Watchmaking

Teacher's Guide

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Contents

Introductory notes

Course goals

The material provided has specific and limited goals. The main focus is lexis related to specific technical areas and fields of professional competence. The lexis is presented in a range of communicative contexts. These are mainly transactional dialogues to provide listening practice of real-world language use, but also include reading texts from technical manuals and the like. These texts - both aural and written - contain many highly valuable examples of functional language. For anyone undertaking a career in these fields familiarity with a range of technical lexis is necessary but not by itself sufficient: as well as understanding the technical terms a worker must interact and cooperate with other workers, managers and clients. Therefore the notes provided for each lesson will include ideas on how to exploit the texts and examples for communicative as well as linguistic purposes.

Dealing with receptive skills

Pre-text work: activating schemata

Outside the classroom it is very rare for us to listen to or read a text without any kind of preparation. Generally, we know quite a lot about what we are going to hear or read: we know where it comes from, why it was written, what style to expect and how much information will be included, for example. We also have a purpose for our listening or reading. Perhaps we are looking for some particular information or perhaps we want to check if something we believe is actually correct. All of this helps us to read efficiently. Therefore it is important to set texts up in a similar way in class, using visual or other stimuli and allowing students time to build expectations and reflect on what answers they expect. The better we can generate interest in the topic and encourage the students to form expectations with regard to the text, the more effective our receptive skills work is likely to be.

Work on the text: task-types and sequencing

Tasks move from the very global or very specific to the more detailed. Initial comprehension tasks do not require the students to understand everything in the text, but rather serve to introduce the students to it. They do, however, still represent

real-world practice, as the tasks reflect the way that we approach texts outside the classroom: getting a general impression, for example, or searching for a particular piece of information.

Post-text work: follow-ups and extensions

This can be linguistic (grammar or vocabulary) or skills (especially productive skills - speaking or writing). Not all texts offer potential for fluency, of course, but those that do can be usefully exploited through performance (acting out dialogues with a partner, for example).

The role of lexis

Lexis forms the main focus of the material. Each lesson introduces a range of technical terms, from individual items of vocabulary to fixed phrases of varying length and complexity. It is important to consider how these items will be used by the learners. Some items may be intended only for **passive knowledge**, which is to say the learners will need only to recognise and understand them when encountered in technical instruction manuals or parts catalogues, or when given instructions referencing them. Other items may be worth teaching for **active use** - i.e. the learners will need not only to recognise and understand them, but also to use them in communicative interactions and, therefore, to some degree manipulate them. Our awareness of this will determine how we teach the items and how much detail the learners should include in their notes.

Items of vocabulary and lexical phrases do not exist in isolation. Where there are common **collocational patterns** these should be highlighted to the learners, especially in the case of items for active use. In the learner's material these patterns are not explicitly identified but they will be listed in this guide. Very often this will not require the learning of any additional language items by the learner, as many collocating verbs and adjective are very simple ('do', 'make', 'have', 'big', 'major' etc). Highlighting the existence of these patterns, including them in the practice activities in the lessons and encouraging learners to **record them in their notes** are very valuable habits and this guide will include reminders and suggestions as to when and how to incorporate such work.

When teaching lexis it is also important to distinguish between **specific and general terms**. Learners need to be aware of how widely a given term is used. A term may

have a limited technical meaning and be used only in a narrow range of contexts, such as in conversations between specialists, or it may be a term which can be used in communication with non-specialists in more everyday situations. Some terms, of course, may have multiple meanings so that they have one meaning in a technical conversation and another meaning outside of this. An example would be the term 'aggregate' which to a specialist may have one meaning (*a tractor connected to another piece of agricultural equipment*) but which to a layman may mean something entirely different (*the total score of a player or team in a fixture comprising more than one game or round*). Ensuring that learners are aware of these differences in usage is important to avoid potential problems outside the classroom later on.

One way to highlight collocations in a student-centred and engaging way, while still maintaining a clear focus on the items you wish to deal with, is to write up part of the collocation on the board and ask the students to find the collocating parts. For example, if the phrase is 'it was pouring with rain' then you might write up 'rain' on the board and ask the students to find the phrase with 'rain' in the text. Once they have done this you can establish if the phrase is a fixed expression or allows for some manipulation.

Teaching functional language

Functional language by its nature derives much of its meaning from the context in which it is used and therefore it is crucial to exploit the context when introducing such language, and to ensure that the intentions of the speakers are clearly identified. While some functional expressions can usefully be analysed in terms of generative grammatical structures, most are best considered fixed or semi-fixed expressions and dealt with and recorded accordingly. This guide will list the most useful functional exponents occurring in each lesson, allowing the teacher to select according to the particular needs of the particular group.

When dealing with functional language the bare meaning is important but not always sufficient. Appropriacy is also an important aspect. Remember to establish whether a particular exponent is formal, informal or neutral, and in what contexts it may be used. As with collocations, make sure the students recognise which parts of the item are fixed or semi-fixed and which can be manipulated or changed. For example:

'*How do you do?*' is a fixed expression which is rarely changed.

'*How are you doing?'* is an expression which can be manipulated to a degree. For example, we can say '*How are we/they doing?*', '*How is he/she doing?*', '*How are you coping?*' and '*How are you managing?*' and so on.

Dealing with pronunciation

Broadly speaking, we can identify three aspects of pronunciation teaching:

- during language introduction and clarification
- prior to speaking tasks to facilitate production
- during feedback for remedial or corrective purposes

These will, obviously, affect the way we go about pronunciation work. During language introduction we may highlight aspects of the target language which we predict will be challenging, but we provide a model of the **whole item or structure**, with an emphasis on **accuracy**.

Fluency is much more the focus when dealing with pronunciation before speaking tasks. For this reason it is important to model and drill the language **in context** - putting the phrase in a short sentence, for example, rather than dealing with it in isolation.

With remedial pronunciation work the aim is to **raise awareness** of the error and demonstrate the correct form so it is helpful to **isolate and highlight the specific problem**, exaggerating it for clarity's sake.

Drilling is quite a mechanical activity, having its roots in behaviourist habit formation. To avoid losing the students' focus it is important to keep the energy level and the pace high, and having a clear drilling routine at your fingertips, so to speak, is the simplest way to achieve this. Here is one such pattern:

1. THE TEACHER MODELS THE TARGET LANGUAGE THREE TIMES
2. THE STUDENTS REPEAT CHORALLY
3. THE STUDENTS REPEAT CHORALLY AGAIN
4. THE TEACHER HIGHLIGHTS KEY ASPECTS OF THE TARGET LANGUAGE
5. THE STUDENTS REPEAT CHORALLY

6. THE TEACHER NOMINATES INDIVIDUAL STUDENTS TO REPEAT INDIVIDUALLY WITH CORRECTION AS APPROPRIATE
7. THE STUDENTS REPEAT CHORALLY TO FINISH

The entire drill should be conducted at pace without allowing the energy levels to fall, which means that we move from stage to stage without hesitation. Effectively it can become something akin to a rap with the only pauses when correction is required. The students may repeat the target language five or six times in total in the space of less that two minutes, giving them intense practice without boredom and loss of motivation. Within the drill the teacher may use various techniques - highlighting with gestures, showing contractions with fingers, asking students to identify particular words in the phrase and so on - and after the drill the teacher may choose to follow up with some repetition in pairs to allow monitoring. It is important to remember that no drill can guarantee perfect pronunciation; it is a process which takes time and which tends towards gradual incremental improvement rather than leaps forward.

The role of grammar

Grammatical structures are not the main focus of the material. That is not to say that they have no place, but rather that they should be introduced where a focus on the structure is likely to be of communicative value to the learner. Though, as said above, functional exponents are generally most usefully taught as expressions, it can sometimes be beneficial to highlight generative grammar patterns and this guide will highlight where this is the case.

Recycling and revision

The material includes recycling and revision tasks at the end of each module and this guide contains quizzes after each second module and an end-of-course test. Of course, more recycling can be incorporated, particularly of vocabulary, collocations and functional language. One way to do this is with a revision activity at the start of each lesson. Some possibilities requiring little preparation:

Back to the board - The students work in pairs or groups. One person sits so that they cannot see the board. The teacher writes a word or phrase on the board and each group tries to make their colleague say the word by defining it or providing examples. This can be done as a competitive game.

Pairs word race - Put the students into two groups. Each group chooses five words from the last lesson(s). The students pair up with a partner from the other group and take turns trying to make their partner say each word on their list using definitions or examples. Again, this can be a competitive task.

Hangman - This can be played with the group as a whole. If the students guess the word then they win; if they do not then the teacher wins.

Wordsearch - A wordsearch is easy to make and can be a useful way to revise items taught previously.

Spoken gapped texts - You can use a text from the previous lesson or use one from the beginning of the lesson at the end of it. Simply read the text out replacing certain words with ‘something’ and ask the students to provide the missing word each time you do.

Anagram - Write items of vocabulary from the previous lesson on the board with the letters jumbled up and ask the students to write them out correctly.

Teaching Suggestions: Activating schemata and listening for gist

Before the students listen it is important to set the context clearly and to encourage the students to begin to formulate expectations about the text (see the section on activating schemata in the introduction to this guide). To do this, you could:

1. **Activate current knowledge.** Introduce the two characters from the listening material and elicit their relationship (e.g. junior employee and drilling site manager). Set the context (e.g. tell students that the junior employee and his manager are talking about constructing a drilling tower). Write on the board

some questions to elicit predictions from learners (e.g. *What parts of the drilling device need to be checked before constructing the drilling tower?*). Students discuss and brainstorm ideas for several minutes. Elicit ideas from the students and write them on the board. Tell students that they should listen and note down how many of their ideas were mentioned. After listening, elicit and tick off how many of the students' ideas were mentioned.

2. **Help students in acquiring knowledge** Students may have limited general knowledge about some of the technical topics contained within these modules. Providing knowledge input will build their confidence for dealing with a listening task. This could be done by giving a related text to read (look at the reading texts for inspiration), or, a little more fun, a quiz about the topic.

3. Play **bingo**. Pair students and ask them a question which will elicit the vocabulary related to the listening text (e.g. to decide what kind of equipment is needed in the assembly of a drilling rig). Provide with a grid (as below) and ask them to write one word in each box. Play the recording, and ask students to watch and tick off each word they hear. If a group hears all six of words, they have 'bingo' and are the winners. After listening, elicit from students how many of their words they ticked.

This task enables learners to activate their prior knowledge of a particular topic area prior to listening and encourages active listening.

Teaching Suggestions: Listening for detail

1) **Listening for specific detail (True/False)**

In these tasks, students have to listen for specific information which confirms/rejects the four statements. Give them a moment to read the statements and encourage them to predict what they think they answers may be based on a) what they remember during the gist listening task; b) their background knowledge of the subject. Then, during the listening, they can verify their predictions and make any necessary changes. Give students a minute to check their answers in pairs after listening, and elicit the answers from nominated students during whole-class feedback.

2) **Listening for specific detail (Multiple choice)**

Again, give students time to read the questions before listening and encourage them to predict the answers. Allow time after listening for students to compare and discuss their answers in pairs.

3) **Using Transcripts**

Transcripts are provided within this teachers book and can be exploited in a number of ways, for example:

- **Fill in the blanks while listening** – This is a fun, different way to use transcripts and vary the listening exercises given to students. First, make one copy of the transcript and white out a word or phrase from each speaker's utterance, or from every two sentences or so. The amount of blanks will depend on the level of your students. Just make sure not to have too many back to back, as students may get frustrated if they can't keep up. Play the recording and let students try to fill in the blanks as they listen. This method ensures engagement during the listening and really makes them aware of each word. Play the recording a second time so that students can fill in any blanks they missed during the first go. Play the recording a second time so that students can fill in any blanks they missed during the first go. Check the

answers together. Make sure you have students check their spelling. Now that the blanks are filled in, play the recording a third time and have students concentrate on the overall meaning of the passage. Now that the blanks are filled in, play the recording a third time and have students concentrate on the overall meaning of the passage. Afterwards, move on to the comprehension activities provided in the modules.

- **Jigsaw listening** – Cut up the transcript into speakers' sections. Play the recording first, then give the cut-up transcript pieces and have students put them in order prior to listening once again and verifying.

Teaching Suggestions: Lexis

The modules contain several tasks focussed on practicing specific lexical items from listening and reading tasks. These typically take of form of matching tasks (e.g. students match words to pictures), or gap fills (e.g. students complete sentences with words from a source list). It is recommended that you give students time to work through these tasks individually at first, prior to checking in pairs and whole-class feedback during which you elicit the answers from nominated students.

It is important to ensure that learners understand the meaning of each lexical item. One way you can do this is by scripting **concept checking questions**. For example, if the lexical item you are teaching is *vent hole*, you could ask:

- Where is a vent hole located? (between the pump and check valve)
- What does a vent hole avoid? (airlocking)

Tips for structuring concept checking questions:

- Make sure the questions are simple and that no difficult language is required to answer the question. Yes/no questions, either/or questions and simple 'wh' questions are particularly effective
- Don't use the new lexis in your questions
- Don't use unfamiliar vocabulary

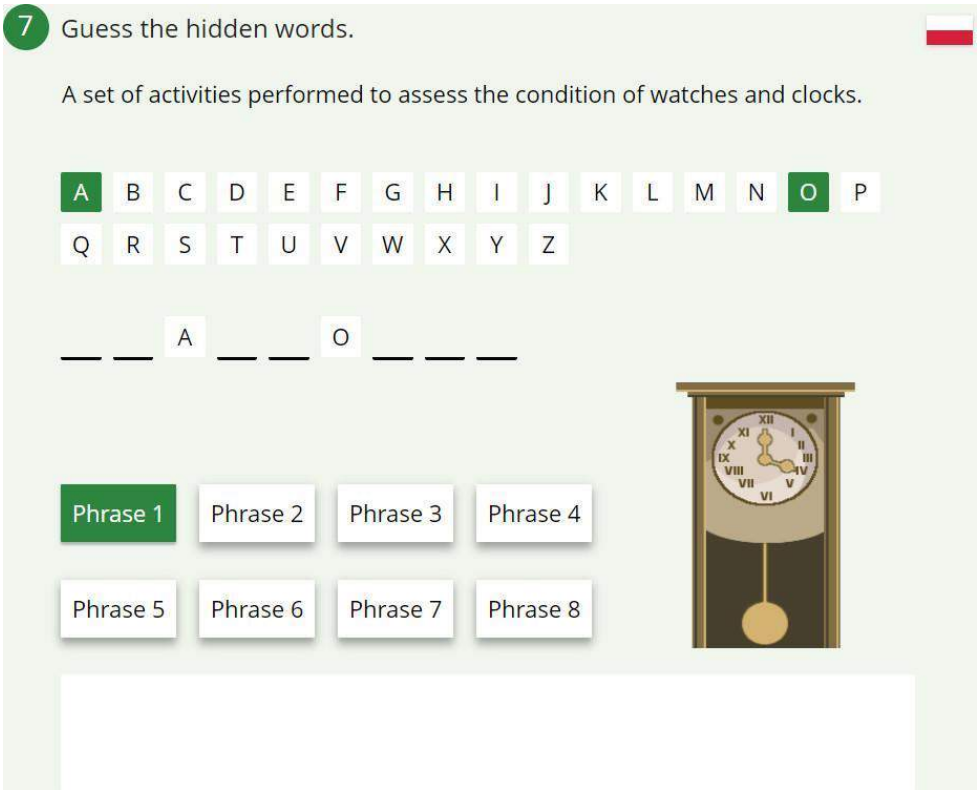
Due to the highly technical nature of a lot of the target lexis within these modules, you could also make use of **translation** (instead of just giving the translation to students, perhaps you could start with some concept checking questions in English and elicit the Polish translation from the students themselves). Students can also make use of the glossary function to obtain accurate translations by themselves.

Don't forget to **model and drill the pronunciation** of new lexical items. Ensure that you highlight word stress (you could use your fingers to elicit the number of syllables as well as stress placement) and problematic sounds (e.g. silent letters or syllables, tricky diphthongs etc.).

Teaching Suggestions: Revision of Lexis

Task: Students complete missing letters to form words

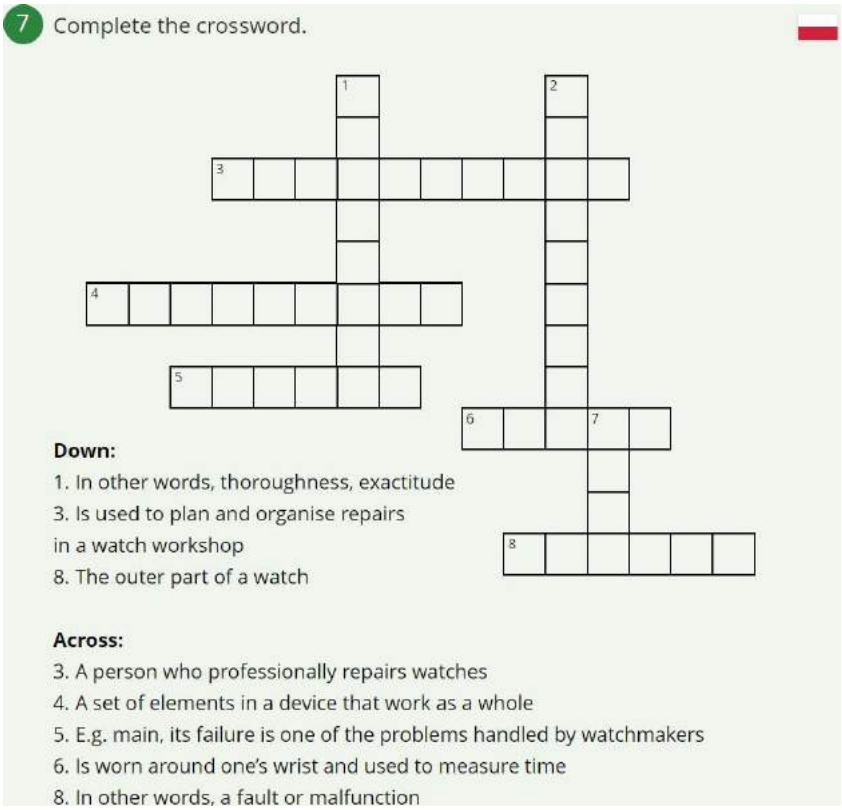
Example:



The focus here is on spelling but the aim is to recycle items from the lesson. The task could be done in open class as a game of hangman between you and the students.

Task: Crossword

Example:



This task recycles lexical items from previous activities. They may be used as a homework activity or as a brief filler. To make it more challenging, you could prepare two sets of crosswords, without the definitions, but with words 1, 3, 5, 7 or 2, 4, 6, 8 etc. filled in. Pair students, and give a completed crossword with even words to one student and another with odd words filled in. Students should keep their crosswords hidden from the partner and should ask their partner for the missing words that they need. Their partner should them give them definitions of the word as well as prompts (e.g. the first letter) to help them recall the lexical item.

Teaching Suggestions: Reading

1) Pre-teaching lexis

Given the large number of technical terms contained within the reading texts of these modules, it is recommended that you identify words that may be new to the students

or which have only recently been introduced and check the meaning/provide translations ahead of dealing with the text itself. This will ensure that students' understanding of the text is not blocked.

2) Gist reading task: Jigsaw reading

Cut the text in half. Divide the students into two groups A and B so that As sit together and Bs sit together. Distribute slips of paper with the text. They will need to tell another person what they read about. Allow a few minutes to read, prepare and consult within the group. Now pair As with Bs and monitor closely. Note down some good examples of the language they use, and sample sentences to correct or upgrade in the language feedback stage.

3) Reading for specific detail

It is best to set a gist reading activity before proceeding to the detailed reading tasks contained within these modules. When you proceed to the tasks, make sure you give students time to read the questions first and encourage them to predict what they think the answers might be based upon what they remember from the first reading or their prior background knowledge.

For an added level of challenge, encourage students to underline/highlight the part of the text which validates their chosen answer and ask them to justify their answers during pair-checking and whole-class feedback.

Lesson notes

Module 1: Technical conditions of watches and clocks: vocabulary and speaking

SCREEN 1

Lead-in

Ask students what does the phrase *sentimental value* mean and encourage them to give some examples of objects that may have it. Allow students to think about an object that has sentimental value for them and the reasons behind it. Ask them to exchange information in pairs and then ask some students to share the information about their partner to the rest of the group.

SCREEN 2

Video: Watch technical condition inspection

Explain that you are going to watch a short video about a visit at a watchmaker's shop. Ask students to listen carefully what is the customer's problem and what does the watchmaker do to solve it. Elicit the answer.

TRANSCRIPT:

(1): Hello.

(2): Hello. How can I help you?

(1): My watch is broken. It has great sentimental value to me and I'd really like to have it fixed.

(2): I see.

(1): So what exactly is wrong with it?

(2): First, it started being slow. But now it just doesn’t work at all.

(1): It’s a quartz watch. When did you last change the battery?

(2): I don’t remember.

(1): I see. How long have you had it?

(2): Over 6 years.

(1): Luckily it doesn’t matter if you’ve been wearing it regularly.

(2): What do you mean?

(1): With automatic watches, the movement mechanism can break if the watch is not worn for a longer time. Their mainspring is automatically wound due to the movement of the wearer's hand. Without the movement, there's no energy provided to run the watch. The movement can get jammed and it may be difficult to repair.

(2): I see.

(1): Have you ever dropped it on the floor?

(2): No...

(1): Perhaps it got wet while you were doing dishes or taking a shower? These watches are moisture resistant but they mustn’t be immersed in water.

(2): Ohh I didn’t know that. It read “water-resistant”.

(1): Yes, but it doesn’t mean you can keep it in water for a long time. One moment, please. I changed the battery and it seems to be running well. The inside parts are in a good condition so you shouldn’t have any more problems with it. Remember to change the battery every two years, though.

(2): Sure, thanks. How much is that?

(1): 8 pounds.

(2): Here you are.

(1): Thanks.

(2): One more thing, you also fix clocks, don’t you?

(1): Sure.

(2): And what's the cost of that?

(1): Well, that depends on several factors, including whether I can make the broken part myself or not.

(2): Right. Thanks again.

Exercise 1

Ask students to read the statements from Exercise 1. Play the video again and give students time to decide which statements are true and which are false. Elicit the explanations for the false sentences.

Answer key:

1. The woman paid 20 pounds for the service. **F**
2. The watchmaker also fixes clocks. **T**
3. The watchmaker discovered that the watch hadn't been wound correctly. **F**
4. The client's watch is six years old. **T**
5. The client didn't remember when she had last changed the battery. **T**
6. It's advisable to change a battery every two years. **T**
7. The watch had just stopped working, without any previous indications. **F**
8. With automatic watches, the mechanism can break if the watch is not worn for a shorter time. **F**

Exercise 2

With less confident students you can encourage to complete the exercise in pairs. Check the answers. Ask students to read whole sentences, correct the pronunciation when necessary.

Answer key:

1. Automatic watches that (**aren’t worn for a long time** / are worn for a long time / are left unattended for a short time) can break down permanently.
2. Water-resistant watches are resistant to (sunlight / **humidity** / large amounts of water).
3. The cost of a watch repair depends on, among other things, (the watchmaker’s skills / the colour of the watch / **the type of watch parts**).
4. Usually it takes a few (**minutes** / hours / days) to change a battery in a watch.
5. The inside parts of the client’s watch are in (a bad / an average / **a good**) condition.
6. The client brought (a mechanical / an automatic / **a quartz**) watch to the shop.
7. A six-year-old quartz watch should have the battery replaced (**3** / 5 / 7) times already.
8. A watchmaker who repairs watches (**can** / cannot / sometimes can) also repair clocks.

Feedback:

1. Some watches are equipped with a mechanism which winds up due to the movement of the wearer's hand. Such watches can break if they aren’t worn.
2. Such watches are resistant to small amount of water only.
3. The cost of a repair depends on the quality of the materials that were used to make it.
4. Changing a battery is a relatively easy task that doesn’t take much time.
5. The inside parts of that watch do not need to be repaired or replaced.
6. These watches are battery powered only and use the vibrations of quartz crystal for operation.
7. The battery should be changed every two years.
8. A watchmaker deals with all types of watches and clocks.

Speaking extension

Hand each student a copy of Watch Technical Condition Assessment sheet (page 20). Go through the phrases at the top of the sheet. Make sure that the students understand the meaning of the phrases and are able to pronounce them correctly. You can ask students to try to describe the meaning of the phrases in English and create some sample sentences with them.

Ask students to create questions with the keywords that are similar or the same as the questions from the dialogue they watched. Give students a moment to complete the task and to consult with a partner if necessary. Check the sentences, make sure to correct any grammar mistakes at this point.

Divide students into pairs. Ask them to act out a similar dialogue to the one from the lesson. Encourage to use the phrases from the sheet. Change the pairs twice. Encourage students act the dialogue without the handout during the third round.

Monitor any language mistakes that occur during the exercise. Make notes and analyse the mistakes with the group encouraging students to self-correct.

WATCH TECHNICAL CONDITION ASSESSMENT

change the battery
equipped with...
wind up
automatic mainspring
moisture resistant
in good/bad condition
movement
broken part

How / help / you? _____

What / wrong / it? _____

When / check / battery? _____

How / long / had? _____

Have / dropped / it? _____

WATCH TECHNICAL CONDITION ASSESSMENT

change the battery
equipped with...
wind up
automatic mainspring
moisture resistant
in good/bad condition
movement
broken part

How / help / you? _____

What / wrong / it? _____

When / check / battery? _____

How / long / had? _____

Have / dropped / it? _____

SCREEN 3

Instructional video: Watchmaking tools

Ask students if they know the names of any watchmaker's tools in English. Write the words on board and encourage students to tell in English what are they used for.

Play the video. Ask how many types of tools were described in the video (correct answer: 9).

TRANSCRIPT:

A watchmaker uses a couple of basic hand-held tools that they couldn't do without. The first such tool is a precision screwdriver. It is used to take the watches apart. It comes in several sizes: 0.8, 1.0, and 1.8 mm. These are the standard sizes of screws used in watchmaking. An oiler is used to oil parts of watch movements. Using it guarantees that the oil gets evenly distributed throughout the entire movement. A movement holder is a tool used to firmly hold the individual parts or the entire watch. It is very useful in watchmaking where precision counts above all else. A watch case opener is needed in case of secured backs. It's a simple and highly durable tool. A case opener ball is great for unscrewing the casebacks. It doesn't leave scratches and makes the job of a watchmaker really easy. The major advantage of a springbar remover is the fact that there is a slim chance of its sliding off the springbar being removed. Thanks to that, both the watch and the watchmaker's fingers stay unharmed. A watch caseback opening knife is made of solid steel which makes it really sharp. It is mostly used to unstick the casebacks and rip off the protection or glue residues. An eyeglass comes in different optical and magnification properties. The majority of a watchmaker's works require a basic eyeglass, with 3.5 times magnification. However, whenever more complicated components are dealt with, a glass with 10 times magnification is needed. Tweezers must be both precise and precision-crafted. An established watchmaker should possess a couple of different types of tweezers. Precision angle tweezers are most frequently used as they are perfectly fit for removing the caseback and working with small, complex mechanisms.

Exercise 3

Before completing the task make sure that students know how to pronounce the names of the tools. You can use a pronunciation drill so that the whole group is confident about the new words.

Answer key:

1. Tweezers → handling small mechanisms
2. Eyeglass → working with tiny, complicated components
3. Watch caseback opening knife → unsticking the backs
4. Springbar remover → changing straps, springbars, bracelets
5. Oiler → evenly distributing oil throughout the mechanism
6. Movement holder → firmly holding the individual parts or the entire watch
7. Watch case opener → removing secured casebacks
8. Precision screwdriver → taking watches apart

Feedback:

1. This tool needs to be precise and made to last.
2. It allows examining small parts of the watch movement at a magnification.
3. It's also used to remove protection or glue residue.
4. It's designed in such a way not to slip when removing the telescope.
5. It ensures proper oil distribution.
6. It is very useful in watchmaking where precision counts above all else.
7. This tool isn't very complicated yet crucial in watchmaking.
8. This is a basic tool in watchmaking.

Speaking extension

Hand out the Tools sheet (page 25). Ask students if there are any unfamiliar words, encourage your class to write down the meaning of the new vocabulary on the sheet.

Divide students into pairs or groups of three. Each student in the pair describes one of the tool from the Tools sheet using the new vocabulary from the lesson. The rest of the group/ partner tries to guess the word. Allow students to count points for each correct guess.

SCREEN 4

Exercise 4

Now, when students are more confident with the new vocabulary, they should try to complete the exercise individually.

After completing the exercise you can choose five or more most difficult words for your group and check if the students can spell them. Read the words aloud and let students write them down on a piece of paper or a notebook. Give your group a minute to check the spelling by looking at the interactive content.

Answer key:

1. Precision angle **tweezers** are most frequently used as they are perfectly fit for removing the case and working with small, complex mechanisms.
2. Glue residue on a watch component can be removed with a watch caseback opening **knife.**
3. A watch case opener is a simple and highly **durable** tool.
4. The majority of a watchmaker’s works require a basic **eyeglass**, with 3.5 times magnification.
5. A movement holder is a tool used to firmly **hold** the individual parts or the entire watch.
6. An oiler guarantees that the oil gets evenly **distributed** throughout the watch movement.
7. **Precision** screwdrivers are used to take the watches apart.
8. A back ball opener doesn’t leave scratches and makes **unscrewing** the back really easy.

Feedback:

1. This is a rather small, yet very precise tool.
2. You need a word that describes a sharp tool.
3. This is a solid and tough piece of equipment.
4. It allows examining small parts of the watch mechanism at a magnification.
5. A movement holder provides stabilisation of the workpiece.
6. In other words: dispersed.
7. These are used for precise works, hence the name.
8. A back ball is great for unscrewing the backs.


COMPLEX MECHANISM
RIP OFF
HOLD
UNSTICK
UNSCREW
SIMPLE
SECURE
SIZE
DURABLE
STEEL
CHANGE
UPSIZING
UNHARMED
SCRATCH
EASY
DISTRIBUTE
PRECISE
ENLARGMENT PROPERTIES
TWEEZERS
OILER
WATCH CASE BACK OPENING KNIFE
MOVEMENT HOLDER
EYEGLASSES
TELESCOPE REMOVER
PRECISSION SCREWDRIVER
BALL OPENER
WATCH CASE OPENER


COMPLEX MECHANISM
RIP OFF
HOLD
UNSTICK
UNSCREW
SIMPLE
SECURE
SIZE
DURABLE
STEEL
CHANGE
UPSIZING
UNHARMED
SCRATCH
EASY
DISTRIBUTE
PRECISE
ENLARGMENT PROPERTIES
TWEEZERS
OILER
WATCH CASE BACK OPENING KNIFE
MOVEMENT HOLDER
EYEGLASSES
TELESCOPE REMOVER
PRECISSION SCREWDRIVER
BALL OPENER
WATCH CASE OPENER

Module 1: Technical conditions of watches and clocks: listening and reading comprehension

Lead-in

Start lesson with the dialogue revision from the last lesson. You can either ask students to revise the dialogue in pairs or ask some volunteers to act it out in front of the group.

SCREEN 5

Speaking

Organise students into small groups for discussion and hand them the Watchmaker's Job sheet. Ask students to gather ideas on "*how the matchmaker's job has changed over the last century*" (page 28) and make notes. Set a time limit. Ask groups to report back on the points they have discussed.

Listening comprehension

Tell students that they are going to listen to the short text about watchmaking industry. Their task is to decide if the statements are true or false according to what they hear. Play the recording twice.

Remember to go over the new vocabulary from the exercise and to practice the pronunciation.

TRANSCRIPT:

Changes in watchmaking technology have been slow over the centuries. Nowadays, however, watchmaking industry has begun to change and evolve following the rapid development of technology. Watchmakers mainly diagnose the technical condition of clocks and watches, as well as repair and maintain their movement. In addition to their mechanical abilities, watchmakers are increasingly required to have extensive knowledge on electronics, since many modern watches are digital. Watchmakers are also assigned unusual tasks, such as repairs of specialised equipment. That is why,

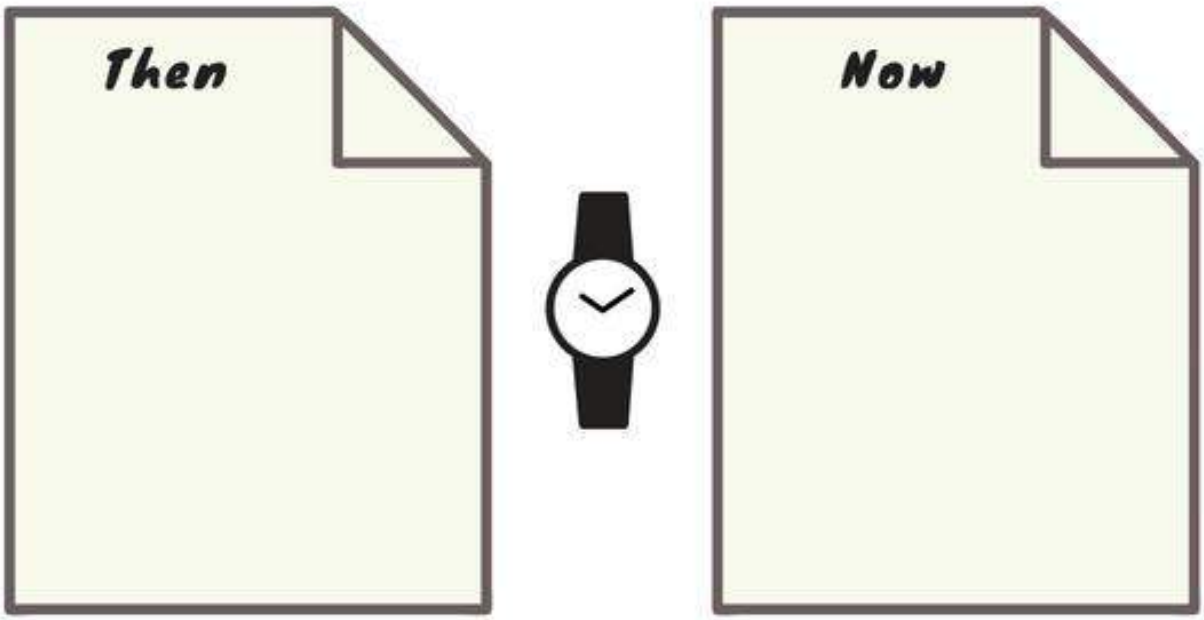
aviation and nautical instruments, compasses and barometers are more and more frequently sent to watchmakers' workshops, too. In order to be familiar with all mechanisms and electronic systems, watchmakers must constantly extend their education. Many trainings are free of charge since they are provided by the watch manufacturers. This allows a workshop to obtain the authorisation of the manufacturer, and the employees to acquire new competences. A large number of such training courses are organised in Switzerland. To correctly diagnose the condition of a timepiece, not only are mechanical tools needed, but also basic electronic tools, including a voltmeter. Complicated electronics may require expertise, which is why watchmakers are increasingly commonly cooperating with electronic device repair shops. Since watch repairs are becoming more and more difficult, the diagnosis itself can take anywhere from a few minutes to a few days.

Answer key:

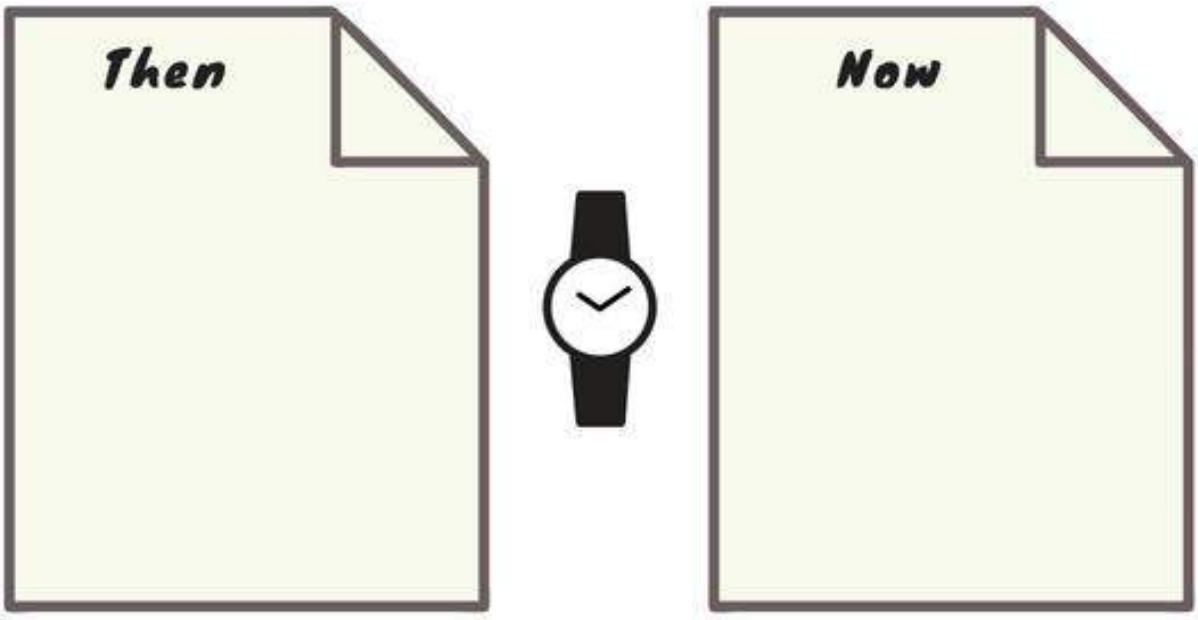
1. **Diagnosing timepieces is becoming more are more complicated.**
2. Watchmakers are increasingly required to have considerable knowledge of ICT.
3. Changes in watchmaking technology have been rapid over the centuries.
4. **Watchmakers are sometimes assigned unusual tasks, such as the repair of specialised equipment.**
5. Most of the training courses are organised by watch manufacturers and are chargeable.
6. **Watchmaking industry has begun to change and evolve following the rapid development of technology.**
7. Aviation and nautical instruments, compasses and barometers are less and less frequently sent to watchmakers' workshops.
8. **Watchmakers are increasingly cooperating with electronic device repair shops.**

Feedback:

1. Modern watchmakers often have knowledge of electronic devices and their parts.
2. Only recently can we observe the rapid development in this industry.
3. In many cases watchmakers don’t have to pay for training courses.
4. Watchmakers repair barometers or compasses more and more often.



Watchmaker's job



Watchmaker's job

SCREEN 6

Exercise 6

You can set this exercise as homework or let students to solve it individually during the lesson.

Answer key:

1. DIAGNOSIS **-** A set of activities performed to assess the condition of watches and clocks.
2. MANUAL SKILLS - Proficiency in using hands, which allows a watchmaker to efficiently work with small components.
3. DIGITAL**-** The type of watches that is getting more and more popular.
4. COMPASS - A device equipped with a magnetic needle; watchmakers fix it, too.
5. WATCHMAKER **-** A person who professionally fixes timepieces but also an adjective which means special-use equipment.
6. EXPERIENCE **-** Necessary in watchmaker's work.
7. CLOCK - A time-measuring device, often hung on the wall.
8. HOLDER - A tool used to firmly hold the individual parts or an entire watch.

Feedback:

1. Not only are mechanical tools used in this process, but also electronic ones.
2. Ease in using the hands while performing activities that require concentration and precision.
3. Such watches are equipped with an electronic display.
4. This device shows geographic directions.
5. An artisan who makes and repairs watches.
6. All knowledge and skills acquired as a result of observations and one's own achievements.
7. It is a practical element but may also have a great decorative value.
8. It is useful in precise tasks performed by a watchmaker.

SCREEN 7

Game: shooting

You can set this exercise as homework or play it on board.

Answer key:

1. Used for evenly distributing oil throughout the mechanism

correct: oiler

incorrect: holder, bearing lubricant

2. The type of watches equipped with a mainspring that wound by means of a movement of the rotor.

correct: automatic

incorrect: mechanical, quartz

3. In their work, watchmakers happen to use

correct: a voltmeter

incorrect: a lathe, a hammer drill

4. One should not put watches on in, since its strong magnetic field can interfere with the device.

correct: electronics equipment

incorrect: a bed, a metal table

5. This allows cleaning and polishing a watch without the need for grinding.

correct: ultrasound

incorrect: sand paper, LED light

6. A sound produced by a watch or a clock is known as

correct: an alarm

incorrect: GMT, a tachymeter

7. The part that protects the dial.

correct: crystal

incorrect: wood, metal

8. This tool is mostly used to unstick the backs and rip off the protection or the remains of glue.

correct: a watch caseback opening knife

incorrect: a back opener ball, a watch case opener

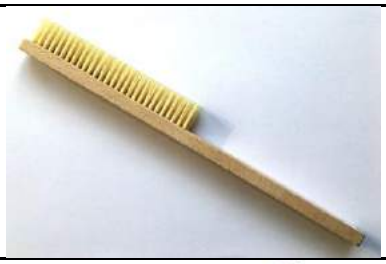
SCREEN 8

Exercise 7

Let students try to match the words with the pictures on their own. Explain the meaning of the new words. Ask students to describe what do you use each tool for.

Answer key:

DEFINITION	PICTURE	FEEDBACK
Eyeglass		A tool designed to help the watchmaker while working with small watch mechanisms.
Tweezers		Used to mount small parts into the movement or the case.

Hand brush		Used to clean clocks and watches and to polish the parts after washing and drying.
Watchmaking reamers		Tools used to open and finish holes.
Watch caseback opening knife		It can be used to remove snap-in backs.
Calliper		A measuring instrument to measure the diameter and length of objects or the diameter and depth of holes.

SCREEN 9

Exercise 8

The exercise can be completed individually or in pairs.

Answer key:

WORD	QUESTION
EYEGLASS	It allows examining small parts of the watch movement at a magnification
CASE	A part of the watch in which the movement is placed.
HAND WOUND	A movement that is wound manually

RESISTANT	Watches not allowing water to go through: water...
DIAGNOSIS	An assessment of the mechanical condition of a watch or a clock
INDICATION	A sign of a watch operating abnormally, for instance, its stopping
CLEANING	A procedure in which all the mechanisms in the watch are maintained
TITANIUM	A metal 40% lighter than steel. It is used in the production of watch cases and bracelets

SCREEN 10

Reading comprehension: Watchmaker's workshop

Ask students to describe a typical watchmaker's shop they have been to. Elicit details such as furniture and the looks of the place. Introduce the phrases *window display*, *artificial light* and *to exhibit*.

Let students read the text for gist.

Exercise 9

Ask students to complete the sentences using the text they have just read. Allow peer-check.

Answer key:

1. A watchmaking shop should be at least of (**7**/11/13) square meters.
2. The (last resort / **best** / worst) method is to arrange all rooms in such a way that customers can see both the work of the watchmakers and their workstations.
3. A professional watchmaking shop must have (small / impractical /**ergonomic)** workstations.
4. It is not uncommon for the watchmakers to store valuable (**watches** / earrings / cloths) in the shop.

5. Some watchmaking work requires (natural /**artificial /** LED) light only.
6. A flash of daylight could make the watchmaker's work (much easier / **more difficult** / significantly faster).
7. The customers (shouldn't / should sometimes / **should**) be able to see the actual watchmaker's work.
8. It's a good practice (**to exhibit** / to hide / to store) the watchmaker's goods in the shop.

Feedback:

1. Such workshops should be of several square meters minimum.
2. It's a good idea to show the customers in what conditions their often precious watches or clocks are fixed.
3. The watchmaker must work in comfortable conditions so that they can perform many precise tasks required while repairing watches.
4. Precious timepieces are kept locked in safes in workshops.
5. Daylight does not always provide enough light to allow the watchmaker to see tiny components of the watches.
6. Some precise tasks require the use of a focused light beam.
7. It's useful when customers get to see how the watchmaker handles the equipment they repair. That way, the customers can be sure that the watchmaker's work is reliable.
8. Hiding clocks and watches in the shop can even scare potential customers away.

SCREEN 12

Exercise 10

You can give the exercise as homework.

Answer key:

1. WATCH

2. WATCHMAKER
3. BATTERY
4. SHOP
5. EYEGLASS
6. HOLDER
7. SCREWDRIVER
8. OILER

SCREEN 13

Exercise 11

Elicit the rules of creating sentences in reported speech. Write three short examples and go through them together. Then, ask the students to complete the sentences from the exercise. Confident students can complete the task on their own and then check, wile the less confident ones can work on the exercise in pairs.

Answer key:

1. "*Perhaps it got wet while you were doing the dishes or taking a shower*".
   The watchmaker said that perhaps it (**had gotten** / got / has gotten) wet while I was doing dishes or taking a shower.
2. *"I clean my watch every day".*
   He boasted (**about cleaning** / that he cleans / denied that the cleaned) his watch every day.
3. *"Watchmakers fix clocks too".*
   He informed me that watchmakers also (**fixed** / are fixing / were fixing) clocks.
4. *"When did you last change the battery?"*
   The watchmaker wanted to know (**when I had last changed** / did I last changed / when I last changed) the battery.
5. *"Remember to change the battery every two years, it's very important".*
   He reminded me to change the battery every two years, adding that it (**was** / is / has been) very important.
6. *"Without the movement, there's no energy provided to run the watch."*

She explained to me that without the movement, there (**was** / were / has been) no energy provided to the watch.

7. "*It was working all right yesterday, but today the hands just don't move at all.* "
   The customer said that the watch (**had been working all right the previous day** / had been working all right yesterday / was working all right the day before), but that day the hands just didn't move at all.
8. *"I wanted to take care of this watch and wear it regularly."*
   He claimed that he (wanted / wants / **had wanted**) to take care of this watch and wear it regularly.

Feedback:

1. In Reported Speech, Past Simple changes into Past Perfect.
2. Use the option that contains a gerund.
3. You can use the backshift, even though this sentence contains a general truth.
4. Keep in mind that there must be no inversion.
5. In Reported Speech, Present Simple changes into Past Simple.
6. Remember about the backshift.
7. In this example, Past Continuous must be changed into Past Perfect Continuous.
8. Past Simple is changed into Past Perfect.

SCREEN 14

Exercise 12

Give students time to complete the exercise. Ask them to explain their choices.

Answer key:

1. diagnosis / **workshop** / repair / pricing
2. soldering / fixing / **damaging** / polishing

3. watch case-back opening knife / **screwdrivers** / back opener ball / watch case opener

4. **holder** / watchmaker / diagnosis / estimate

5. watch / watchmaker / **carpenter** / clock

6. cleaning / replacing / **indication** / changing

7. mechanical / automatic / **colourless** / quartz

8. platinum / **wood** / titanium / silver

Feedback:

1. The word that does not fit in this group refers to the working place of a watchmaker.
2. The word that does not fit in this group refers to the action of destroying something.
3. The wrong word in this set is not related to opening watch backs.
4. The word that does not fit in this group is a tool that is not an element of the initial technical condition diagnosis process.
5. The wrong word refers to a professional who makes wooden furniture and everyday-use objects.
6. The word that does not fit here refers to a sign of malfunction.
7. Three of these adjectives describe different types of watches, whereas one of them is a visual feature.
8. A word that does not fit this group is a raw material that is rarely used to make watch bracelets.

Module 2: Maintenance and regulation of clocks and watches

SCREEN 1

Lead-in

Prepare three pictures of standing clocks. Show the first one to students and ask them to try to describe it. Introduce the words *pendulum*, *case* and *index hour marker*. Help students with vocabulary and write the new words on the board.

Show the two other pictures of the clocks. Ask students to describe them in pairs, trying to use the new vocabulary.

SCREEN 2

Instructional video: Maintenance and regulation

Explain that you are going to watch a short video about a watchmaker's visit at a customer's house. Ask them the watch carefully to find out what was the purpose of the visit. Then, elicit the answer.

TRANSCRIPT:

(Z): Hello.

(K): Hello.

(Z): Did you call me about the standing clock?

(K): Yes, I'd like you to adjust it and carry out its maintenance.

(Z): Well, where is the clock?

(K): Upstairs, please, come in.

(pause)

(Z): Beautiful, how old is it?

(K): About 90 years old. When your colleague repaired it last year, he said that the maintenance and regulation of mechanisms should be carried out once a year. This clock has been in my family for several generations, so I'm trying to take good care of it.

(Z): It’s in a very good condition. I'll open it and look at the inside.

(Z): I see that the clock was modelled on the work of one of the best Polish watchmakers - father Korycki. He made clocks based on his own design. He designed all the parts himself... beautiful work.

(K): For me it has a great sentimental value. I inherited this clock from my Grandmother.

(Z): I can see that all 5 weights need to be adjusted. They provide the movement with energy to chime hours, quarter-hours, drive the hands and the striking train.

I’ll have to oil the mechanisms, too. I’d better get started.

(pause)

(Z): Done.

(K): Great, thank you very much.

(Z): Please call me if you need to, but I think the clock is in a very good condition. It's enough to oil it regularly and properly take care of it.

(K): Alright. Thanks again. How much is it?

(Z): 19 pounds, including the costs of getting here as it’s on my way home.

(K): Here you are, keep the change, please.

(Z): Thank you, Goodbye!

(K): Goodbye.

Exercise 1

Let students read the statements from Exercise 1. Play the video again and ask students to mark the statements true or false. Check the answers and ask students to explain the sentences which are marked as false ones.

Answer key:

1. The client wanted the watchmaker to replace the faulty mechanism. - **F**
2. The woman had a hanging cuckoo clock. - **F**
3. Service and regulation of clock mechanisms should be carried out once a year. - **T**
4. The client's clock comes from the turn of the 20th century and was made by father Piotr Korycki. - **F**
5. There were three weights in the clock - one to chime quarter-hours, one to chime hours and an alarm clock. - **F**
6. The clock also needed oiling the mechanisms. - **T**
7. The client's clock was in a very good condition, it only required regular oiling and a proper care. - **T**
8. The watchmaker's visit cost the client £19. - **T**

SCREEN 3

Exercise 2

Ask students to complete this task on their own.

Instructional video: methods of servicing and regulating watches

Write three statements on the board:

the watchglass is scratched
chronograph needs to be calibrated
the pin bracelet is too long

Divide students into small groups. Each group should take one problem from the board (you can either allow them to make a choice or assign a statements) and

decide on the steps that a watchmaker should take to solve it. Encourage students to use dictionaries to find the necessary vocabulary. Finish the group work with a short presentation of the steps by each group. You may note down new words used by the groups on the board.

Watch the video. Ask students if the steps from the video are different from their ideas from the speaking exercise.

TRANSCRIPT:

Cleaning

It sometimes happens that a watch stops due to a minor ingression. In order to remove it, the watch must be taken apart and placed in an ultrasonic washer. Once it's been cleaned, dry it and put together again.

Watch glass maintenance

Old watches can be polished and thus given a new look. You should wipe the watch glass with sandpaper in order to smooth any big scratches. Then, use special polishing paste. After that, apply a small portion of the paste onto a damp cloth and vigorously wipe the watch glass until the intended effect is reached. Then, wipe the watch glass with soft dry cloth. In case of a plastic watch glass, you can also secure the surface by applying a coat of protective lacquer.

Chronograph calibration

A chronograph is composed of three wheels. The first one measures minutes, the second the tenths of seconds, and the third one works independently and displays seconds of the current time. In order to calibrate the hand displaying 1/100th of a second, pull out the crown, set it at the first position and set the hand in an upright position with the top button. The seconds are set with the lower button. Then, you should set the crown at the second position and turn it as to regulate the minutes. Finally, you should press the side crown in and close it. Once that's done, the chronograph has been successfully calibrated.

Downsizing and regulating a pin bracelet

In order to adjust a braclet to one's hand, try on the bracelet and mark the number of links that need to be removed. You need a punch of a 0.6 mm diameter, a hammer

and a watch block. You should open the bracelet and look at the small arrows engraved on the inside that indicate the direction in which the pin is to be knocked out. Then knock out the pin with a watch punch and a hammer. The bracelet must be downsized to the proper size and the pin pressed again with the round ending in the opposite direction to that indicated by the arrows. At the end, buckle the bracelet and test its strength.

Exercise 3

Ask students to choose the correct answer in according to the information from the video.

Answer key:

1. The process of cleaning a watch does not require
    a. taking the watch apart.
    b. placing the watch into the washer.
    c. **carrying out service of the mechanisms.**

Feedback: Cleaning the watch requires taking it apart, washing and drying it.

2. Due to a minor ingression watches may
    a. run fast.
    b. run slow.
    c. **stop working.**

Feedback: If this happens, the watch must be taken apart and placed in an ultrasonic washer, or else it won't work.

3. For the maintenance of a watchglass one needs
    a. **sandpaper**
    b. a punch.
    c. a pin.

Feedback: Two of the mentioned tools are used to downsize the bracelet.

4. In case of a plastic watchglass, you should secure the surface by applying
    a. polishing paste.
    b. **a coat of protective lacquer.**
    c. a tape.

Feedback: Most often it's available in a brushing or spray form.

5. In a chronograph there is a wheel which measures
    a. minutes.
    b. seconds.
    c. **both provided options are correct.**

Feedback: A chronograph is composed of three wheels.

6. In order to calibrate the chronograph you should use the so-called
    a. **crowns.**
    b. pins.

c. nuts.

Feedback: They are placed to the side of the watch.

7. In order to downsize a bracelet a watchmaker needs such tools as
   a. a watch punch and a watch block,
   b. **a watch punch, a watch block and a hammer.**
   c. a watch punch, a hammer and a pin.

Feedback: Take a close look at the tools the watchmaker uses in the video one more time.

8. After downsizing the bracelet, the pin should be pressed again with the round ending
   a. in the direction indicated by the arrows.
   b. **in the opposite direction to that indicated by the arrows.**
   c. bracelets have no visible arrows.

Feedback: There are small arrows engraved on the inside that indicate the direction in which the pin is to be removed in order to downsize the bracelet.

SCREEN 5

Exercise 4

Make sure that students understand the vocabulary. Then, give students enough time to decide on the correct order of the steps. Check the answers.

Answer key:

1. Ask the client to try on the bracelet.
2. Mark the number of links to be removed..
3. Prepare a punch of a 0.6 mm diameter, a hammer and a watch block.
4. Open the bracelet and look at the small arrows that indicate the direction in which the pin is to be forged.
5. Knock the pin out with a watch punch and a hammer.
6. Downsize the bracelet to the proper size.
7. Press the pin again with the round ending in the opposite direction to that indicated by the arrows.
8. Buckle the bracelet and check if the work has been successfully completed.

SCREEN 6

Listening comprehension

Ask if calibrating process is the same for all kinds of clocks and watches. Gather students' opinions.

Listen to the recording. Elicit what types of clocks are mentioned by the speaker.

TRANSCRIPT:

When servicing old clocks, one should keep in mind that they aren't as accurate as the modern ones. Once, there was no need to calibrate them down to one second per month, so they were running slow to several minutes a day, even after a careful repair, service and regulation. They can't be regulated to a higher precision than a several dozens of seconds a day. A wristwatch or a pocket watch should be regulated in a professional watchmaker's workshop. Regulating the movement on one's own may cause damage to the balance, balance staff, regulator, hairspring or even the watch. Repair may then not be possible or it may cost more than a new watch. The client should be made aware that by so doing, they may void the guarantee granted by the manufacturer or by the person who repaired the movement. Large wall clocks or grandfather clocks can be regulated by their owners, except for clocks without pendulums. Clocks with balance escapement have to be regulated by experienced watchmakers. The pendulum has a regulation nut placed on its bottom. If the clock is running slow, the nut should be turned clockwise, which shortens the length between the pendulum bob and suspension spring and makes the pendulum swing faster. When the clock is running fast, the nut should be turned in a counterclockwise direction.

Exercise 5

Ask students to complete sentences with the correct phrases. Listen to the recording again if necessary.

Answer key:

1. Regular clock **calibration** makes the clock more accurate.

Feedback: This activity is called regulation.

2. Old clocks are regulated to a few **dozens** of seconds a day.

Feedback: This word means a number between 20 and 60.

3. Wrist and pocket watches should only be adjusted in the **watchmaker's workshop**.

Feedback: A place where the watchmaker works.

4. Regulating the mechanisms on one's own may cause damage to the balance,

balance staff, regulator or hairspring.

Feedback: Other parts are mounted on it, rotating around or along it or moving in a swinging motion.

5. Large wall clocks or grandfather clocks with a **pendulum** can be adjusted by their owners.

Feedback: A clock element that hangs from the suspensions spring and exhibits a periodic motion.

6. Clocks that do not have pendulums with a **balance escapement** can be regulated only by the watchmaker.

Feedback: A separate element mounted in grandfather clocks, composed of a balance wheel and an escapement wheel.

7. The pendulum has a regulation **nut** placed on its bottom

Feedback: An element that we turn to make the pendulum swing slower or faster.

8. If the clock is running fast, turn the nut **clockwise** - it makes the pendulum swing faster.

Feedback: The opposite of counterclockwise.

Exercise 6

In this exercise students have to decide on the correct form of the words. Make sure to explain the all the problematic points.

Answer key:

1. In order to adjust a strap to one's hand, the bracelet must **be tried** on and the number of links to be removed has to be marked. **[try]**
2. The bracelet must **be downsized** to the proper size. **[downsize]**
3. At the end, the bracelet must be pinned and you must check if the work has been **successfully** completed. **[success]**
4. The weights provide the motive power necessary for the clock **movement. [move]**
5. The client wanted the watchmaker to replace the **faulty** mechanism. **[fault]**
6. A chronograph **is composed** of three wheels**. [compose]**
7. The first wheel **measures** minutes, and the second one the seconds. **[measure]**
8. The third wheel works **independently** of the other two and it displays seconds of the current time. **[depend]**

Feedback:

1. Use the passive voice. Remember about using the correct form of the verb “be” plus past participle.
2. It is the passive voice.
3. You need to form an adverb. It is sometimes formed by adding the “-fully” suffix to the nouns (e.g. mind-mindfully, use-usefully, power-powerfully etc.)
4. Form a noun. It is often formed by adding the “-ment” suffix (e.g. state-statement, disappoint- disappointment, pay - payment etc.)
5. Form an adjective. It is often formed by adding the “-y” suffix (e.g. cloud - cloudy, rain - rainy, wind - windy etc.)
6. Use the passive voice.
7. Use present simple. Remember about adding “s” in verbs for the third person singular.
8. Use an adverb with a negative prefix.

SCREEN 7

Game: Catch

You can use this exercise as homework.

Answer key:

Stage 1:

correct: watch case, crown, hands, dial

incorrect: chain, earring, plastic, hammer

Stage 2:

correct: balance wheel, hairspring, balance staff, gear cluster

incorrect: nut, glass, magnifier, bracelet

Stage 3:

correct: pin bracelet, watch punch, hammer, watch block

incorrect: chronograph, gold, time, defect

SCREEN 8

Exercise 7

Give students time to complete the diagram and check the answers. You can extend this exercise my asking students to give the definitions of each part.

Answer key:

DEFINITION	PICTURE	FEEDBACK
movement		Time measuring device making use of electrical or mechanical phenomena.
case		Inside this part the mechanism of the watch is placed; it can have different shapes.
dial		Hours and minutes are marked on it (e.g. in the form of indexes). Sometimes it's opened (skeletonised), which allows observation of the movement work.
crown		The "knob" mounted on the right side of the case. It is used, among others, to change the position of the hands or, in the case of mechanical watches, to wind the watch.
hands		Mounted on rotating wheels; they indicate the time.

SCREEN 9

Exercise 8

Students can play the game individually or in pairs.

Answer key:

1. CRYSTAL - A transparent element through which the dial and hands are visible.

Feedback: It can be made of glass or plastic.

2. INDEX...hour marker - Located on the dial, they stand for hours.

Feedback: Most often they are Roman or Arabic numerals, dots or dashes.

3. REGULATION - Actions aimed at setting the movement in such a way that they cooperate.

Feedback: Doing it on one's own may cause damage to the balance staff, regulator or hairspring.

4. HAIRSPRING - It is a spring attached to the balance wheel.

Feedback: One of parts that can be damaged when regulating the mechanisms on one's own.

5. STRAP - Element of the watch thanks to which we can wear it on our hands.

Feedback: It can be made of, for example, leather or metal.

6. CALENDAR - Shows the date and sometimes also the day of the week.

Feedback: It is placed on the dial, sometimes a magnifying lens is mounted above it.

7. HANDS - Mounted on rotating wheels; they indicate the time.

Feedback: They often have the shape of arrows.

8. BATTERY - The source of electric current.

Feedback: Thanks to it, the work of the watch mechanism is possible.

SCREEN 10

Reading comprehension

Divide students into pairs and ask them to read the text, and note down 5 new words which they could not understand from the context. Analyse the vocabulary together. Encourage students to write down the words that they would like to remember.

Ask pairs to prepare 5 questions to the text. Then, create groups of four and let the pairs answer to the questions of the opponents.

TRANSCRIPT:

The regulation of clocks is one of the basic tasks performed by the watchmaker. The activities carried out during regulation depend **primarily** on the type of the clock. One of the most important elements that require maintenance and regulation is the drive train. There are many solutions all over the world. Nowadays, the way of construction of the drive train in relation to the original solution goes in two different directions. The first consists in reducing **energy loss** and stabilising **the drive torque** of the watch, and the other one consists in accumulating the energy in the drive train. Watchmakers need to optimise these solutions.

Such **modifications** of the drive train make it possible to achieve very high accuracy. One of the directions for the development of clock mechanisms is the stabilisation of the drive torque at the output of the drive mechanism. When diagnosing, maintaining and regulating, one must pay attention to these mechanisms. The further work of all other **components** depends on the correct operation of the drive train.

SCREEN 11

Exercise 9

Ask students to choose the correct word for each sentence. Check the answers and explain the problematic points. You can use the sentences for the pronunciation practice. Ask each student to read aloud one sentence after giving him a prompt about the emotion that should be expressed with the sentence (ex. angry, tired, insecure, excited).

Answer key:

1. I'd like you to /**downsize** / downsized/ downsizing/ the bracelet.

Feedback: Use a bare infinitive.

2. You had /**better**/should/later/ not regulate the movement on your own.

Feedback: We use "had better" to talk about actions we think people should do.

3. I /**would**/had/will/ like you to regulate and carry out service of my standing clock.

Feedback: We use "would like" to politely state what we want.

4. It's /**raining**/feeding/selling/ cats and dogs, so be careful if your watch isn't waterproof.

Feedback: The idiom " It's raining cats and dogs" means, that it's raining heavily.

5. **/Well,** / Welcome, / Goodbye,/ where is the clock?

Feedback: In speaking, we often use “well” at the start of what we say.

6. I can see that all 5 weights /**need/** will/ must/ to be adjusted.

Feedback: Only one of these modal verbs can be followed by “to”.

7. Alright. Thanks again. How /**much/** many/ lot/ is it?

Feedback: We can ask this question when we are about to pay for something but don’t know the price.

8. You have a mechanical watch, so it doesn’t work, because it /**requires/** can’t stand/ wasn’t/ winding.

Feedback: Mechanical watches usually should be wound.

Exercise 10

Students can complete the task individually or in pairs.

Answer key:

1. **Modifications to the clock drive enable the clock’s high accuracy.**
2. **An efficient drive train affects the work of other components.**
3. The repair should be done with a feeler gauge.
4. **A qualified worker performs stabilisation of the drive torque at the output of the drive train.**
5. The firing process precedes drying.
6. **The activities carried out during regulation depend on the type of the clock.**
7. The seat adjustment depends on the client's height.
8. **During the diagnosis, service and regulation, the watchmaker must be careful.**

Feedback:

1. (3) This measuring instrument is used to determine the gap width or clearance between adjacent surfaces.
2. (5) These processes are related to the ceramic industry.
3. (7) This applies to seats in bicycles or motorcycles.

SCREEN 12

Exercise 11

You can use this exercise as homework.

Answer key:

WORD	QUESTION
CROWN	The smallest element among the visible parts of the watch
PUNCH	A tool for downsizing bracelets - Watch …
CLUSTER	Clock regulation mechanism - Gear ...
BRACELET	Made of metal links - Pin …
CHRONOGRAPH	A watch with a measuring mechanism and of different lengths of time intervals
MOVEMENT	There can be, for example, quartz or mechanical one
WASHER	A device designed for cleaning watches
PIN	Connects the links of the bracelet

Exercise 12

Make sure that the students are able to pronounce the expressions correctly and shortly describe their meaning.

Answer key:

1. pendulum + clock
2. oiling + the mechanisms
3. movement + regulation
4. chronograph + calibration
5. watchmaking + workshop
6. balance + staff
7. cuckoo + clock
8. glass + polishing

Module 3: Repairing watches and clocks

SCREEN 1

Lead-in

Ask students to imagine that they are customers in a watchmaker's shop and they need to have a watch fixed. Elicit what kind of questions might a watchmaker ask and then, what questions might a customer have. You can write the questions on the board.

SCREEN 2

Video: A visit to a watchshop

Watch the video. Ask students what is wrong with the customer's watch.

TRANSCRIPT:

(C): Hello.

(W): Good morning. Nice to see a familiar face. What can I do for you?

(C): Well… My watch has broken again. I must be jinxed. It's the third time this year and it's only March!

(W): That's a bummer. Let's have a look at it.

(C): First of all, I can't set the time.

(W): Can you wind it?

(C): Yeah.

(W): Perhaps you dropped it on the floor recently?

(C): No, not that I remember.

(W): I see that the set lever is loose. And a tooth is broken off the clutch wheel. That's probably the cause of the problem.

(C): Sounds pretty serious. I hope you can fix it.

(W): Sure. But it will take some time. I have to dismantle all the parts and check if the broken tooth hasn't caused any other problems.

(C): So… When can I come to collect it?

(W): In three days, I suppose. It depends on whether I can make the broken part myself or if I have to order it.

(C): Is it time-consuming to make it?

(W): Depends on the part. It requires great precision.

(C): And if you have it delivered? How long would it take?

(W): I can't say exactly. This is a very rare model. The parts would probably have to be ordered from abroad. It might be problematic.

(C): I see.

(W): I'll have a look at it later today and I'll call you when I am positive about the defect. Perhaps I'll know about the parts by then, too.

(C): OK. I'm looking forward to hearing from you.

(W): Goodbye.

Exercise 1

Let students read the statements. Ask them to decide which sentences are true and which are false.

Answer key:

1. The client's watch has a loose set lever. (T)
2. The watchmaker identified the cause of the problem without having to put the watch apart. (F)
3. The watch has been previously repaired. (T)
4. The client's watch is very common on the market. (F)
5. The watchmaker replaced the battery. (F)
6. Making new parts requires great precision. (T)
7. The repair of the client's watch can take up to a week. (F)
8. The time of the repair depends on the availability of the broken part on the

market. (T)

Feedback:

1. (2) The watchmaker had to dismantle the watch in order to see what the problem was.
2. (4) It might be troublesome to find proper spare parts since the client's watch is a rare model.
3. (5) There's been no information on battery changing in the video whatsoever.
4. (7) It will be much shorter than that.

Exercise 2

Students try to complete the sentences with words on their own. Make sure to explain any problematic points after the task completion.

Answer key:

A woman came to a watch workshop, as her **[watch]** was **[broken]** yet again. The **[watchmaker]** performed an initial inspection which proved that there was a loose **[set lever]** and a **[tooth]** had broken off the **[clutch wheel]**. Due to the limited availability of the needed parts, the **[repair]** could take up to three days. The watchmaker wanted to make some **[parts]** by himself, but that required great precision and patience.

Feedback:

1. Otherwise known as a timekeeper.
2. A failure. A state in which one of the parts is malfunctioning.
3. A qualified specialist who professionally repairs and services watches.
4. When it's broken, setting the time is impossible.
5. This part of the client's watch was broken which may have caused some other damage, too.
6. It is mounted to the arbour of the setting lever spring.
7. An activity which helps restore a watch to its previous condition.
8. In other words, components.

Speaking extension

Divide students into pairs and hand them copies of A Visit to a Workshop worksheet (page 56). With less confident groups allow students to write a dialogue that is similar to the one from the film, using prompts from the worksheet. Monitor their work and correct any mistakes you notice. Then, ask students to act out the dialogue,

trying to look at the text as little as possible. With more confident students you can try to go straight to acting out the dialogue without making notes.

If you have enough time, mix students again and let them act out a similar dialogue again, this time with new partners. You can also repeat this exercise on next lesson as additional practice.

SCREEN 3

Presentation: Damaged and malfunctioning watches

Pre-teach keywords from the video recording. Elicit some ideas what the video can be about. Play the instructional video and check if the guesses were correct.

TRANSCRIPT:

A mechanical watch is a device whose repair takes a lot of patience and a great deal of precision. Its failures are most commonly caused by a faulty movement, glass, or watch case. The other frequent repairs include watch bracelets and their links. There are some cases, however, in which the visible fault is caused by a hidden defect. Before attempting any repair, the watchmaker must identify the exact cause of the malfunction.

Taking the caseback off allows making a detailed assessment of the internal parts, before the device is fully disassembled. A watchmaker checks the loose spaces, the position of the hairspring, the mainspring and the manner in which the particular parts are put together. It’s not that uncommon for a watch to have a mechanical fault such as curved or bent parts that block one another.

Malfunctioning crowns are also very common. When they are too loose or do not align with the hands, it’s likely that the barrel bridge is loose, crowns are displaced from the clutch or the yoke is broken.

Bearing axes displaced with respect to each other can result in uneven hand setting.

When the movement cannot be wound it is probably due to damage or a broken mainspring and loose power wheel or damaged spring.

It often happens that a watch stops running. If it does regularly, every couple of hours, all its mechanisms must be thoroughly checked. The probable cause might be damage to the barrel area - the click, loose case or a damaged spring. Let's not forget that contamination or humidity inside a watch can cause trouble as well.

Each watch defect should be inspected individually. Properly conducted repairs will extend the lifespan of a device even by more than ten years.

Exercise 3

Explain any unfamiliar vocabulary and encourage students to make notes. Students should solve the task individually.

Answer key:

damaged barrel tooth,

loose barrel case,

broken mainspring,

loose power wheel,

damaged spring,

broken yoke,

loose barrel bridge,

crowns displaced from the clutch

Exercise 4

Let students go through the statements. Play the video recording again and ask students to decide which statements are true and which are false. Elicit the answers.

Answer key:

1. Each watch defect should be handled identically. (F)
2. If a watch stops, it is probably due to a damaged barrel. (T)
3. Watch crowns are always loose. (F)
4. Humidity does not have a negative effect on watches. (F)
5. Repairing straps and their buckles is among a watchmaker's most common task. (T)

6. Damaged movement is the most common cause of watch defects. (T)
7. Repairing watches requires a great deal of precision. (T)
8. Displaced bearing axes don't cause uneven hands setting. (F)

SCREEN 4

Listening comprehension

Play the recording. Ask students to work in pairs exchange the information that they remember from the listening. Listen to the recording again. This time elicit information from students. Try to engage as many students as you can by asking them to give one piece of information at a time.

TRANSCRIPT:

There are watches of different qualities available on the market. It mostly depends on the materials used and the amount of work put into creating a given product. Established companies offer precisely made, carefully fit mechanisms that hardly ever break. Low quality watches often require a series of expensive repairs which can exceed the cost of purchasing a new device. Regardless of the type of a watch, each inspection should be carefully planned. It is a good idea to use a checklist which will organise the work and help follow the procedures. This way there is a slim chance that a defect is overlooked.

A watchmaker is usually occupied with four types of repairs. Cleaning the watch mechanisms is the most popular one. It is not uncommon that the watchmaker has to replace the parts that match the particular model and year of production. In cases where a device is rather unique or custom made, the watchmaker must also have proper skills to make new parts and press them together.

Watches usually break due to use. The most severe damage includes seizing up, dirt accumulated inside the mechanism and thus blocking it, magnetisation, mechanical damage caused by a forceful impact, rusty parts, or corrosion caused by insufficient tightness.

Exercise 5

Allow students to look through the exercise. Play the recording again. Ask students to listen carefully and choose the correct answers.

Play again and allow peer-check if needed. Elicit the correct answers and explain new vocabulary where necessary.

Answer key:

1. Dirt causes [**blocking** // proper functioning // vanishing] of the watch mechanisms.
2. Checklists are useful when it comes to [**planning** // describing // standardising] a repair.
3. Watches usually break due to [some action taken by the third party // a hidden defect // **their use**].
4. Established enterprises offer well-made, carefully matched [straps // hands // **mechanisms**].
5. A watch inspection should be [conducted by the client // performed quickly on the spot // **carefully planned**].
6. A watchmaker should be able to [**make** // order // press] new parts.
7. Low quality watches often require [regular // urgent // **expensive**] repairs.
8. [**Cleaning watch mechanisms** // Replacing the barrel // Recreating crowns] is one of the most frequent types of watch repair.

Feedback:

1. Watches must be properly taken care of as to avoid frequent repairs.
2. Organising the work helps stick to the correct order of procedures.
3. Exploitation and improper maintenance cause the mechanisms to wear.
4. It is believed that Swiss watchmakers manufacture high-quality, perfectly matched mechanisms.
5. Setting the activities in order makes it possible to improve thoroughness and effectiveness of the work being performed.
6. It is not always the case that the spare parts that match a given model of a watch can be ordered easily.
7. Low quality watches often require costly repairs.
8. It is one of the basic maintenance tasks that must be performed on a regular basis in order to ensure proper timekeeping.

Exercise 6

Depending on the group level ask students to complete the sentences on their own or in pairs. Analyse the sentences together.

Answer key:

1. There **[are]** watches of different quality available on the market. [to be]

2. Using a checklist **[helps]** a watchmaker not to overlook a failure. [to help]
3. The most common failures **[include]** magnetisation, rusty parts, and corrosion caused by insufficient tightness. [to include]
4. A watchmaker should **[possess]** the knowledge of parts pressing. [to possess]
5. **[Purchasing]** a low-quality watch may result in multiple, costly repairs. [to purchase]
6. The quality of a watch **[depends]** on the materials used and the amount of work put into its making. [to depend]
7. In order **[to repair]** a unique watch one must possess proper skills. [to repair]
8. Repairs **[are conducted]** in accordance with specific procedures. [to conduct]

Feedback:

1. 'There is/ there are' is a very useful structure used to describe the world around us.
2. You need third person singular.
3. Pay attention to the fact that the word 'failures' is plural.
4. A modal verb is followed by a bare infinitive.
5. You need a gerund.
6. The word 'quality' is third person singular.
7. The structure goes: 'in order to do something.'
8. You need passive voice.

SCREEN 5

Game: memo

You can either play the game on board or let the students play individually.

Answer key:

1. zegarmistrz	watchmaker
2. precyzja	precision
3. usterka	defect
4. wodzik	yoke
5. nastawnik	set lever
6. korozja	corrosion
7. mechanizm	mechanism
8. koperta zegarka	watch case

SCREEN 6

Exercise 7

Use the crossword as homework.

Answer key:

WORD	QUESTION
PRECISION	The quality of being precise and exact.
CASE	The outer part of a watch
SPRING	E.g. main, its failure is one of the problems handled by watchmakers
DEFECT	In other words, a fault or malfunction
WATCH	Is worn around one's wrist and used to measure time
MECHANISM	A set of elements in a device that work as a whole
WATCHMAKER	A person who professionally repairs watches
CHECKLIST	Is used to plan and organise repairs in a watch workshop

SCREEN 7

Reading comprehension: Watch defects caused by improper usage.

Preview some of the vocabulary introduced in the text. Allow to students to read the text for the gist and elicit the main points mentioned by the author.

TEXT:

The most significant watch **defects** are caused by improper usage of the device. That's why watch owners should follow a couple of basic **rules**.

First of all, the crowns should not be wound too much for that may result in damaging the watch. Before **setting the time**, one must make sure that the crown is pulled slightly and that it is in the winding mode. It is not that uncommon for people to turn the

crown and **eject** it only after noticing that the hands do not move.

Secondly, the crown should only be turned in one direction, clockwise (away from the user), preferably applying a uniform and relaxed, yet confident movement. It is not advisable to move the crown quickly and in both directions, which, unfortunately, is not that rare. The watch must not be taken apart on one's own because any attempt at repairing or disassembling the device will result in the loss of warranty. A watch must not be thrown, dropped, hit against **surfaces**, drawn on, kept at either too low or too high temperature, exposed to contact with fire, water or other liquids. Also, any activities that could result in damaging the watch must not be performed.

SCREEN 8

Exercise 8

You can either play the game on board or let the students play individually.

Answer key:

1. WINDING MODE - The state of a watch in which it is possible to set the time.

Feedback: It must be slightly ejected.

2. DISASSEMBLING - Taking the watch apart.

Feedback: If one does it by themselves, they can be denied their warranty rights.

3. USE RULES - A set of rules which must be followed in order to keep the watch in good condition over a long time.

Feedback: In other words, the manual on how to use a particular object.

4. REGULATION - Activities performed in order to obtain the parameters as close to the standard as possible.

Feedback: It should be done by a professional watchmaker.

5. WARRANTY - Manufacturer's obligation to repair or replace an item for a new one in case factory defects are found before the specified period of time is over.

Feedback: Usually it is valid over the first 12 or 24 months since the purchase.

6. USAGE - In other words, exploitation.

Feedback: When improper, it can cause some damage.

7. HANDS - They show the time on the dial.

Feedback: A moveable part of the watch placed on the dial plate.

8. HIGH TEMPERATURE - One of the parameters which causes damage to the watch if inappropriate.

Feedback: This physical quantity is expressed in Celsius degrees.

SCREEN 9

Exercise 9

Use the exercise as homework.

Answer key:

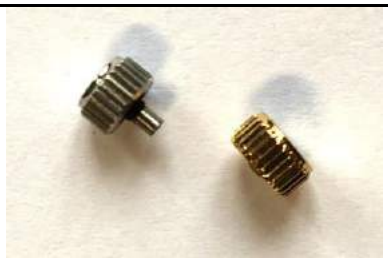
1. winding
2. regulating
3. repair
4. watch
5. case
6. disassembling
7. hands
8. crown

SCREEN 10

Exercise 10

Ask students to match the phrases with the correct pictures. Allow students to work in pairs to complete the exercise if necessary. Remember practice the pronunciation with the group.

Answer key:

DEFINITION	PICTURE	FEEDBACK
crown		It composes the knob along with the winding pinion.
movement		A set of elements that a watch mechanism is composed of.
hands		The hour hand is short and thick, the minute hand is long and slim.
case		The outer housing of a watch.
set lever		When loose, it can cause some problem with setting the time.

watch		A timekeeper that is worn around one's wrist.

SCREEN 11

Exercise 11

Ask students to label the parts of the watch.

Answer key:

SCREEN 12

Exercise 12

Ask students to connect the phrasal verbs with their meaning.

Answer key:

1. come apart - separate
2. cheer somebody up - make somebody happier

3. fall apart - break into pieces
4. find out - discover
5. get back - return
6. hold on - wait a short time
7. put something off - postpone
8. take off - start to fly

COURSE TEST

Exercise 1

Name the objects.

Exercise 2

Choose the correct word.

I can see that all 5 weights /need/ will/ must/ to be adjusted.

I would /rather/ want/have/ you downsized the bracelet.

It's /raining/feeding/selling/ cats and dogs, so be careful if your watch isn't waterproof.

You had /better/should/later/ not regulate the movement on your own.

You have a mechanical watch, so it doesn't work, because it /requires/ can't stand/ wasn't/ winding.

Exercise 3

Explain the words in English.

HOLDER

CALLIPER

SPRING

CHECKLIST

STRAP

Exercise 4

Translate into English.

Korozja

Usterka

Koperta zegarka

Mechanism

nastawnik

Exercise 5

Name 8 tools used by watchmaker.

Exercise 6

Guess the words.

pendulum bob mounted at the end of the pendulum rod –

evaluation of the clock condition done by a professional watchmaker –

removal of defects and damages in the clock and ensuring it’s in a working order –

Proficiency in using hands, which allows a watchmaker to efficiently work with small components –

A device equipped with a magnetic needle; watchmakers fix it, too –

Exercise 7

Write down 5 causes of watch failures.

Exercise 8

Circle the odd word.

cleaning / replacing / indication / changing

diagnosis / workshop / repair / pricing

holder / watchmaker / diagnosis / estimate

mechanical / automatic / colourless / quartz

platinum / wood / titanium / silver

Exercise 9

What changes have happened in watchmaking industry? Give a few examples. (50 words)

Exercise 10

Draw the objects.

Watchmaking reamers tweezers eyeglass

Exercise 11

Write a short dialogue using 10 keywords connected to watchmaking. Underline them.

Exercise 12

Complete the expressions.

Pendulum ……..

Glass ……..

Movement …….

…….... the mechanisms

Balance …….

Exercise 13

Write 5 questions to the text.

When servicing old clocks, one should keep in mind that they aren't as accurate as the modern ones. Once, there was no need to calibrate them down to one second per month, so they were running slow to several minutes a day, even after a careful repair, service and regulation. They can't be regulated to a higher precision than a several dozens of seconds a day. A wristwatch or a pocket watch should be regulated in a professional watchmaker's workshop. Regulating the movement on one's own may cause damage to the balance, balance staff, regulator, hairspring or even the watch. Repair may then not be possible or it may cost more than a new watch. The client should be made aware that by so doing, they may void the guarantee granted by the manufacturer or by the person who repaired the movement. Large wall clocks or grandfather clocks can be regulated by their owners, except for the clocks without pendulums. Clocks with balance escapement have to be regulated by experienced watchmakers. The pendulum has a regulation nut placed on its bottom. If the clock is running slow, the nut should be turned clockwise, which shortens the length between the pendulum bob and suspension spring and makes the pendulum swing faster. When the clock is running fast, the nut should be turned in a counterclockwise direction.

Exercise 14

Order the steps of downsizing and regulating a pin bracelet.

Ask the client to try on the bracelet.

Buckle the bracelet and check if the work has been successfully completed.

Downsize the bracelet to the proper size.

Knock the pin out with a watch punch and a hammer.

Mark the number of links to be removed..

Open the bracelet and look at the small arrows that indicate the direction in which the pin is to be forged.

Prepare a punch of a 0.6 mm diameter, a hammer and a watch block.

Press the pin again with the round ending in the opposite direction to that indicated by the arrows.

Exercise 15

Draw a watch and name its parts.

COURSE TEST KEY

Exercise 1

Dial

Crown

Case

Exercise 2

Need

Rather

Raining

Better

Requires

Exercise 3

Student’s own ideas

Exercise 4

Corrosion

Defect

Watch case

Mechanism

Set lever

Exercise 5

Student’s own ideas

Exercise 6

Weight

Diagnosis

Repair

Manual skills

Compass

Exercise 7

Student’s own ideas

Exercise 8

Indication

Workshop

Holder

Colourless

Wood

Exercise 9

Student’s own ideas

Exercise 10

Student’s own ideas

Exercise 11

Student’s own ideas

Exercise 12

Examples:

Clock

Polishing

Regulation

Oiling

Staff

Exercise 13

Student’s own ideas

Exercise 14

1. Ask the client to try on the bracelet.
2. Mark the number of links to be removed..
3. Prepare a punch of a 0.6 mm diameter, a hammer and a watch block.
4. Open the bracelet and look at the small arrows that indicate the direction in which the pin is to be forged.
5. Knock the pin out with a watch punch and a hammer.
6. Downsize the bracelet to the proper size.
7. Press the pin again with the round ending in the opposite direction to that indicated by the arrows.
8. Buckle the bracelet and check if the work has been successfully completed.

Exercise 15

Student’s own ideas