌC DỦY TÂN	UNIT 1 TEAMWORK	<
1.2 Structure of	an organisation	
Assistants; clients, suppliers; technica A. My (1)support they need	is to make sure that all the project managers have the for (2)and equipment. We have a fleet of project managers and site managers use, and I also	
•	Tive people in my department, two lawyers and three andle all the (4)and claims.	
managers work for	works with all the other departments. The project me, but the people in the project teams come from the These teams change as the project goes through	
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Z	DAIHOC DUY TÂN
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UNIT 1 TEAMWORK

1.2 Structure of an organisation

- D. Our main role is to work with the clients and our management to (5).....the projects and work out costs. We also help to look for new clients.
- E. Our main task is to look after all the income and outgoings in the company. So we send out the bills to our (6).....and pay the (7).....
- F. We are the (8).....department. We do the maths and make sure that things work the way they should. We work a lot with Operations and also Business Development.
- G. We help to (9).....new staff and deal with training and development. We are also responsible for paying (10).....and paying wages and salaries.

Which departments do they belong to?

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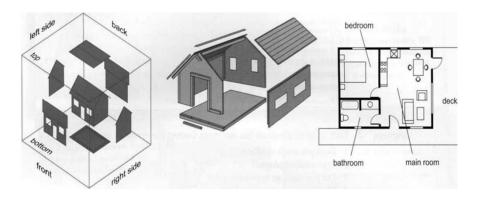


UNIT 2 DESIGN

2.1 Technical drawing

2.1.1 Reading

Look at three representations of a house. Name the types of drawing. Then read the text and check your answers.



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UNIT 2 DESIGN

2.1 Technical drawing

There are many ways of putting a 3D object into 2D. Orthographic projections can be found on all construction projects. These drawings show different views of the object, and can include elevations (a view from one side) and cross-sections (the view when you cut through an object). Another type of drawing shows exploded views, which are very useful for understanding the assembly of an object, in other words how it all fits together. A third type of drawing is the plan view, which allows us to see an object from above. A typical example of this is a floor plan. These are very useful when we want to look at the fittings in detail, in other words where objects like cookers and baths go.

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UNIT 2 DESIGN

2.1 Technical drawing

2.1.2 Speaking

Work in small groups. Discuss what other types of drawing are used in the construction industry.

2.1.3 Vocabulary

1	circle (n)	a	a solid or hollow shape that is round at one end, has sloping sides
			and has a point at the other end
2	I-shape (n)	b	a flat shape with three straight sides and three angles
3	oval (n)	c	has six flat sides with 90° angles and all of its faces are rectangles
4	square (n)	d	a shape, object or container with circular ends and long straight sides
5	triangle (n)	e	a completely round shape, like the letter 'O'
6	cone (n)	f	a solid object with six equal square sides
7	cube (n)	g	a shape like a circle, but wider in one direction than the other
8	cylinder (n)	h	a shape with four straight equal sides with 90° angles at the corners
9	rectangular prism (n)	i	a ball shape
10	sphere (n)	j	shaped in the form of the letter 'I'
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DAI HOC DUY TÂN	UNIT 2 DES	IGN
2.1 Technical drawing	9	
2.1.4 Listening		
Listen to an architect d	escribing the house. Write the	
dimensions you hear. (T	Track 05)	
1. total area		
2. main room, with the k	itchen	
3. bedroom		
4. bathroom		
5. height of rooms		
6. doors, not including fr	ames	
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DATHOC DUY TÂN	UNIT 2 DES	
2.1 Technical drav	ving	
2.1.5 Talking about d	imensions	
We write:	We say:	_
Imperial	<u> </u>	
12' x 16'	twelve foot (or feet) by sixteen foot (or feet)	-
560 sq ft (or sq ft)	five hundred and sixty square foot (or feet)	_
2'8"	two foot (or feet) eight inches	-
sq yd (or sq yd)	square yard (one square yard = three feet by three feet)	_
Metric		
1.34 mm	one point three four millimetres	
0.03 cm	zero (or nought) point oh three centimetres	_
25 m ²	twenty-five square metres	-
600 m3	Six hundred cubic metres	-
2.000 m	two thousand metres	-
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DAT TÂN	UNIT 2 DESIG
2.1 Technical di	rawing
2.1.5 Talking abou	at dimensions
We use plus or minus to ta	alk about tolerances:
28'± 1"	twenty-eight foot (or feet) plus or minus one inch
200 ± 1 mm	two hundreds millimetres plus or minus one millimetre
We use to to talk about sca	ales:
15:1	fifteen to one
20 x 30 = 600	Twenty multiple by (times) thirty is/equals 600
12/5	Twelve divided by five
πr^2	Pi r squared
2πr	Two pi r
$\sqrt{64} = 8$	The square root of sixty four is eight

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UNIT 2 DESIGN

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2.2 Estimates

2.2.1 Reading

a. Read the text about estimating. Do you agree with it? Estimating is at the heart of the construction industry. Estimating is about calculating time, materials, equipment costs and so on. If we overestimate, someone else gets the job. If we underestimate, we lose money. So it's very important that we get it right.

What is the surface area of this book? Estimate it and then measure to check. How much does it weigh?

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UNIT 2 DESIGN

2.2 Estimates

2.2.1 Reading

b. Read the passage below

"First we look at various documents, such as preliminary specifications, drawings, utility requirements and so on - anything which can give us relevant information. We then calculate our initial estimate. As the design moves on into specific details - for example, floor plans, fittings, - we get more accurate. This means we include cost of labour, materials and plant, subcontractor quotes, and overheads - that's things like legal fees, building permits, on site temporary construction, transport and so on. We even allow for stoppages due to weather. For example, if it snows, we can't work on roofs. And then we add the profit we expect. Finally, we produce an estimate that can be sent to you, the client. This is the bid price."

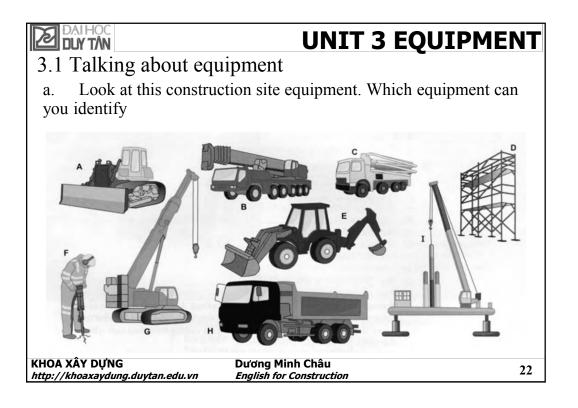
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2.2	Estimates 2.1 Reading e are some of the college	ocation	s from the passage	e. Match them and then underline them:	1
1	utility	a)	fees		
2	relevant	b)	estimate	Find words that are similar in meaning to:	
3	initial	c)	information	1. Equipment	
4	subcontractor	d)	quotes	2. Initial	
5	legal	e)	requirements	3. Precise	
6	building	f)	construction	4. indirect costs	
7	temporary	g)	permits	5. papers	
				6. customer	
				7. offer	
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UNIT 2 DESIGN
2.2 Estimates
2.2.2 Listening
Listen a conversation and complete it. (track 08)
A: We need to make some(1) to the original plans.
B: What? Why?
A: The new(2). He wants us to make some(3).
B: OK. So tell me what changes?
A: Well, first he wants to build a floor- to(4) aquarium
here, on the right. That means strengthening the floor.
B: OK. How about if I do some(5) and get back to you on
that?
A: Yes. I'm OK with that. Thank you. Now, the lighting
B: What about the lighting?
A: He wants more(6) lighting. Do you have any thoughts?
B: I know, why don't we remove these(7) walls?
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DUY TAN	UNIT 2 DESIGN	1				
2.2 Estima	2.2 Estimates					
2.2.2 Listeni	ing					
Listen a con	versation and complete it. (track 08)					
A: design, so that	Yes, good idea. He also wants more(8), a more open- plan fits in nicely. What do you think?					
B: workstation ca	Well, they are only(9) walls. But we'll need to run the bling through the floor. Maybe we need to raise the floor?					
A: wants better	Yes, that's a good point. I'll speak to him again about this. Next thing he (10). He thinks it's too noisy. Can you speak to Ahmed about that?					
B:	Sure.					
A:	OK, now the joinery.					
B:	What about the joinery?					
A: timber. It's mo	Well, the doors and windows stay the same, but he wants us to use FSC ore(11) friendly.					
B:	OK. How about if I speak to the joiners and see what they(12)?					
A:	OK. And we need to change the paint.					
B:	What about the paint?					
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DAIHOC DUY TÂN	UNIT 2 DESIGN				
2.2 Estin	nates				
2.2.2 Liste	ning				
Listen a co	nversation and complete it. (track 08)				
A:	He wants us to use natural paints. No VOCs.				
B:	Yes, that makes sense. But isn't that more(13)?				
A:	Yes, he knows. He's OK with that.				
B: OK. I'll organise that.					
A: And finally the air conditioning. He wants us to think about different systems, systems that are more energy- (14) if possible					
B:	OK. I'll speak to the HVAC people.				
A: them.	There's no need. I'm seeing them later today. I'll speak to				
B:	Thank you.				
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DAI HOC DUY TÂN	UNIT 3 EQUIPMENT			
3.1 Talking about equ	ipment			
b. Name equipment th	at:			
1us	es hydraulics.			
2has	s tracks.			
3us	3uses stabilisers.			
4lifts loads.				
5diş	digs trenches.			
6dr	ives piles into the ground.			
7br	eaks things.			
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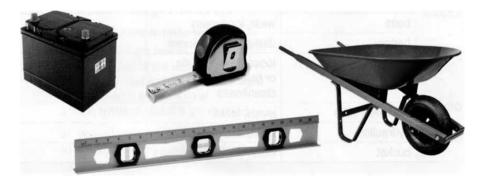
			UNIT 3 EQUIPMENT	
3.1 Talking about equipment			equipment	
		c. Match 1-10 wit	h the	eir meanings a-j
	1	track (n)	a	a large digging machine used for making roads, etc.
	2	stabiliser (n)	b	a powerful vehicle with a broad metal blade, used for moving earth and rocks, destroying buildings, etc.
	3	lift (v)	c	to move something or someone upwards into the air
	4	trench (n)	d	a continuous metal band that goes over the wheels of a vehicle allowing it to move over uneven ground
	5	bulldozer (n)	e	a long narrow hole dug into the surface of the ground
6 jackhammer (n) f a large powerful tool used by hand to break materials, e.g. the surface of a road, concrete		a large powerful tool used by hand to break hard materials, e.g. the surface of a road, concrete		
	7	pile driver (n)	g	a machine for pushing heavy posts into the ground
	8	backhoe (n)	h	a piece of equipment that helps make something steady
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DAIHOC DUY TÂN	UNIT 3 EQUIPM	ENT
3.1 Talking a	about equipment	
3.1.2 Listeni	ing	
a.Complete	the descriptions of construction site equipment.	
Put one work	rd in each gap. Then listen and check your answers. (Track	09)
1. This mach	hine isdriving piles into the so	oil.
2. This mach out of the gro	hine has a bucket which is usedscoop sound.	soil
3. This mach	hinelift heavy loads high in the air.	
4. You	this machine to move large amounts of	earth.
5. This mach	hineelectricity from petrol.	
6. This mack construction	hineused for transporting concrete to high parts a site.	s of a
7. This mack construction	hine isto transport people to high parts of a site.	a
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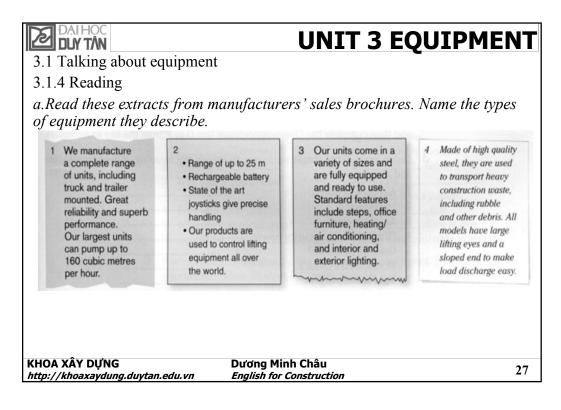
UNIT 3 EQUIPMENT

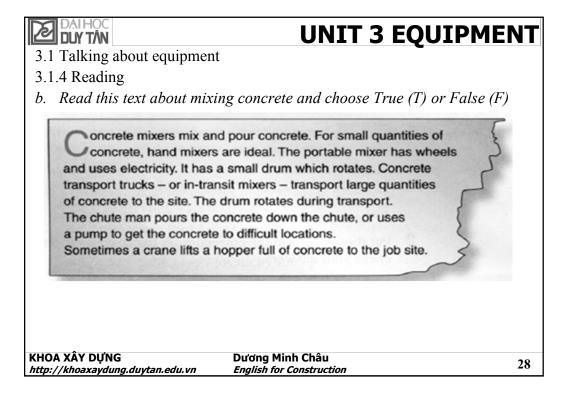
- 3.1 Talking about equipment
- 3.1.3 Speaking
- a. Work in small groups. Brainstorm different ways to use these items.



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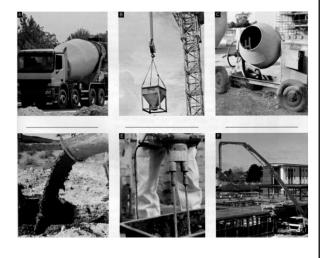






UNIT 3 EQUIPMENT

- 3.1 Talking about equipment
- 3.1.4 Reading
- 1. Concrete mixers mix and pour concrete.
- 2. For small quantities of concrete, transport trucks are ideal.
- 3. Portable mixers use electricity.
- 4. Cranes lift hoppers full of chute men to the job site.
- 5. In- transit mixers rotate during transport.



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DAIHOC DUY TÂN

UNIT 3 EQUIPMENT

- 3.2 Faults and repairs
- 3.2.1 Listening

Fill the blank with one word (Track 10)

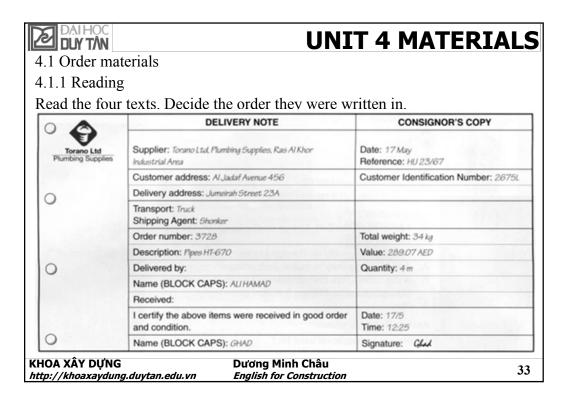
- A: Hi, Karl. You asked about the backhoe. A couple of things. One of the mirrors is
- B: I thought it got Can you put it on the?
- A: Yes, I've already done that. And one of the was loose. I tightened it.
- B: OK. Let's keep an eye on that. Anything else?
- A: Well, the first aid kit is and the fire extinguisher, too.
- B: What, again? That's the third time this month! I'll speak to the people.
- B: Oh? What's up?
- A: Look at this.

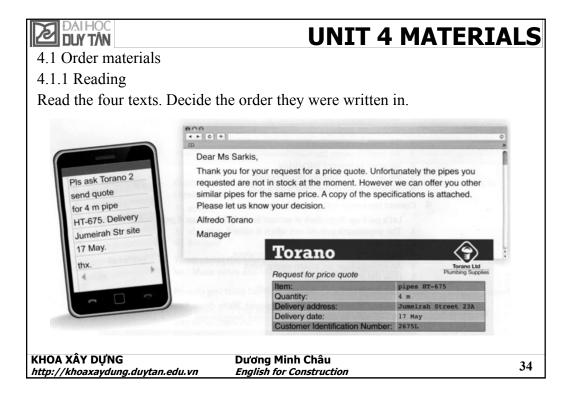
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UNIT 3 EQUIPME	NT		
3.2 Faults and repairs			
3.2.1 Listening			
B: Yes, that's too much Did you check the reservoir?			
A: Yes, it's nearly			
B: OK. Let's have a look Got a torch handy?			
A: Yes, just a second Here you are.			
B: Ah, I see the problem.			
A: What is it?			
B: The hose is here. Just behind the Can you see?			
A: Yes, I missed that, sorry. Shall I call Mohammed, then?			
B: No, Mohammed's off sick today. But Farid should be around somewhere.			
A: OK. I'll give him a call.			
B: Tell Farid it's We need the backhoe to dig those trenches.			
A: Yes, OK. I'm on it now.			
3.2.2 Speaking			
What's the difference between maintain and repair? Give examples			
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UNIT 3 EQUIPMENT 3.2 Faults and repairs 3.2.3 Reading Read the conversation below, fill the blanks with words: broken; mess; key plate; wiring; leaking; replacing; welding; [A = Supervisor B = John C = Sandra]A: OK, listen up. We need to sort out the office trailer. It's a bit of a...... Here's what I want you to do. First of all, the roof is John, can you look at that? B: Sure, no problem. I'll fix it this afternoon, OK? A: Yes, that's fine, thanks. Secondly, one of the steps is broken. It needs Sandra? C: OK. I'll do that right away. It should take me an hour, tops. A: Good. Can you look at the jack as well, please? It looks like it needs some grease. It's a two-minute job C: Sure. A: Next, the electrics. Some of theis damaged, so there are no lights. And 1 don't think the air conditioning is working either. I'll ask the HVAC people to have a look at those. Leave that with me. And John, can you do those after the roof? B: Just to clarify - is it just the lock that needs replacing or the handle andas well? A: Just the lock. There's a broken key in it. It's a mortise lock. B: OK, no problem. A: Great Thanks, everyone. Any more questions ...? KHOA XÂY DỤNG Dương Minh Châu 32 http://khoaxaydung.duytan.edu.vn English for Construction





4.1 Order materials 4.1.2 Vocabulary	UNIT 4 MATERIALS
1	ms in 1-7 with their meanings a-g. Use the texts in 4.1.1
1 BLOCK CAPS	a) a document from the seller to the buyer, giving details of a delivery
2 price quote	b) ask for
3 in stock	c) information about how much the goods cost
4 FAQs	d) a person's name, written in his/her own handwriting
5 signature	e) CAPITAL LETTERS
6 delivery note	f) Frequently Asked Questions
7 request	g) The seller has the items in his store.
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	UNIT 4 MATERIALS					
4.1 O	4.1 Order materials					
4.1.2	Vocabulary					
b. words	Find words in the texts in 4.1.1 that are similar in meaning to these					
1.	Goods					
2.	number					
3.	value					
4.	seller					
5.	lorry					
6.	client					
7.	details					
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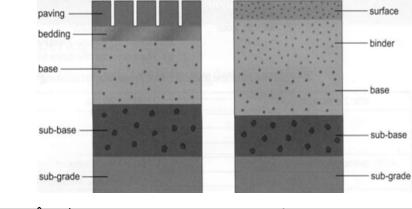


UNIT 4 MATERIALS

4.2 Properties of materials

4.2.1 Speaking

Work in pairs. Imagine you are going to build a driveway to a house. Think about the materials and the different layers you will need. Give reasons for your choices. Use these sketches to help you.



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UNIT 4 MATERIALS

4.2 Properties of materials

4.2.2 Reading

Read this text and answer these questions:

Concrete is a mixture of gravel, sand, cement and water, which has been densely compacted and left to mature. It is very strong in compression and is durable. As it cracks when stretches, it is designed to contain rebars in it. This reinforced concrete is the most versatile and cheapest structural material available. It is even more effective if the steel in the concrete is tightened up or pre- stressed.

The concrete frame is made by pouring the wet mixture into mould and leaving it to harden. If the process is carried out in a factory, the concrete is called precast. If the moulds are used on the site, it is called in situ concrete.

- 1. What kinds of raw materials can be used to make concrete?
- 2. What are advantages of concrete?
- 3. In what case can concrete crack and how to solve that?
- 4. How to make concrete more effective?
- 5. How many ways are applied for making concrete? What are they?

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DAI HOC DUY TÂN	UNIT 4 MATERIALS
4.2 Properties of materials	
4.2.3 Listening	
a. Fill the blank with wo	ords: (track 13)
There are basically two type	es of driveway. You can have a surface,
like stones or concrete or as	phalt, and you can have a surface of
aggregate, like gravel or	
Each type needs layers of di	fferent materials underneath the surface,
and the materials you use fo	r these layers have different properties.
So, for example, if you wan	t paving stones, you need a bedding layer
underneath, which is norma	llyor grit. If the sand is too fine, the
bedding layer will be too so	ft. Under that you may have a base layer, and
underneath that you may ha	ve another layer, called a sub-base.
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UNIT 4 MATERIALS
4.2 Properties of materials
4.2.3 Listening
This sub-base needs to beto take the weight of vehicles, like
family cars. If this sub-base is too weak, the driveway will subside, or sink.
These two layers will be aggregates of different sizes. The larger
are at the bottom. The sub-base sits on the sub-grade, in other
words on the On the outside you have edgings.
The edgings are often stone or Some edgings, like in children's
playgrounds, can be elastic. On driveways, the edgings need to be strong
enough to hold the paving together. And they need to be tough.
Brittle edgings are no good - they break or chip easily. Edgings also need to
look attractive. So it's important to think about things like colour and finish,
otherwise the finished driveway may look unattractive. You also need to take
into account. Will the texture be rough or smooth? And then you
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