Teaching Technical English

Navot Laufer

Pearson

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Why technical English

"I know the grammar,
but I cannot say what I need for my work".

"I can order in restaurant,
but I cannot order tools for this project".

"I can read and understand,
but when someone speaks English to me I am
lost".

"I tried many times,
but I never learned English".

Motivation

Possibly the most important factor in learning.
Motivation is enhanced by:

- Needs
- Interest
- Relevance
- Success

Background

Coursebooks:

- Few technical English books.
- Almost none at elementary level.

Teachers often avoid technical English –

- "I don't understand technical things, how can I teach them."
- "What if they ask me what is the English word for a tool I've never heard of even in Czech?"

Issues often neglected :

- Who are the students?
- Learning history
- Needs
- Theory

The result

Unsuitable material is used

Loss of motivation

and

Courses fail to meet goals – improving the students' communication skills.

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What is technical English?

Skills

50% of using a language are receptive skills:

Listening

Reading

All three must work simultaneously.

Functional language

Asking for information

Describing a product or a process

Describing work

Dealing with problems

Giving feedback

It is the English students need in order to fulfill their tasks at work.

Vocabulary

General

Vocabulary that is used across all industries and professions. Numbers, units, shapes, tools, dimensions, values and deviation, measurement and location.

Industry specific terms

Vocabulary that is used only or mainly in one industry. Machines and tools, components, processes, materials.

Sixteen millimeter measured on the cut piece
Sixty millimeter measured on the cutted piece

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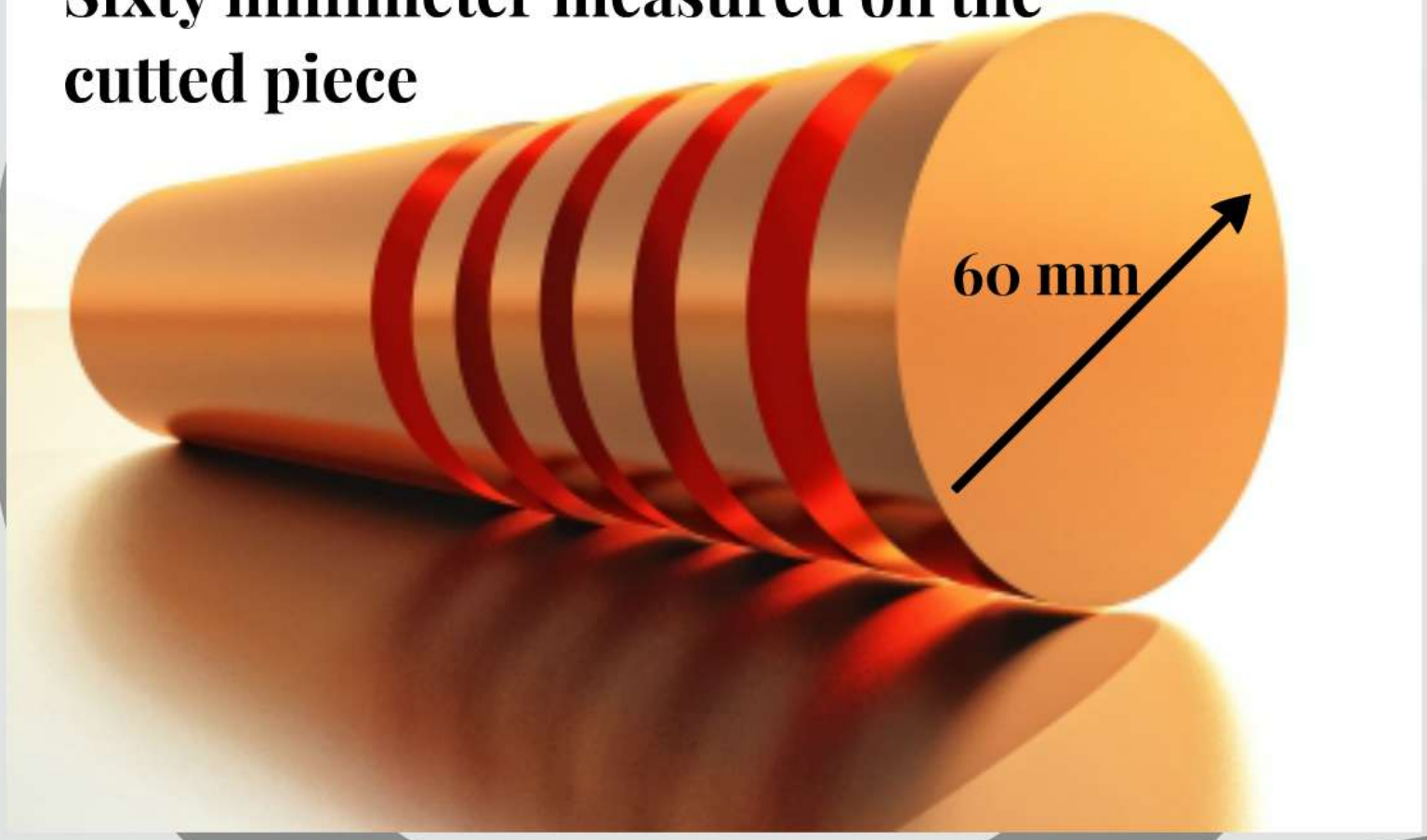

Image courtesy of dan at FreeDigitalPhotos.net

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Functional language

Asking for information

Describing a product or a process

Describing work

Dealing with problems

Giving instructions

Skills

50% of using a language are receptive skills:

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Main considerations

Who

What

How

- What is their job? What does that mean?
- What do they need English for? What can they do with English now?
- What are their interests outside work?
- English learning history

Main considerations

Who

What

How

Selection

Careful needs analysis

Plant / office tours

What are you working on today?

Be involved in the company

Main considerations

Who

What

How

Focus on vocaulary

Vocabulary **9** What do the following mean?

km + g in kW kg L V
A °C rpm C km/h gal
m £ – ft € W

Example: km = kilometre

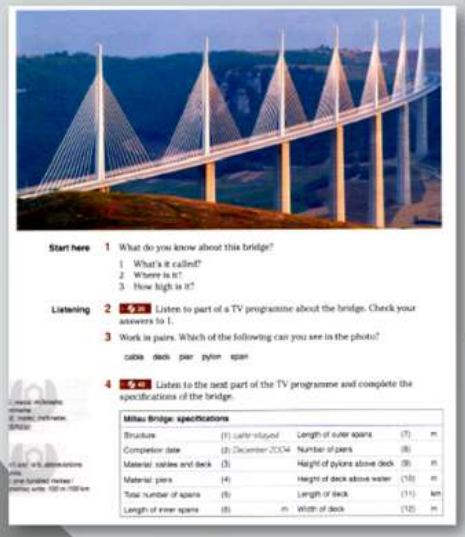
Listening **10** 07 Listen and write the numbers in the correct space.

1	_____ °C	5	_____ °	9	_____ W
2	_____ A	6	_____ km/h	10	_____ V
3	_____ km	7	_____ rpm	11	_____ €
4	_____ m	8	_____ kg	12	_____ L

4 Match the sports measuring instruments with the other items in the table.

Measuring instrument	What is measured	Unit of measurement	Abbreviation
1 barometer	distance (cycling)	metres	km/h
2 tachometer	speed	seconds	m
3 odometer	height (above sea level)	beats per second	km
4 altimeter	rate of heart beat	kilopascals	bps
5 stop watch	weight	watts	s
6 heart rate monitor	power output	kilograms	W
7 power monitor	pressure	kilometres per hour	kPa
8 scales	time	kilometres	kg

Numbers are paramount



Start here 1 What do you know about this bridge?

1 What's it called?
2 Where is it?
3 How high is it?

Listening 2 Listen to part of a TV programme about the bridge. Check your answers to 1.

3 Work in pairs. Which of the following can you see in the photo?

cable deck pier pylon span

4 Listen to the next part of the TV programme and complete the specifications of the bridge.

Millau Bridge: specifications					
Structure	(1) cable-stayed	Length of outer spans	(7)	m	
Completion date	(2) December 2004	Number of piers	(8)		
Material: cables and deck	(3)	Height of pylons above deck	(9)	m	
Material: piers	(4)	Height of deck above water	(10)	m	
Total number of spans	(5)	Length of deck	(11)	km	
Length of inner spans	(6) m	Width of deck	(12)	m	

4 Work in pairs. Leave phone messages.

Student A. Turn to page 112.

Student B:

1 Leave phone messages for Student A. Use the business cards below. Spell out the name of the person and the company.

Example:
Hello. This is John West. That's W-E-S-T. Manager of Kesko. That's K-E-S-K-O. My phone number is 00 44 1224 867 4490. Please call me back.

STELLA MARITIMA
Pepino Turi
Engineer
00 39 06 625 500

NIKOMATIC
Kazuo Suzuki
Technician
00 81 3 3388 6124

Komet
Stefan Gross
Designer
00 49 711 845 8833

2 Change roles. Listen to Student A and make notes like this:

Call from John West, Manager
Company: Kesko
Phone number: 00 44 1224 867 4490
Please call him back.

https//www.youtube.com/watch?v=UgWtJzPa-Rs

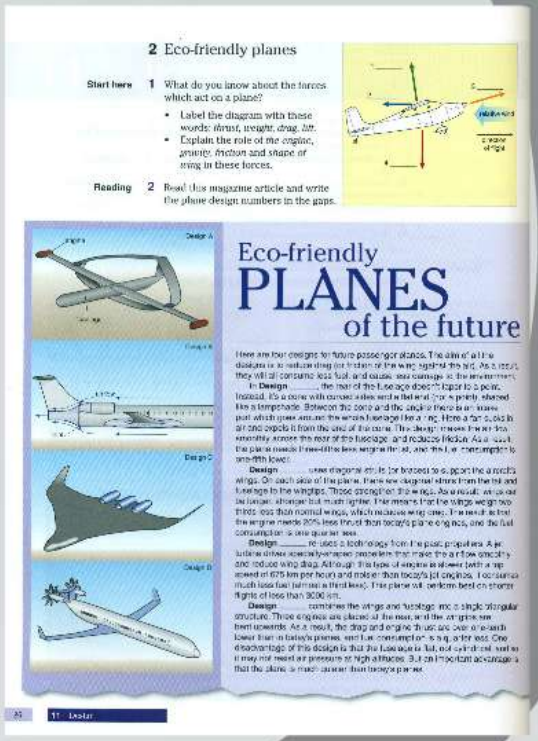
Technical English I

by David Bonamy

The shop floor is the best classroom

Watch videos and discus them

https//www.youtube.com/watch?v=cZ1WYEP1Ag8



2 Eco-friendly planes

Start here 1 What do you know about the forces which act on a plane?

- Label the diagram with these words: *thrust, weight, drag, lift*.
- Explain the role of *the engine, gravity, friction* and *shape of wing* in these forces.

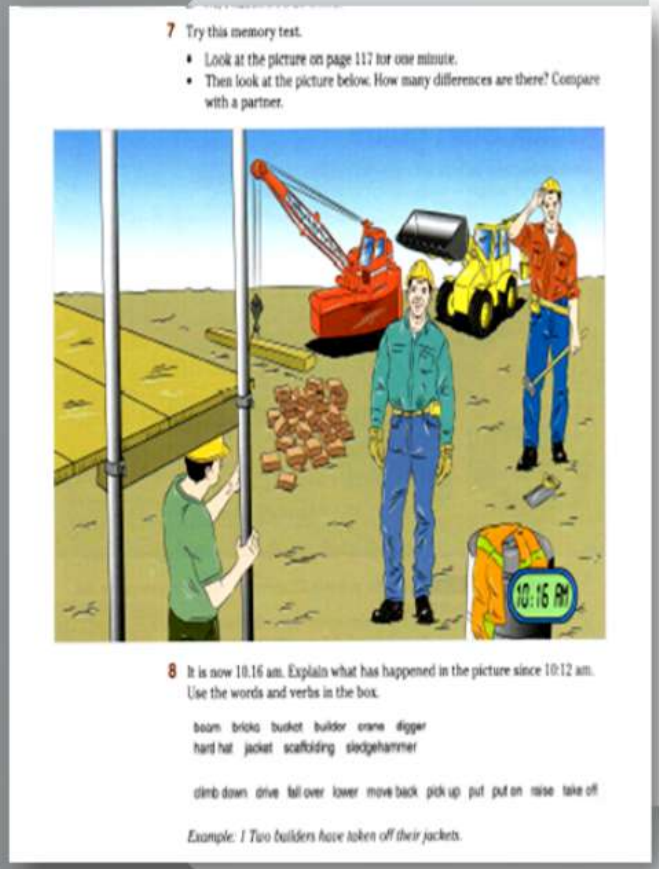
Reading 2 Read this magazine article and write the plane design numbers in the gaps.

Eco-friendly
PLANES
of the future

Technical English 2

by David Bonamy

Apply to reality



7 Try this memory test.

- Look at the picture on page 117 for one minute.
- Then look at the picture below. How many differences are there? Compare with a partner.

8 It is now 10.16 am. Explain what has happened in the picture since 10:12 am. Use the words and verbs in the box.

boom bricks bucket builder crane digger
hard hat jacket scaffolding sledgehammer

climb down drive fall over lower move back pick up put put on raise take off

Example: 1 Two builders have taken off their jackets.

The safety signs below follow the ISO international standard.
This standard is used in the EU because it has many different languages.
There are three types of safety sign:

A B

- **WARNING SIGNS.** These signs warn you about a danger. They say things like this: *Warning. Danger. Be careful. Look out. There is a danger or hazard here. You might injure yourself.* The signs are yellow and black in colour and triangular in shape. Here are some examples:
  1 Warning. Poison: see (1) _C_
  2 Danger. Fire hazard here: see (2) _____

C D

- **PROHIBITION SIGNS.** These signs prohibit an action. They say: *Do not do this. You must not do this. Never do this.* The signs are red, white and black in colour and round in shape. Here are some examples:
  3 You must not lift this with a book: see (3) _____
  4 Never take the guard off this machine: see (4) _____

E F

- **MANDATORY ACTION SIGNS.** These signs order you to do something. They say: *Do this. You must do this. Always do this.* These signs are blue and white in colour, and round in shape. Here are some examples:
  5 Always read the manual before you service this machine: see (5) _____
  6 You must use the guard on this circular saw: see (6) _____

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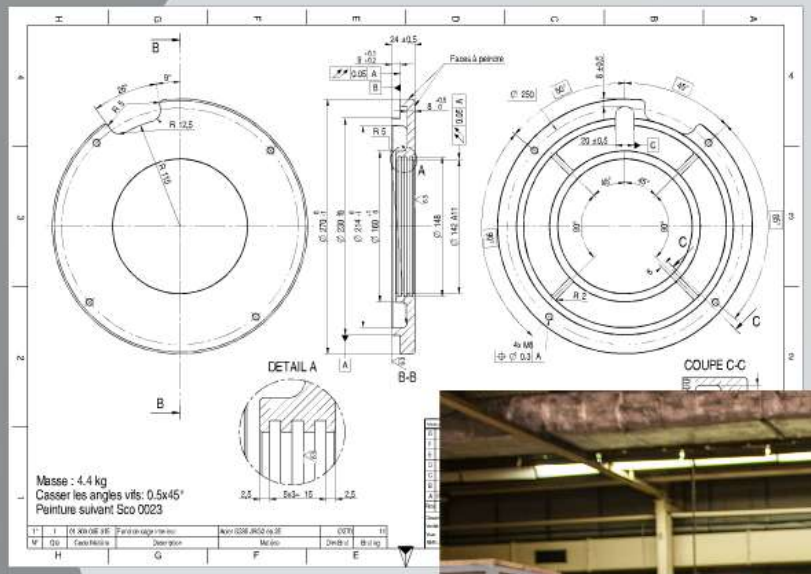
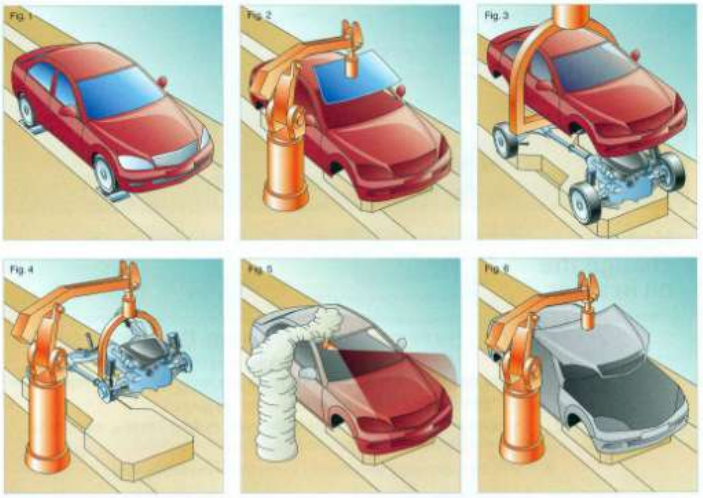
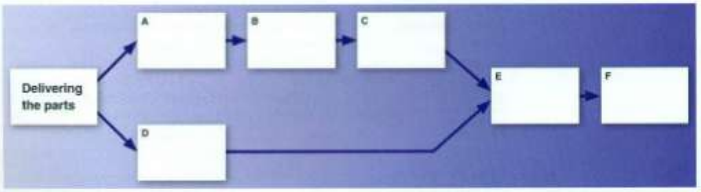
Use drawings



Think like a technician (or show interest :)

wrong order. Write the figure numbers in the correct boxes in the flow chart.





3 Make captions for the six photos with the verbs and nouns in the box. Use verbs ending in ***-ing***.

add attach install paint test weld body chassis finished car parts

Example: Fig 6. Welding the body panels to the body frame.

28 4 Processes

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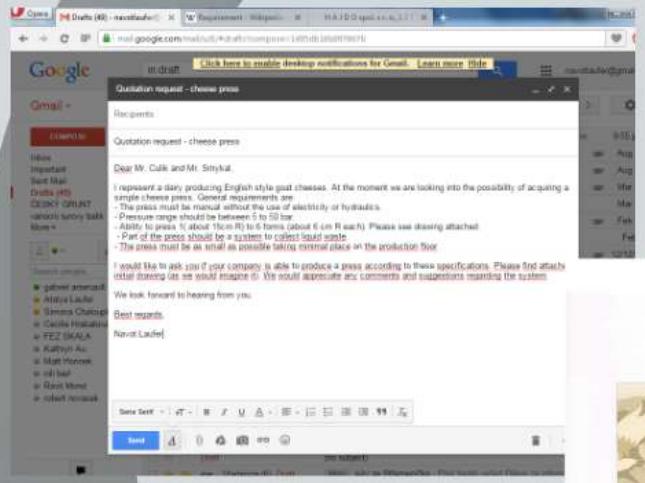
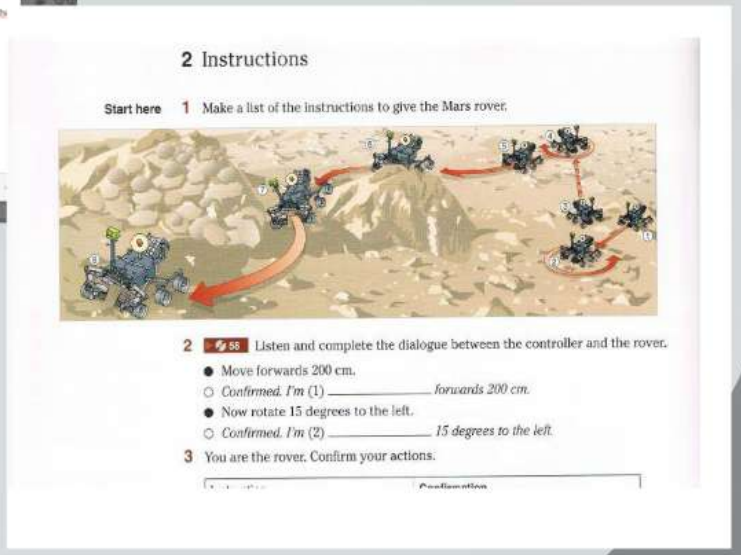
Role-playing





2 Instructions

Start here **1** Make a list of the instructions to give the Mars rover.

2 55 Listen and complete the dialogue between the controller and the rover.

- Move forwards 200 cm.
- *Confirmed. I'm* (1) _____ *forwards 200 cm.*
- Now rotate 15 degrees to the left.
- *Confirmed. I'm* (2) _____ *15 degrees to the left.*

3 You are the rover. Confirm your actions.

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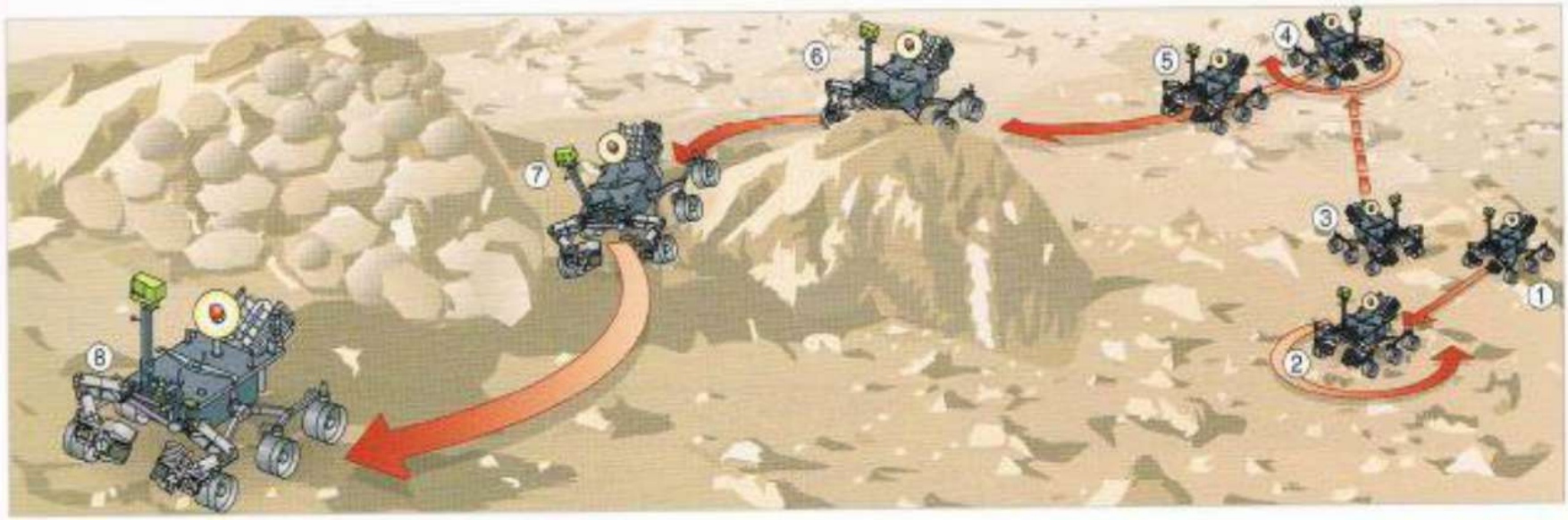

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Instruction	Confirmation

Opera | Drafts (49) - navotlaufer@ | Requirement - Wikipedia, | H A J D O spol. s r. o., L I T

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Cecilie Hrabalova
FEZ SKALA
Kathryn Au
Matt Horinek
nili berl
Ravit Mond
robert novacek

Quotation request - cheese press

Recipients

Quotation request - cheese press

Dear Mr. Culik and Mr. Smykal,

I represent a dairy producing English style goat cheeses. At the moment we are looking into the possibility of acquiring a simple cheese press. General requirements are:
- The press must be manual without the use of electricity or hydraulics.
- Pressure range should be between 5 to 50 bar.
- Ability to press 1(about 15cm R) to 6 forms (about 6 cm R each). Please see drawing attached.
- Part of the press should be a system to collect liquid waste.
- The press must be as small as possible taking minimal place on the production floor.

I would like to ask you if your company is able to produce a press according to these specifications. Please find attache initial drawing (as we would imagine it). We would appreciate any comments and suggestions regarding the system.

We look forward to hearing from you.

Best regards,

Navot Laufer

Sans Serif

Send

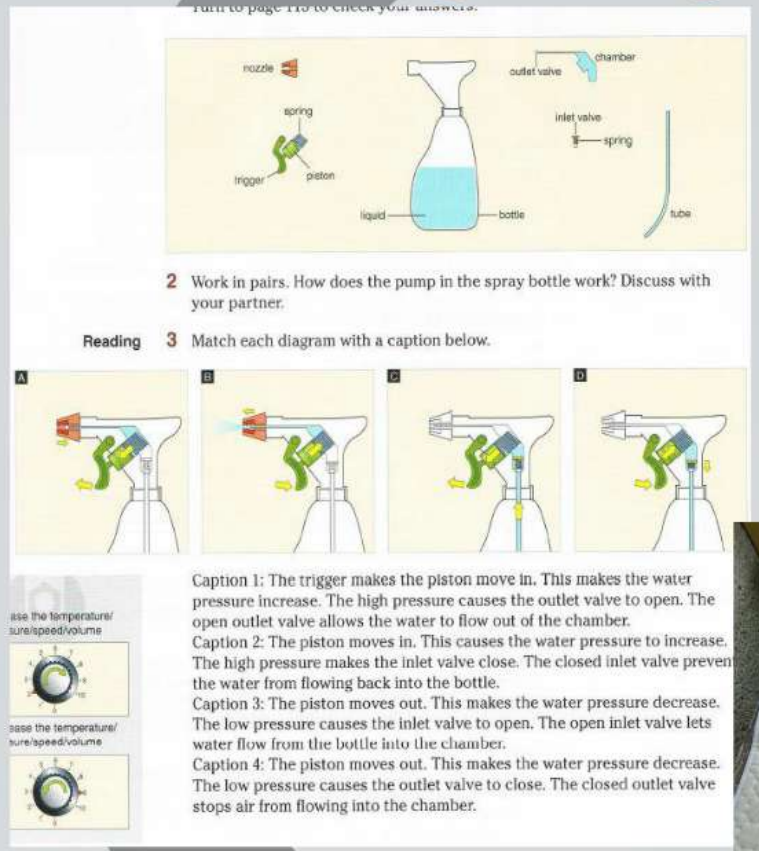
re 9:55 p
Aug
Aug
Mar
Mar
Feb
Feb
12/12/

Draft (no subject)

me Vladimíra (6) Draft Inbox sýry ze Střemeníčka - Přeji hezký večer! Děkuji za inform

Prezi

Bring things into lessons



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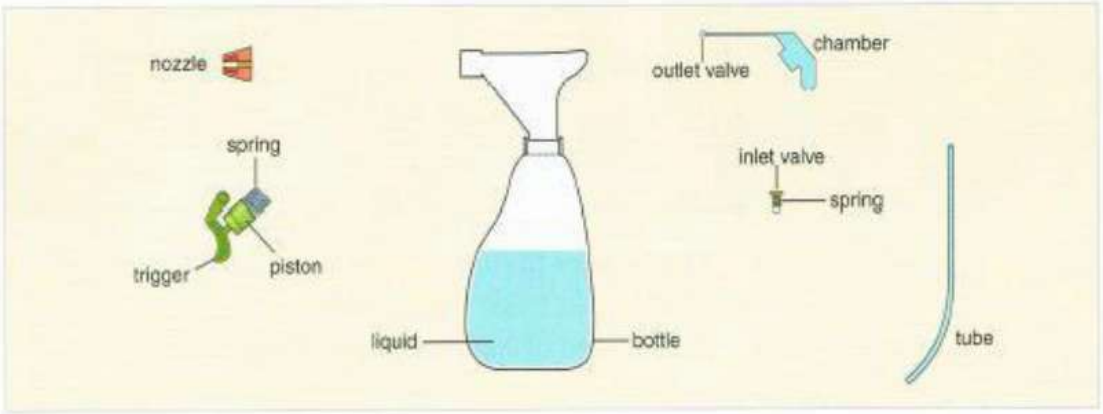
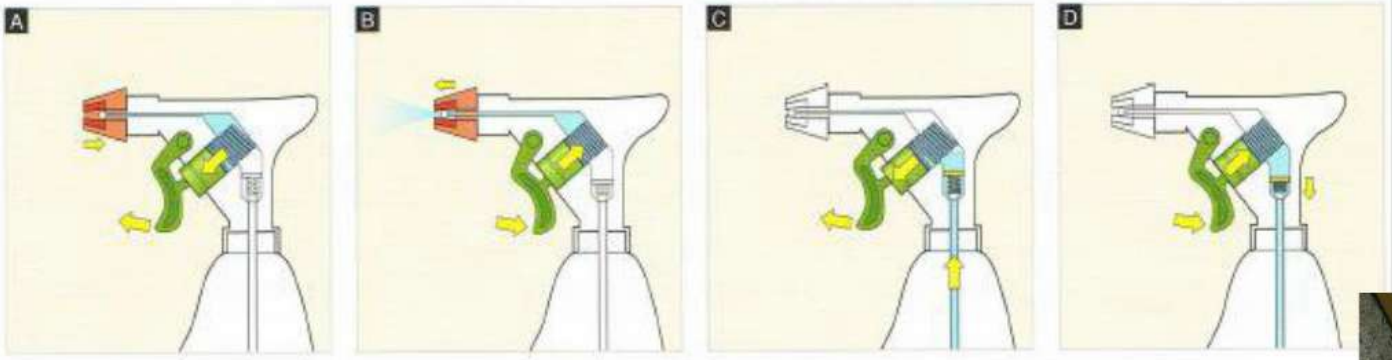
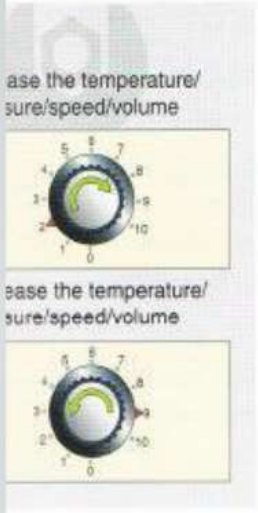
Turn to page 113 to check your answers.



2 Work in pairs. How does the pump in the spray bottle work? Discuss with your partner.

Reading **3** Match each diagram with a caption below.

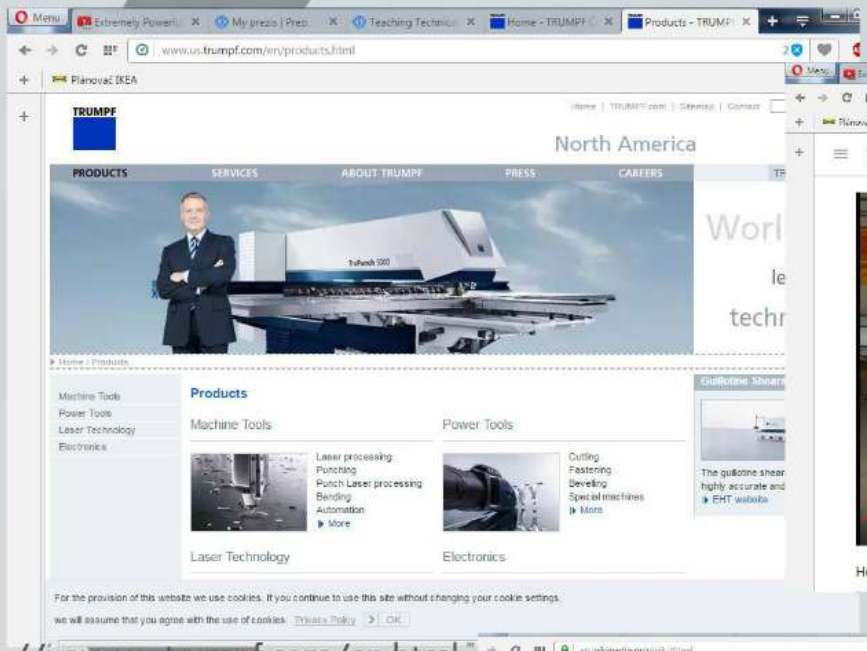




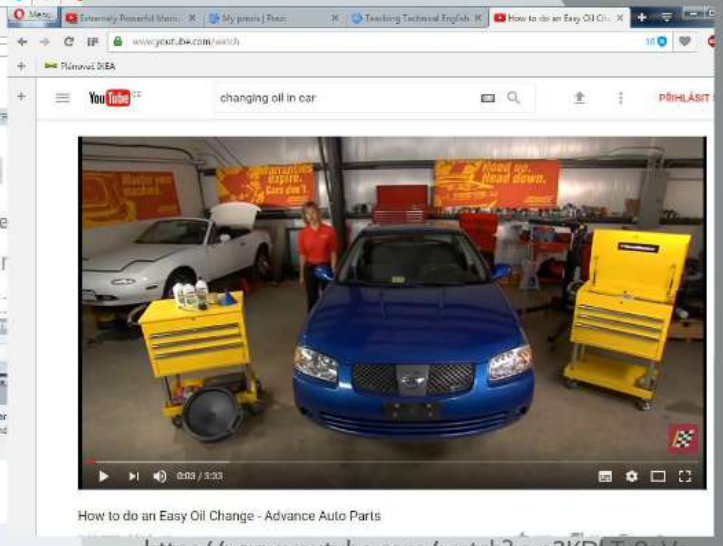
Caption 1: The trigger makes the piston move in. This makes the water pressure increase. The high pressure causes the outlet valve to open. The open outlet valve allows the water to flow out of the chamber.
Caption 2: The piston moves in. This causes the water pressure to increase. The high pressure makes the inlet valve close. The closed inlet valve preven the water from flowing back into the bottle.
Caption 3: The piston moves out. This makes the water pressure decrease. The low pressure causes the inlet valve to open. The open inlet valve lets water flow from the bottle into the chamber.
Caption 4: The piston moves out. This makes the water pressure decrease. The low pressure causes the outlet valve to close. The closed outlet valve stops air from flowing into the chamber.

Technical English is practical

Use internet



http://www.us.trumpf.com/en.html



https//www.youtube.com/watch?v=n2KDbTx9gVo

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The guillotine shear
highly accurate and
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changing oil in car

PŘIHLÁSIT

How to do an Easy Oil Change - Advance Auto Parts

Prezi

Steel

From Wikipedia, the free encyclopedia

For other uses, see Steel (disambiguation).
"Steel worker" redirects here. For other uses, see Steel worker (disambiguation).

Steel is an alloy of iron and other elements, primarily carbon, that is widely used in construction and other applications because of its high tensile strength and low cost. Steel's base metal is iron, which is able to take on two crystalline forms (allotropic forms), body centered cubic and face centered cubic (FCC), depending on its temperature. It is the interaction of those allotropes with the alloying elements, primarily carbon, that gives steel and cast iron their range of unique properties. In the body-centred cubic arrangement, there is an iron atom in the centre of each cube, and in the face-centred cubic, there is one at the center of each of the six faces of the cube. Carbon, other elements, and inclusions within iron act as hardening agents that prevent the movement of dislocations that otherwise occur in the crystal lattices of iron atoms.

The carbon in typical steel alloys may contribute up to 2.1% of its weight. Varying the amount of alloying elements, their presence in the steel either as solute elements, or as precipitated phases, retards the movement of those dislocations that make iron comparatively ductile and controls its qualities such as the hardness, ductility,

Steels and other iron–carbon alloy phases

Ferrite · Austenite · Cementite · Graphite · Martensite

Microstructures

Spheroidite · Pearlite · Bainite · Ledeburite · Tempered martensite · Widmanstatten structures

Classes

Crucible steel · Carbon steel · Spring steel · Alloy steel · Maraging steel · Stainless steel · Weathering steel · Tool steel

Thank you for your attention.

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Pearson