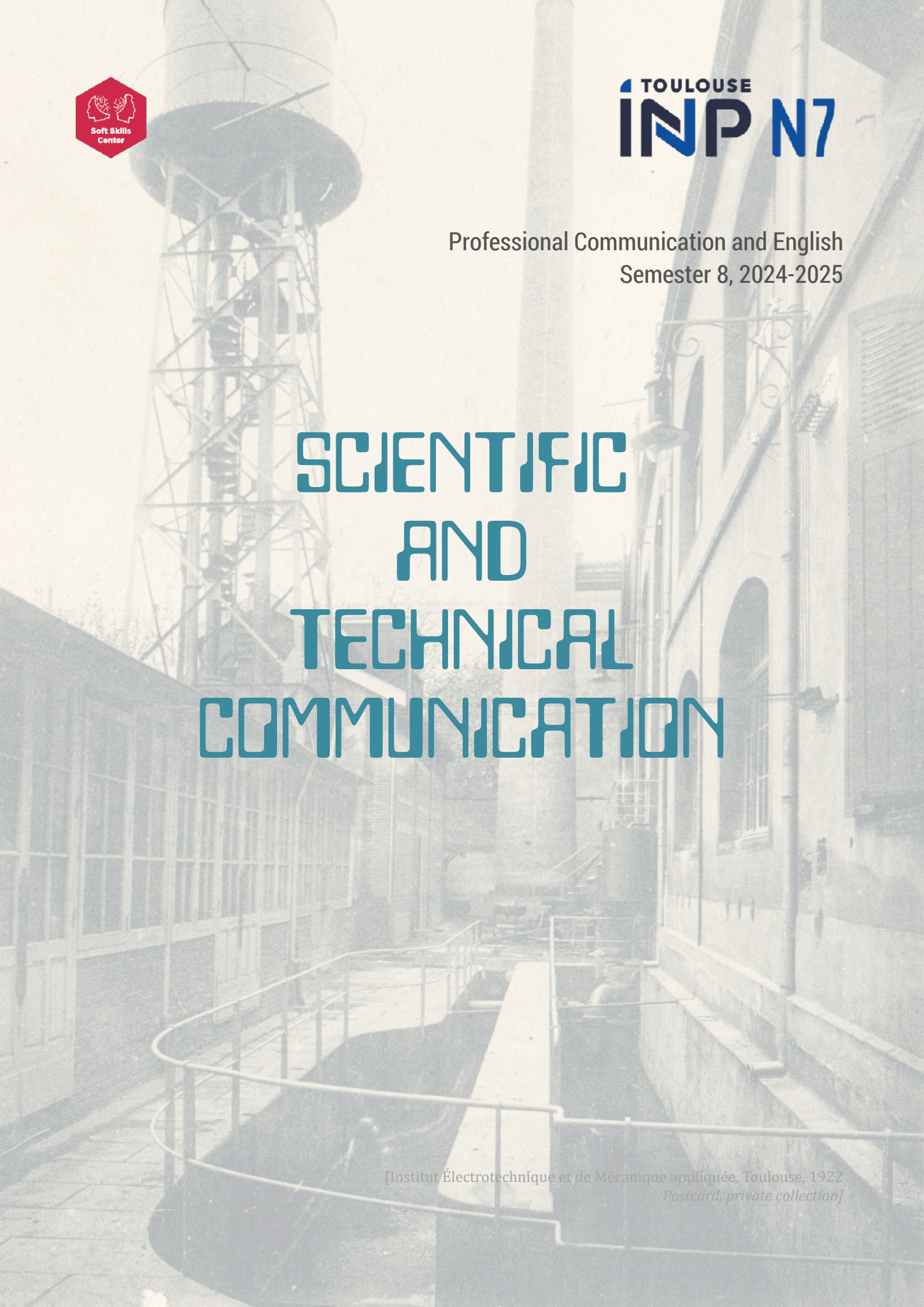
Soft Skills Center

TOULOUSE INP N7

Professional Communication and English
Semester 8, 2024-2025

SCIENTIFIC AND TECHNICAL COMMUNICATION



[Institut Électrotechnique et de Mécanique appliquée, Toulouse, 1922
Postcard, private collection]

Calendar Semester 8

[subject to modification]

Week beginning	SN: MONDAY	MF2E: TUESDAY	3EA: WEDNESDAY
20 Jan	(Semester 7: 12)	Introduction Technical Communication: *The Passive Voice*	Introduction Technical Communication: *The Passive Voice*
27 Jan	Introduction Technical Communication: *The Passive Voice*	Technical Communication: *Describing Processes*	Technical Communication: *Describing Processes*
03 Feb	SKI WEEK	SKI WEEK	SKI WEEK
10 Feb	*Journée Ateliers CV/conférences/Forum PME/ETI* *NO PCE*	*CMS + conf communes avec 1A* *NO PCE*	Technical Communication: *Describing Data*
17 Feb	Technical Communication: *Describing Processes*	Technical Communication: *Describing Data*	*Journée Ateliers CV/conférences/Forum PME/ETI* *NO PCE*
24 Feb	Technical Communication: *Describing Data*	Technical Communication: *Effective Presentations (1)*	Technical Communication: *Effective Presentations (1)*
03 Mar	Technical Communication: *Effective Presentations (1)*	Technical Communication: *Effective Presentations (2)*	Technical Communication: *Effective Presentations (2)*
10 Mar	Conférences entreprises NO PCE	CMS NO PCE	CMS NO PCE
17 Mar	Technical Communication: *Effective Presentations (2)*	Technical Communication: *Effective Presentations (3)*	Technical Communication: *Effective Presentations (3)*
24 Mar	Technical Communication: *Effective Presentations (3)*	Technical Writing	Technical Writing
31 Mar	Technical Writing	**Evaluation:** **Technical Presentation 1 & 2**	**Evaluation:** **Technical Presentation 1 & 2**
07 Apr	**Evaluation:** **Technical Presentation 1 & 2**	**Evaluation:** **Technical Writing**	Vistes entreprises NO PCE
14 Apr	Spring Holiday	Spring Holiday	Spring Holiday
21 Apr	Spring Holiday	Spring Holiday	Spring Holiday
28 Apr	**Evaluation:** **Technical Writing**	**Evaluation:** **Technical Presentation 3 & 4**	**Evaluation:** **Technical Writing**
05 May	Vistes entreprises NO PCE	Semaine de voile NO PCE	**Evaluation:** **Technical Presentation 3 & 4**
12 May	Mock Linguaskill Test	Mock Linguaskill Test	Mock Linguaskill Test
19 May	**Evaluation:** **Technical Presentation 3 & 4**	**Evaluation:** **Technical Presentation 5 & 6**	**Evaluation:** **Technical Presentation 5 & 6**
26 May	**Evaluation:** **Technical Presentation 5 & 6**	CMS NO PCE	CMS NO PCE

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Règlement de Scolarité [extraits]

[28 juin 2024]

4.4 Validation en session 2 ou en session de remplacement

Si le taux d'absence non justifiée d'un élève sur l'une des matières d'une UE excède 30%, alors l'élève concerné ne peut pas se présenter en session 2 sur l'UE considérée. En cas de dette, un élève peut passer toutes les sessions d'examen des années précédentes.
En cas d'absence(s) justifiée(s) lors d'une ou plusieurs épreuves de la session 1, l'élève sera évalué lors d'une session de remplacement.
Le mode d'évaluation d'une UE peut être différent en session 1, en session 2 et en session de remplacement. La note de l'UE d'un élève validant en session 2 sera plafonnée à 10/20.

5.1 Absences / retards

Tout événement parmi ceux listés ci-dessous devra être signalé 2 jours ouvrés minimum AVANT l'absence (sauf cas de force majeure) pour que celle-ci soit considérée comme justifiée :

- Épreuves du permis de conduire (photocopie des convocations avec date et lieu de ces épreuves et attestation de présence aux épreuves mentionnant la date et le lieu de ces épreuves) ;
- Épreuves de concours (photocopie des convocations avec date et lieu de ces épreuves et attestation de présence aux épreuves mentionnant la date et le lieu de ces épreuves) ;
- Obsèques d'un proche (attestation idoine) ;
- Pour les étudiants bénéficiant des différents statuts reconnus par l'INP :
    - Les compétitions pour les Sportifs de Haut Niveau (SHN), Sportifs de Bon Niveau National (SBNN) et les Sportifs de Niveau Inter-Régional (SNIR),
    - Les évènements artistiques pour les Artistes de Haut Niveau,
    - Les évènements extérieurs majeurs (audits qualités, concours JE,…) liés à la vie étudiante pour les étudiants bénéficiant du statut Engage ou étudiant-entrepreneur,
- Et toute autre situation particulière retenue par la direction du département.

Une photocopie des convocations avec date et lieu de ces événements et attestation de présence aux événements mentionnant la date et le lieu). Les différents statuts sont octroyés chaque année par l'établissement ;

Dans tous les cas listés ci-dessous qui ne peuvent être prévus à l'avance, l'absence doit être signalée à l'école au plus tôt par simple mail et justifiée au plus tard 3 jours ouvrés après la fin de l'absence. En cas de non-respect de ce délai, l'absence est considérée comme injustifiée.

- Problèmes de santé liés à maladie ou accidents (certificat médical français justifiant l'absence),
- Bulletin d'hospitalisation (ou pièces équivalentes),
- Accidents, pannes ou grèves de transport (toutes pièces permettant de justifier l'absence),
- Toute autre situation particulière retenue par la direction du département.

Tout retard dans la délivrance d'un rapport ou projet entraîne le résultat « Non évaluable », ce qui empêchera le calcul de résultat de l'UE qui ne pourra donc être considérée comme validée, quels que soient les résultats obtenus dans les autres épreuves.Un élève arrivé en retard à un examen écrit pourra être admis à composer si personne n'est déjà sorti mais terminera l'épreuve à l'heure prévue.
Toute sortie anticipée pendant un examen écrit est définitive.
Toute absence injustifiée à un examen écrit ou oral empêche la proposition de validation de
l'UE correspondante par le jury.

Tout retard dans la délivrance d'un rapport ou projet entraîne le résultat « Non évaluable », ce qui empêchera le calcul de résultat de l'UE qui ne pourra donc être considérée comme validée, quels que soient les résultats obtenus dans les autres épreuves.

5.2 Honnêteté intellectuelle

Les productions personnelles ou de groupe appréciant les compétences rédactionnelles (en français, langues étrangères ou langages informatiques) peuvent recevoir la mention « non évaluable » si un enseignant estime que le travail rendu a fait l'objet d'un apport extérieur partiel ou complet (par exemple production assistée par Intelligence Artificielle) l'empêchant d'évaluer les compétences visées, ce qui empêchera le calcul de résultat de l'UE qui ne pourra
donc être considérée comme validée, quels que soient les résultats obtenus dans les autres épreuves.

5.3 Savoir-être

La consultation quotidienne des mails institutionnels est obligatoire. En aucun cas un élève ne pourra prétendre ne pas avoir été prévenu par l'école d'une information envoyée par mail.

La consultation quotidienne des mails institutionnels est obligatoire.

Dr. Euripides Joannidi, University of Constantinople.
Albumen print, c.1896. Collection, B.Hanson. Toulouse.

Tout personnel de l'école ou prestataire de l'école considérant qu'il y a eu manque de savoir- être peut demander la délivrance d'un carton jaune ou rouge selon le niveau de gravité par la direction des études ou du département de l'élève incriminé. Tout élève qui relève d'un manque de savoir-être sera convoqué par la direction du département concerné ou la direction des études pour s'en expliquer puis se verra éventuellement attribuer un carton jaune ou rouge pour l'année universitaire concernée. Les jurys de semestre et de diplôme en seront informés par la direction des études. 3 cartons jaunes sur une période maximale de 12 mois engendrent un carton rouge. Tout carton rouge peut faire l'objet d'une convocation devant la section disciplinaire. Tout carton rouge ou jaune est automatiquement effacé un an après son attribution.

6.5 Règles de délivrance du diplôme d'ingénieur de Toulouse INP-ENSEEIHT

[…] Le jury de diplôme prononce la délivrance du diplôme aux conditions suivantes :- Les 180 crédits ECTS du diplôme (ou reconnus comme équivalents par l'école) sont obtenus,

- En application des recommandations de la CTI, le niveau C1 en anglais est souhaitable. Le niveau linguistique d'anglais minimum à valider pour obtenir le titre d'ingénieur diplômé est le niveau B2 confirmé dans toutes les compétences. Ce niveau concerne tous les élèves ingénieurs entrés à l'école en formation initiale. Dans le cas où le niveau B2 confirmé n'est pas obtenu en fin de cursus, le jury suspend la délivrance du diplôme pour un maximum de 3 ans. Au-delà de ce délai, l'étudiant ne pourra plus être diplômé de Toulouse INP-ENSEEIHT. Le niveau d'anglais exigé pour l'attribution du niveau B2 confirmé est de 815 au TOEIC ou 165 au Cambridge Linguaskill. D'autres tests reconnus sont possibles (TOEFL par exemple).
- Le passage d'un seul test de certification est compris dans les frais de scolarité de chaque élève.
- La certification est valable uniquement 2 ans et doit impérativement être valide le jour de la diplomation. Une extension de durée d'1 an sera automatiquement accordée aux étudiants ayant validé un semestre académique dans une université anglophone allongeant la durée globale des études dans le cadre d'un double diplôme.
- Les élèves qui souhaitent repasser un test de certification (score ou date de validité insuffisants) organisé par l'ENSEEIHT doivent s'être acquittés du règlement auprès de l'INP avant de passer le test.
- Si le passage du test de certification compris dans les frais de scolarité est effectué en dehors de l'ENSEEIHT, une contribution de l'école est possible. Les pièces justificatives (certification obtenue et justificatif de paiement) doivent être soumises et validées par l'école. Le montant de la contribution versée s'élève au tarif moyen appliqué par les centres Cambridge Linguaskill, soit 75€ TTC.

How many hours do I need to prepare for my CLB test?1

In order to receive the ENSEEIHT Engineering Degree, you must have a consolidated B2 level in English. This corresponds to a score of 815 in the TOEIC, or 165 in the Cambridge Linguaskill Business test.

According to Cambridge University, it takes approximately **200 guided learning hours** for a language learner to progress from one level of the Common European Framework of Reference (CEFR) to the next.

For example, a candidate with B2 level might need approximately 200 hours of lessons and supervised study to prepare for a *C1 level test.* Factors that can affect how long it will take to increase your level of English, include:

- the intensity of your study
- the amount of study/exposure outside of lesson times

The table below suggests how many guided learning hours you might need to reach each level of the CEFR. These figures are intended as a guideline only. You may require more or less time and support depending on your own needs.

		Target Level				
		A2	B1	B2	C1	C2
Current Level	A1	180-200 hours	350-400 hours	500-600 hours	700-800 hours	1,000-1,200 hours
	A2		170-200 hours	320-400 hours	520-600 hours	820-1,000 hours
	B1			150-200 hours	350-400 hours	650-800 hours
	B2				200 hours	500-600 hours
	C1					300-400 hours

1 Adapted from Cambridge English; Guided Learning Hours. Available at: https://support.cambridgeenglish.org/hc/en-gb/articles/202838506-Guided-learning-hours [Accessed 18 July 2023].

Council of Europe CEFR auto-diagnosis table

		A1	A2	B1	B2	C1	C2
UNDERSTANDING	**Listening**	I can recognise familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.	I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). I can catch the main point in short, clear, simple messages and announcements.	I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.	I can understand extended speech even when it is not clearly structured and when relationships are only implied and not signalled explicitly. I can understand television programmes and films without too much effort.	I have no difficulty in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent.
	Reading	I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.	I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.
SPEAKING	**Spoken Interaction**	I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions in areas of immediate need or on very familiar topics.	I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers.	I can take part effortlessly in any conversation or discussion and have a good familiarity with idiomatic expressions and colloquialisms. I can express myself fluently and convey finer shades of meaning precisely. If I do have a problem I can backtrack and restructure around the difficulty so smoothly that other people are hardly aware of it.
	Spoken Production	I can use simple phrases and sentences to describe where I live and people I know.	I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	I can present clear, detailed descriptions of complex subjects integrating sub-themes, developing particular points and rounding off with an appropriate conclusion.	I can present a clear, smoothly-flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.
WRITING	**Writing**	I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	I can write short, simple notes and messages relating to matters in areas of immediate needs. I can write a very simple personal letter, for example thanking someone for something.	I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	I can express myself in clear, well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select style appropriate to the reader in mind.	I can write clear, smoothly-flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

Notes:

Overview of Assignments

	Assignments	Description
1	**Scientific/Technical Group Presentation**	*In groups of 3, you will prepare and deliver a scientific/technical presentation on a subject of your choice.* *An email invitation including 10 items of useful vocabulary and expressions must be sent to all members of the class (including the teacher) four days before the presentation.*
2	**Technical Writing**	*In-class evaluation. You will write a process description based on technical notes provided on the day. In addition, you will also be tested on your academic integrity (plagiarism).*
3	**Professional Interaction**	*Based on general attitude and on-going performance in class: attendance, punctuality, participation, active listening, preparation, effective group work, etc.*
	Exam Preparation: Cambridge Linguaskill Business *(non-graded)*	*You will sit a mock Cambridge Linguaskill Business test*

Assignment 1: Scientific/Technical Presentation

Objective:

to further develop and improve professional communication skills including:

- ❑ teamwork
- ❑ presentation skills
- ❑ reading & analytical skills
- ❑ evaluation of sources
- ❑ professionalism
- ❑ autonomy
- ❑ scientific vocabulary
- ❑ developing research skills
- ❑ keeping audience interested
- ❑ presenting to non-specialists

Instructions:

- In groups of 3, choose a scientific or technical topic that you are interested in. This could be something that you already specialise in or something that you would like to know more about. The presentation should be aimed at a general, intelligent audience of **non-experts**. You may choose to present a research topic that you are currently working on in your department.
- The presentation must include a **description of data trends (graphs/charts etc)** and a **process description**, in addition to the standard content (**introduction, main body, conclusion, bibliography**).
- Research your topic, being careful to evaluate the reliability of your sources. Keep track of your sources for your bibliography.
- Prepare appropriate visual support. Include graphs, diagrams/numerical data. Remember to cite the source of your images. Using an image that does not belong to you without citation or attribution is plagiarism.
- Practice. Consider your use of body language and vocal techniques.
- Invitation – send an invitation, outline, and 10 items of vocabulary (with English definitions) to your teacher and your classmates four days in advance.
- Your presentation should last 30 minutes. There will be a 10-minute question-and-answer /discussion session following the presentation.

Evaluation:

Students will be evaluated INDIVIDUALLY based on preparation, professionalism, quality of English and presentation / communication skills.

Your class teacher will confirm the presentation date for your group.

Active listening:

All Students in the audience are expected to learn the vocabulary they receive, to prepare questions and to participate in a discussion on the topic. Participation as an audience member will be taken into account when evaluating Professional Interaction.

M1 SCIENTIFIC / TECHNICAL PRESENTATION EVALUATION CRITERIA

NAME: _____ OVERALL MARK: /20

TOPIC: _____

Criteria	Not Validated(0-4.9)	Partially Validated (5-9.9)	Validated (10-14.9)	Well Validated (15-20)	General Comments
Content and Structure	Does not demonstrate a clear understanding of the topic or logical organisation of ideas.	Demonstrates partial understanding of the topic but struggles to organise ideas clearly and logically.	Demonstrates a clear understanding of the topic and organises ideas in a logical manner, with some minor lapses in coherence.	Demonstrates a thorough understanding of the topic and organises ideas in a coherent, engaging, and logical manner.	
Clarity and Accuracy	Lacks clarity / accuracy in explanations, which may be hard to follow or contain frequent errors.	Demonstrates some clarity and accuracy but explanations are occasionally difficult to follow or contain errors.	Demonstrates clear and mostly accurate explanations, with minor issues that do not impede comprehension.	Demonstrates precise and highly accurate explanations, ensuring clarity and ease of understanding throughout.	
Delivery	Limited engagement, weak voice projection, or little to no adaptation to the audience. Poor body language/eye-contact.	Demonstrates partial ability to deliver effectively, with some lapses in engagement, voice projection, or audience adaptation. Body language/ eye-contact need work.	Demonstrates effective delivery with clear voice projection, reasonable engagement, and some adaptation to the audience. Effective body language/eye-contact.	Demonstrates excellent delivery, engaging the audience with strong voice projection, natural delivery, and clear adaptation to the audience. Excellent body language/eye-contact.	
Use of Visual Aids	Visual aids absent, unclear, or poorly integrated into the presentation. Contains spelling errors and numerical errors (, vs .)	Visual aids are present but may lack clarity, relevance, or effective integration. Contains spelling errors and numerical errors (, vs .)	Demonstrates effective use of visual aids that support the presentation, with occasional issues in clarity, relevance, or integration.	Demonstrates exceptional use of visual aids that are clear, relevant, and seamlessly integrated to enhance the presentation.	
Q&A Handling	Does not engage with or respond effectively to questions, providing unclear or irrelevant answers.	Demonstrates partial engage with or respond to questions, with occasional unclear or incomplete answers.	Demonstrates the ability to engage with and respond effectively to most questions, providing clear and relevant answers.	Demonstrates exceptional ability to engage with and respond confidently to all questions, providing insightful and relevant answers.	

Assignment 2: Technical Writing

Objectives:

To develop professional writing skills in the scientific and technical domain

To sharpen skills in summarising and synthesising ideas with the accurate use of grammar and vocabulary

Other skills developed:

- ❑ critical analysis and critical thinking
- ❑ research skills
- ❑ conciseness
- ❑ appropriate style and register in writing

Instructions:

Using appropriate written style, you will compose technical description based on notes provided on the day. You will also be tested on your ability to identify and avoid plagiarism.

Format:

- ❑ Individual hand written evaluation during class time (see calendar)
- ❑ No access to digital tools will be authorised

Evaluation:

★ Sentence Construction, points per sentence:

1 point	Correctly formulated sentence
0.75 points	1 error, not affecting the general sense of the sentence.
0.5 points	Several errors, not affecting the general sense of the sentence.
0.25 points	Several errors, affecting the overall clarity of the sentence.
0 points:	Sentence is unclear/incorrect.

★ Plagiarism: Multiple choice; 1 point per correct answer

Assignment 3: Professional Interaction

This mark is based on your general attitude and on-going performance in class and towards assignments.

Professionalism: attendance, punctuality, participation, preparation, assignments submitted on time and effective group work.

Criteria	Not Validated 0-4.9	Partially Validated 5-9.9	Validated 10-14.9	Well Validated 15-20
Attendance	*Frequently absent without explanation*	*Occasionally absent without explanation*	*Few unjustified absences*	*No unjustified absences*
Punctuality	*Always late*	*Often late*	*Rarely late*	*Always punctual*
Preparation	*Unprepared for class*	*Minimal preparation*	*Mostly prepared*	*Thoroughly prepared for class*
Participation	*Daydreaming, sleeping, or disengaged*	*Easily distracted or minimally engaged*	*Attentive but quiet*	*Focused on tasks and actively engaged*
Team/group work	*Refuses to work in a group or fails to contribute*	*Minimal cooperation or poor teamwork*	*Good team player, cooperative*	*Works exceptionally well with others*
Language	*Frequently uses inappropriate language (e.g., swearing) or speaks French often*	*Occasionally uses French or inappropriate language.*	*Speaks mainly in English and avoids inappropriate language*	*Only speaks English and uses appropriate, professional language*
Concentration	*Regularly engages in inappropriate multitasking (e.g., using mobile telephones, playing games, doing unrelated work)*	*Occasionally distracted by non-class-related tasks*	*Remains mostly focused on class tasks*	*Always focused and fully engaged in class activities*
Instructions	*Frequently ignores instructions or disrupts the class*	*Occasionally misunderstands or fails to follow instructions*	*Follows instructions with minimal guidance*	*Consistently follows instructions accurately and efficiently*
Attitude	*Defeatist, uncooperative, or unprofessional*	*Displays minimal enthusiasm or care*	*Generally professional and positive.*	*Highly professional and consistently positive attitude*

Evaluation Task: How is your Scientific English?

Fill in the gaps in the sentences according to the definitions given at the end of the sentence. Do not use a dictionary or any other resources. You have 20 minutes. (35 questions).

A) Measurements

1. In 1841, Sir George Everest, a colonial official, recorded the location and h…….. of the most famous mountain in the world. (***altitude***)
2. GIS (geographic information systems) are designed to process massive a…….. of data. (***quantity***)
3. The hearing r…….. of bats is enormous; it goes from 50 to 100,000 cycles. (***from the lowest to the highest limit***)
4. It is said that Galileo dropped objects from the leaning tower of Pisa to prove that the speed of fall is not proportional to w…….. . (***heaviness***)
5. Colonial power depended on navigation. In 1714, the British Parliament offered a prize of £20,000 to the first man to develop an a…….. marine chronometer. (***exact, precise***)

B) Frequency

1. Under stress, the heart b…….. faster. (***pulsates***)
2. Over the past 100,000 years, the polar ice sheets have advanced or retreated depending on periodic sw…….. in the climate. (***variations, oscillations***)
3. The famous 19th century millionaire, Carnegie, emigrated to the US from Scotland and began work in a factory for $1.20 p…….. week. (***each***)
4. There will be a r…….. of epidemics as soon as natural immunisation dies out. (***repeated incidence, revival***)
5. The Ebola virus produces a mortality r…….. which can be as high as 88% in human beings. (***a measure of frequency***)

C) Comparison

1. In the early 1970s, b…….. the American and Russian space agencies began exploring the possibility of long-term habitation in space. (***the two agencies***)
2. The upper salinity limit for irrigation is l…….. than 15% of the salt content of seawater. (***≠ more***)
3. Fever has a useful medical function; it not only increases the metabolic rate, but the w…….. environment facilitates the destruction of pathogens. (***higher temperature***)
4. U…….. true organisms, viruses are unable to synthesise proteins because they lack ribosome. (***as opposed to***)
5. Many of the drugs prescribed for human therapy are the s…….. …….. those used for farm animals. (***identical***)
6. Chemicals can be added to vary the properties of the glass. For example, the addition of lead oxide e…….. the refractive index. (***improve***)
7. Fleming noticed that a penicillin solution prevented the s…….. of bacteria. (***proliferation***)

D) Linking words

1. A new technique, **…….** the infra-red camera, means that dust surrounding new stars can be penetrated.

   A) **thus** B) **namely** C) **besides** D) **for instance**

2. Computers can process data extremely fast. ……..... this, they have several serious drawbacks.

   A) **in spite of** B) **whereas** C) **however** D) **moreover**

3. The data is stored on hard disk, ……..... t is easily accessible.

   A) **actually** B) **whereas** C) **e.g.** D) **hence**

4. Applicants for the job should speak at least one other European language……..... French.

   A) **obviously** B) **besides** C) **moreover** D) **actually**

E) Cause and Consequence

1. A superficial interpretation of statistics may l……..... to erroneous conclusions. (***have as a consequence***)
2. The airports are being enlarged, t……..... we can expect an increase in the tourist industry. (***consequently***)
3. D……..... ……..... rising temperatures, the average thickness of polar ice is only half as much as it was 10 years ago. (***because of***)
4. New data supplied by the human genome project is going to s……..... a revolution in medical research. (***cause, start***)
5. In statistics, when the number of possible o……..... is 0, it indicates that an event will never occur. (***consequences, results***)
6. The accident r……..... ……..... two deaths from multiple organ failure. (***had as a consequence***)
7. Lake Geneva is becoming severely deoxygenated during the summer months o……. ……..... the hydroelectric dams built in the upper Rhone. (***because of***)

F) Purpose and Process

1. As far as public transport is concerned, the t……..... is to extend the tram network by 25 km within the next 6 years. (***goal, objective***)
2. The infection causes an inflammation which blocks the artery s……..... blood to the appendix. (***providing, feeding***)
3. To survive on land, reptiles had to develop a skin which was relatively impermeable to water s……..... ……..... ……..... prevent desiccation. (***in order to***)
4. The a……..... of the Government's population policy is to bring about a fundamental change in the demographic pattern. (***the objective***)
5. It was Canadian scientists who first proposed and de……..... the experiment. (***made the plan***)
6. A complete survey of the surface of the Earth has been carried out b……..... ……..... ……..... high-resolution satellite photography. (***using, thanks to***)
7. The escape velocity, which is 40,250 kph, e……..... a rocket to overcome the Earth's gravitational pull. (***permits***)

Score out of 35:

Notes:

Describing Data

Numbers: a few reminders

AND

- **In British English:** when saying numbers above 99, group them into 'hundreds' and say "and" after the first number in each group of 3.
- 651, 235, 308 = *six-hundred-**and**-fifty-one-million—two-hundred-**and**-thirty-five-thousand—three-hundred-**and**-eight*

- **In American English:** do not say "*and*" when constructing numbers.
- 651, 235, 308 = *six-hundred-fifty-one-million—two-hundred-thirty-five-thousand—three-hundred-eight*
-

PLURAL 'S'

- **Don't add 's' if you give an exact number or with quantifiers like 'several' or 'a few':**
  - two thousand years
  - three hundred
  - four billion
  - several million years
  - a few thousand dollars

a few hundred cats

- **Do add 's' if you don't give an exact number:**
  - hundreds of people
  - thousands of years
  - millions of dollars

LONG and SHORT SCALES

There are two different scales in used to describe long numbers and misunderstandings can happen when people from various countries work together. Understanding these differences can prevent confusion in reports, presentations, and data analysis.

Many English speaking countries, including the UK and the USA, typically use the **SHORT SCALE.**

Please note that some older documents - and people - may use the Long Scale.

1,000,000 = 1 million

1,000,000,000 = 1 billion

1,000,000,000,000 = 1 trillion

Many European countries typically use the **LONG SCALE**

1,000,000 = 1 million

1,000,000,000 = 1 thousand million

1,000,000,000,000 = 1 billion

1,000,000,000,000,000,000 = 1 trillion

DECIMAL POINTS and COMMAS

In English, **the dot symbol is used to indicate the decimal point.**
Every number following a decimal point should be read separately.

81.59 = *eighty-one point five nine*
−0.067 = *minus nought **point** zero six seven*

The comma is used to facilite the reading of long numbers.
9,632.32 = *nine-thousand, six-hundred-and-thirty-two **point** three two*

POWERS

UK : x to the (power of) n

USA: x to the nth (power)

0

In British English there are several ways of referring to the number 0.

Zero is often used in maths or scientific situations.

Nought is only used in British English and is often used in everyday mathematical situations, but more rarely in scientific contexts.

Nil is used when talking about the score in a game and also in medical situations (*"nil by mouth"* meaning do not give any food or drink orally).

Oh is a feature of spoken English, particularly when reading telephone numbers and reference numbers. It is also used when saying times using the 24-hour system.

Numbers: Listening

You are going to hear eight short extracts in which scientists discuss their work. Read the questions below, then listen to each extract and write down the number that you hear.

What was the dosage of fluoride per kilogram of body weight? _____

What was the sensitivity of the assay? _____

What is the output impedance at the 5 V end? _____

What amperage of flex is used? _____

What is the temperature below which the superconductor conducts electricity with no resistance? _____

What is the enthalpy change when 2 moles of water are formed at a pressure of one atmosphere and a temperature of 298 kelvin? _____

What is the lowest frequency at which young mice squeak (make a noise) when isolated from their mother?

_____

What speed laser pulses were used? _____

Listen and complete the values (a- l) with the number or numbers you hear:

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

h) _____

i) _____

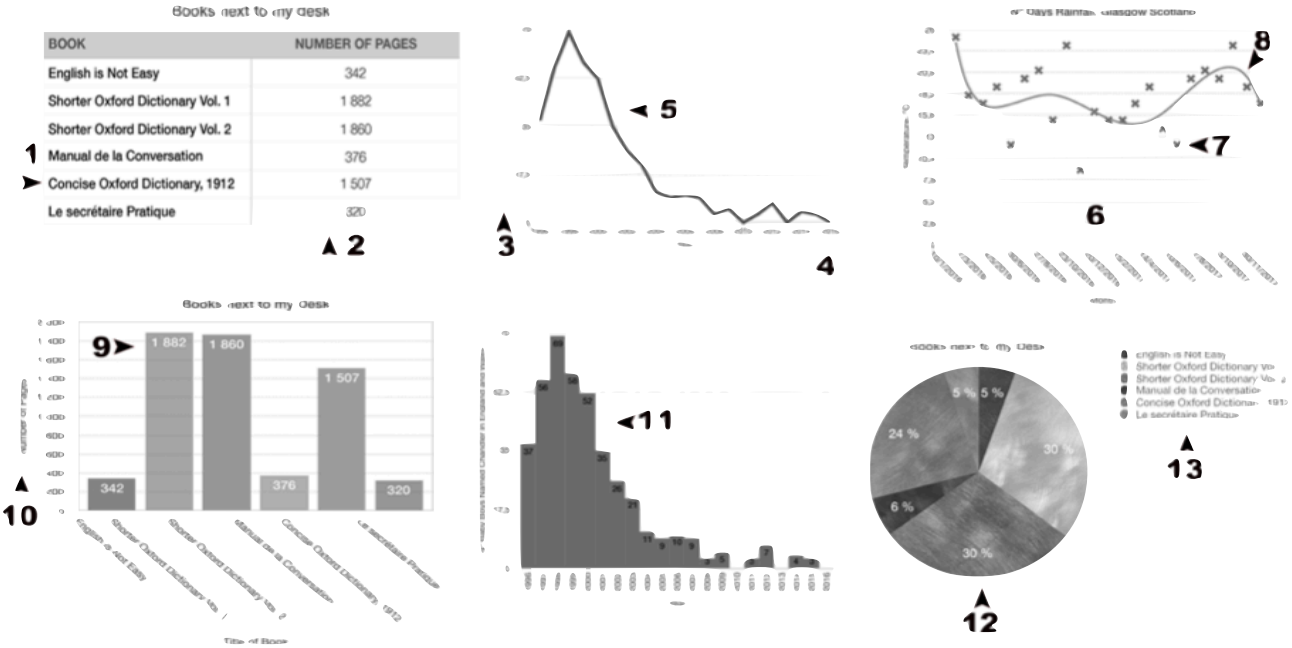
j) _____

k) _____

l) _____

Graphs: Evaluation Task

1) Look at the visuals below.
Match elements 1 - 14 with the appropriate label (A - N).

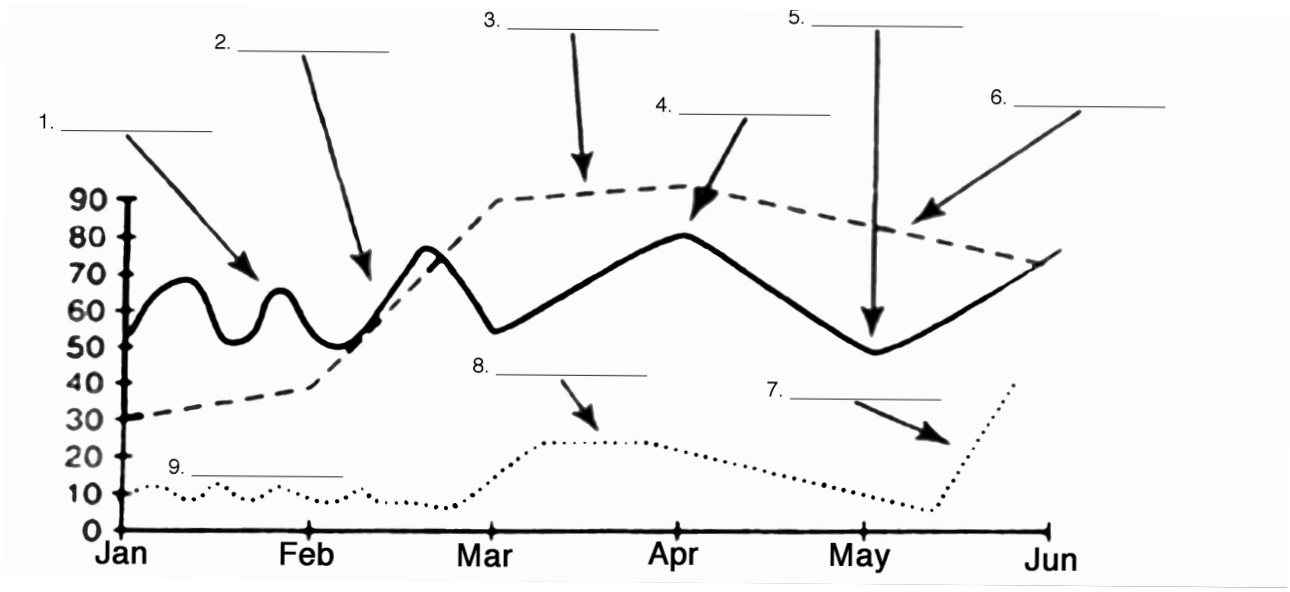


A. Pie chart	H. Data point
B. X-axis	I. Histogramme
C. Line of best fit	J. Column
D. Legend	K. Scale
E. Bar chart	L. Label
F. Y-axis	M. Scatter plot
G. Line / row	N. Line graph

1		8	
2		9	*type of graph/chart*
3		10	
4		11	*type of graph/chart*
5	*type of graph/chart*	12	*type of graph/chart*
6	*type of graph/chart*	13	
7		14	

2) Study the graph below and complete the labels 1-9 with an appropriate noun, verb, adverb or expression from the following list (there is more than one possible location for some terms):

To reach a peak	*To remain constant*	*A downward trend*	*To rise steeply*
To reach a plateau	*An upward trend*	*A trough*	*To decline gently*
To level off	*Fluctuations*	*To worsen*	*To recover*



3) Name the different types of line in the graph above:

(i) ——————

(ii) - - - - - - - - -

(iii) ....

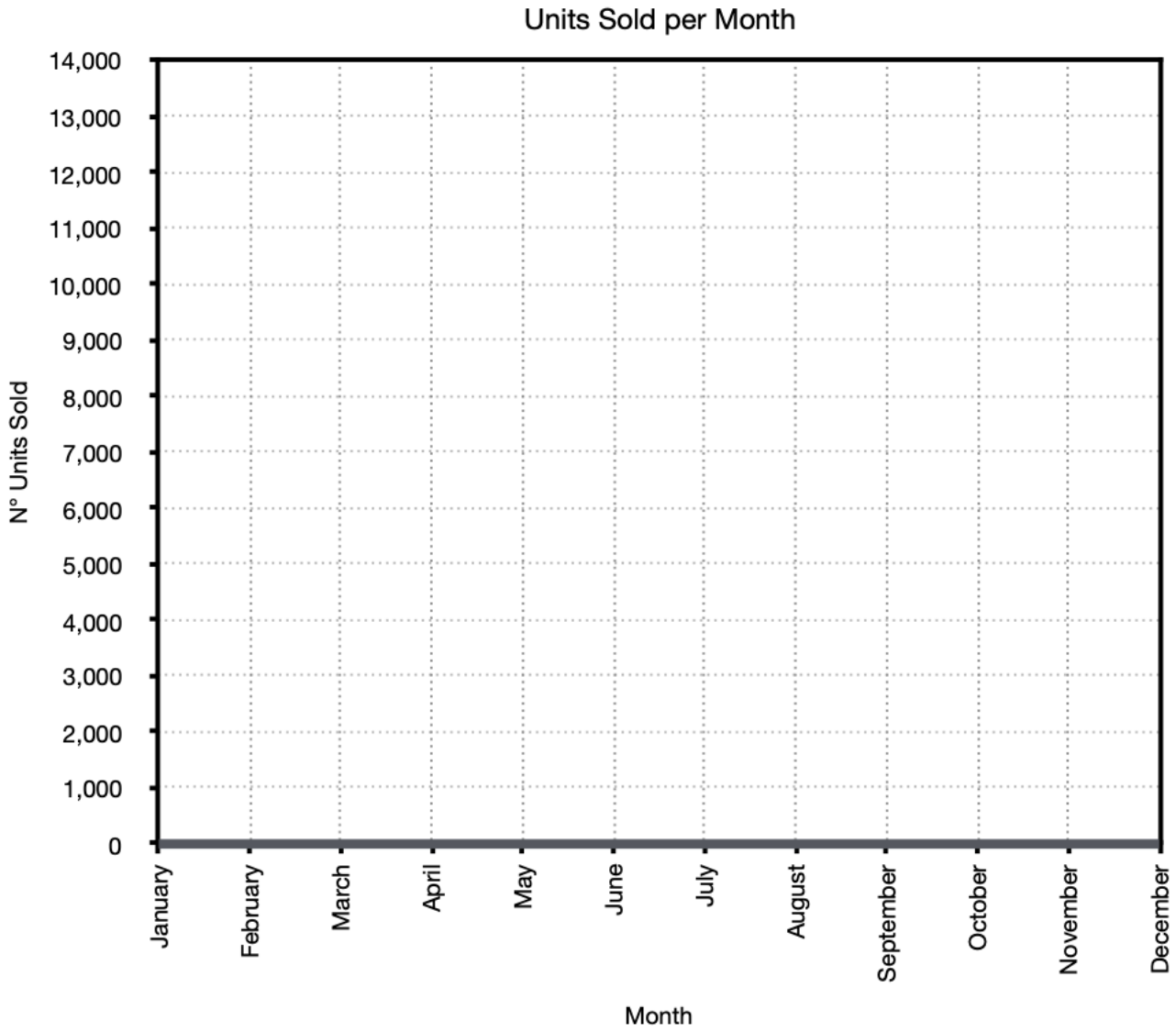
4) Fill in the blanks with the following prepositions:

by / within / from / for / to / over

Visual Aid	Topic	Circumstances
This graph shows ...	the results of our products ...	_____ a period of 10 years.
The diagram outlines ...	rates of economic growth ...	_____ 2018 _____ 2022.
This table lists ...	the top ten corporations...	in the industrial world.
This pie chart represents	the company's turnover ...	_____ this year in our sector.
This line chart depicts ...	the impact of air pollution ...	_____ year 2030.
This chart breaks down ...	the sales of each device...	_____ the past 48 hours.

Graphs: Listening

Listen to a boardroom presentation concerning sales figures over a 12-month period and complete the graph below.



Graphs: Additional Vocabulary

Referring to Visuals

- As you can see
- Here, on the bottom left hand corner
- This can be seen over here in the second column
- This curve illustrates
- The table illustrates
- The figure
- The Diagram
- The Shaded area
- The largest sector

Describing a Curve

- The curve rises / increases / goes up / reaches a peak
- The temperatures drops / goes down / decreases / declines / reaches a low point
- It levels level / reaches a plateau / stagnates / remains stable
- A sharp / steep / significant / considerable / unexpected / gradual fall
- It declines steadily / abruptly / dramatically / unexpectedly with minor fluctuations

Patterns and Tendances

- A general trend
- A growing tendency
- A slow but steady increase
- A clear pattern
- An overall improvement
- A swing
- The richer people become, the more energy they consume

Chronology

- From then on / onwards
- Immediately after that
- At this stage
- Over the last few years
- Up to now
- In the near future
- Shortly
- Before long
- By the end of the year
- It is expected

Contrast, Comparison & Similarity

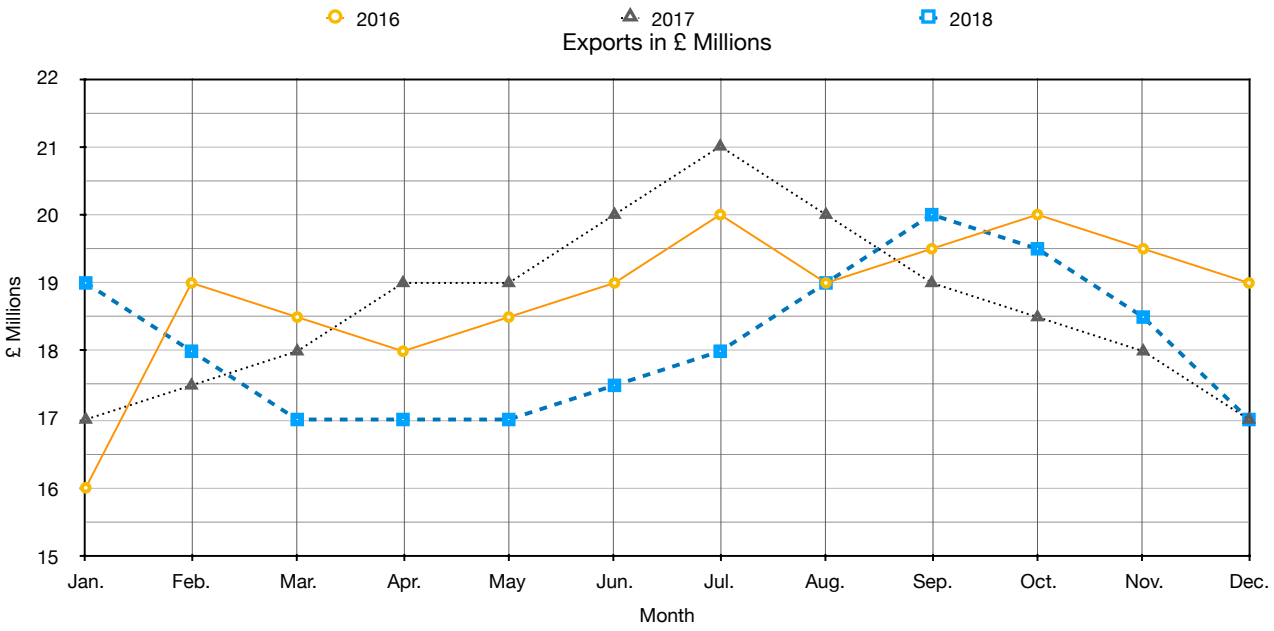
- By contrast
- As opposed to
- Unlike
- However
- While
- Nevertheless
- On the other hand
- In the same way
- Similarly
- Likewise
- By comparison
- Compared to
- A great deal better
- Considerably worse

Graphs: Pair work

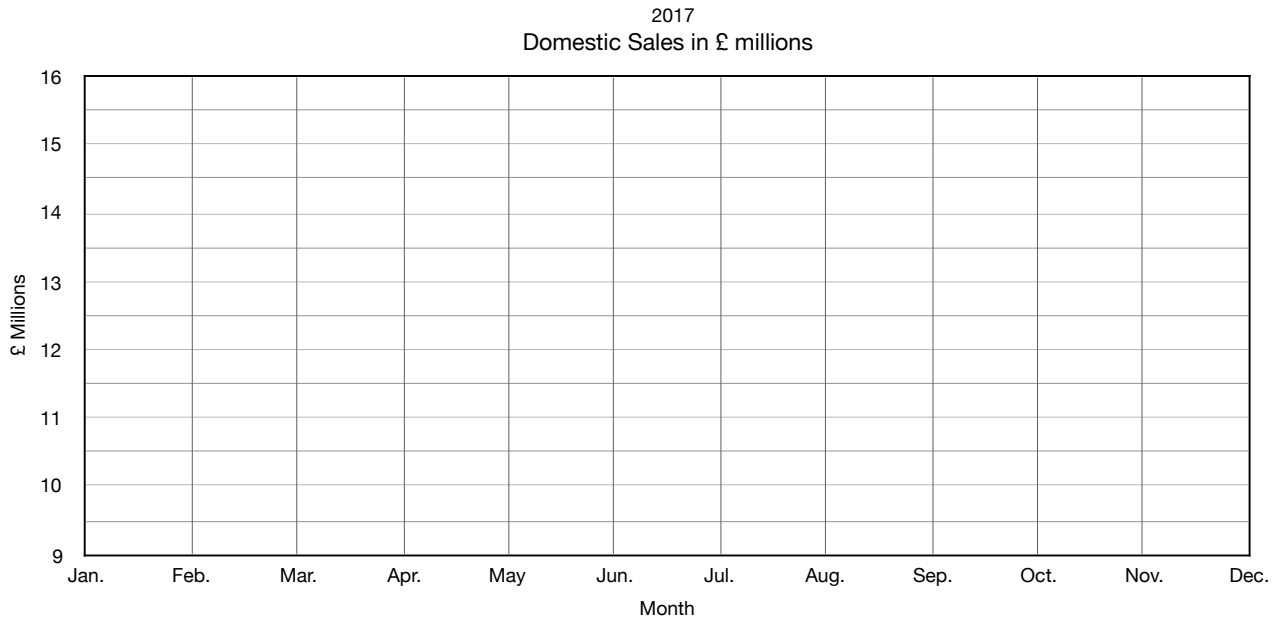
Student A

[Student B, page 26]

1) The graph below shows a company's exports in £ millions, over a 12-month period. Describe the graph to Student B.



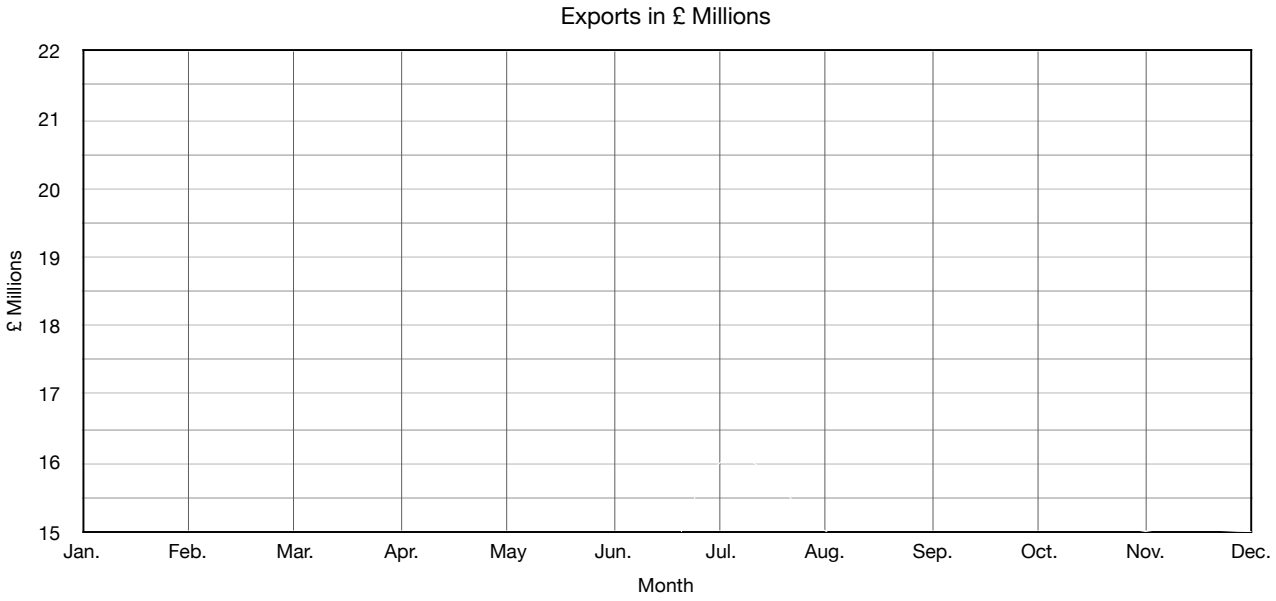
2) Now listen to Student B's description of the company's domestic sales, and complete the graph below.



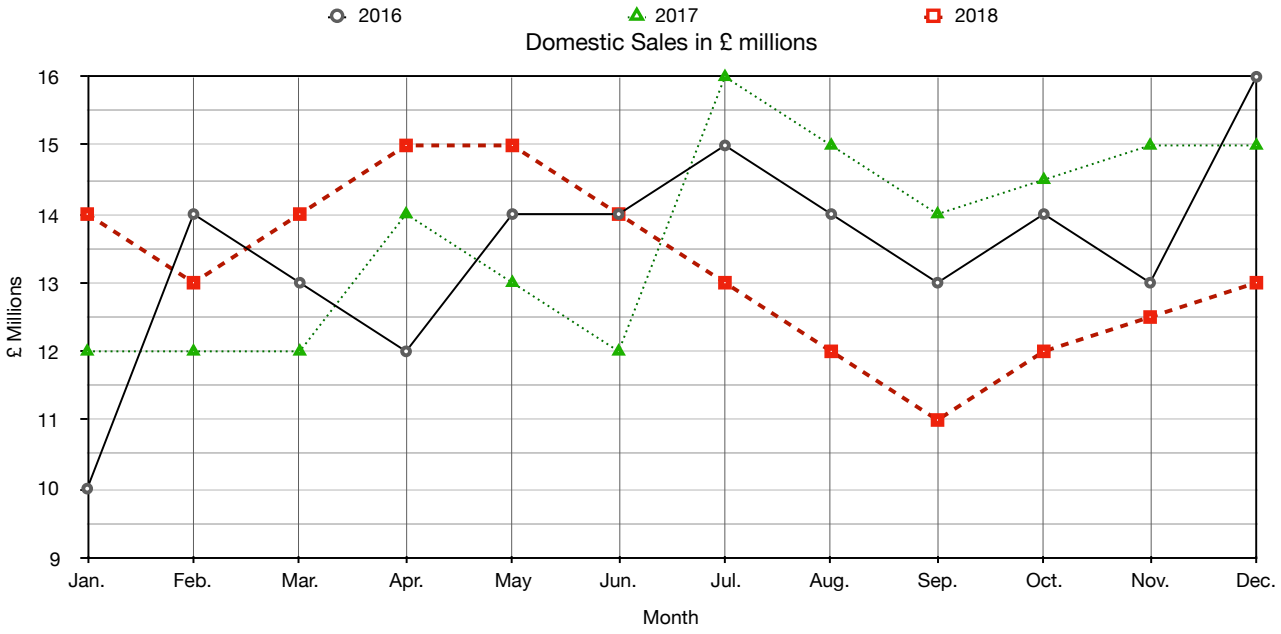
Student B

[Student A, page 25]

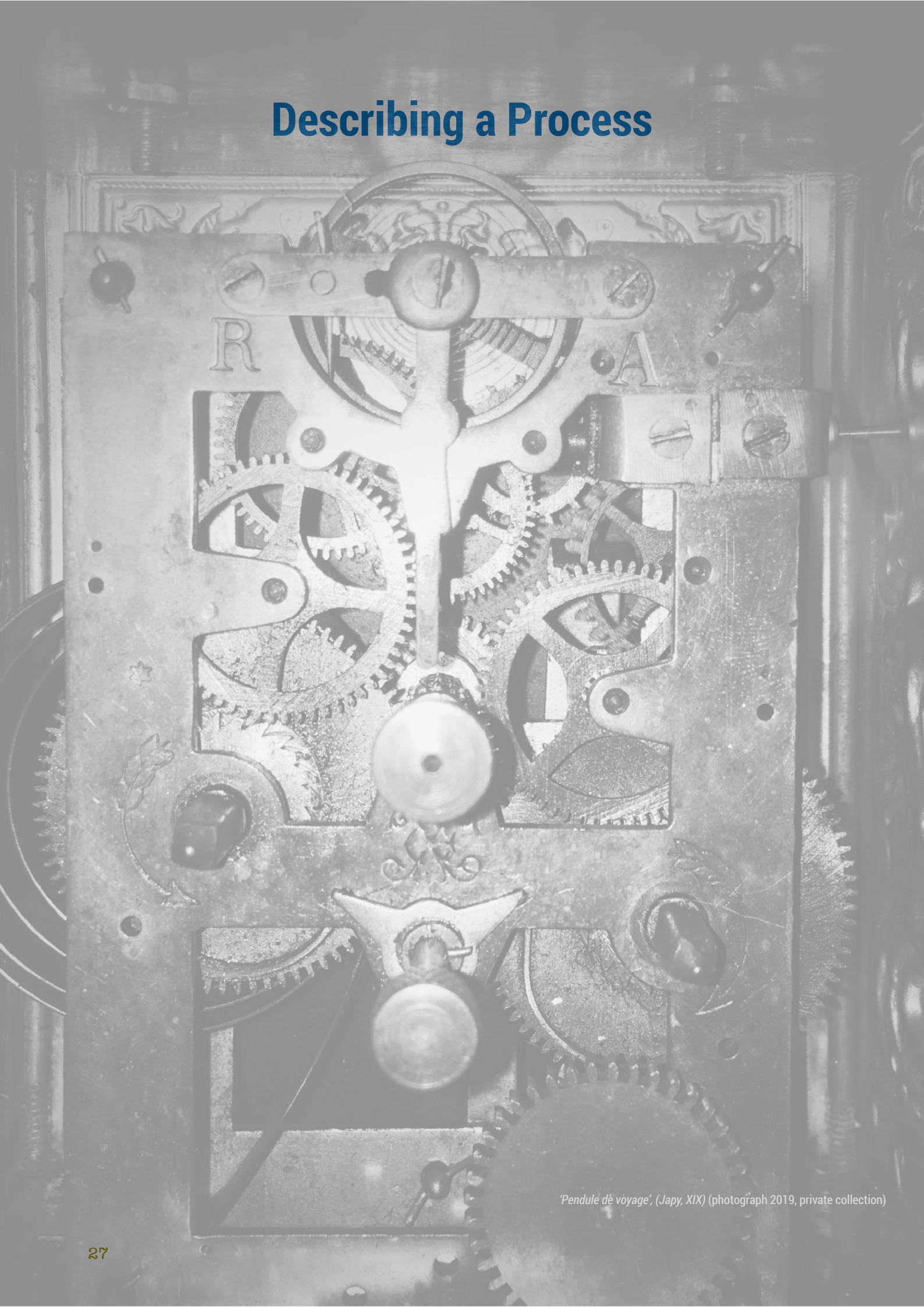
1) Listen to Student A's description of a company's exports, and complete the graph below.



2) The graph below shows a company's domestic sales in millions, over a 12-month period. Describe the graph to Student A.



Describing a Process



'Pendule de voyage', (Japy, XIX) (photograph 2019, private collection)

The Passive Voice

*The passive form alone accounts for **roughly 35% of all verbs** found in general scientific texts. By using the passive, the focus can be placed on the action - on what was done and not who did it. Science is not particularly interest in the actor ("I", "you", "she"). It is the action or result that matters.*[2]

There are two voices in English: the **Active** and the **Passive**.

- The active voice describes what the subject does.
  - ➡ *Millions of people use the internet every day.*

- The passive voice describes what is done to the subject.
- It is usually used when we don't know (or are not interested in) who performs the action.
  - ➡ *Julianne's leg was bitten by some dog.*

- The passive voice *is formed* with: **To Be + Past Participle**

In informal, spoken English, the passive can also be formed by:

To Get + Past Participle

- ➡ *got broken*

All the verb tenses can be expressed in the passive voice.

- ➡ *The solution was heated to 100 degrees.*
- ➡ *The solution will have been heated to 100 degrees.*

BY is used to show the person or thing doing the action

- ➡ *The painting was made **by** a monkey*

Image: Gutiérrez, L. (2013). English is not easy. 1st ed. Barcelona: Blackie Books

Processes *are usually described* in the passive voice as the action is more important than the person or thing performing it. If a sequence of actions *is being described*, it is not always necessary to repeat the auxiliary "to be".

- *The metal sheeting **is heated** and **bent** into shape before **being cooled**, **polished**, and finally **painted**.*

The **present simple** is usually the most appropriate tense if the action described is a generally accepted fact.

If a *specific* experiment/trial is being referred to, the **present perfect** or **past simple** are more appropriate (depending on the context].

[2] *Jans, V., Blattes, S. and Upjohn, J. (2006] 'Unit 11, Impersonal Forms', in Minimum competence in scientific English. Les Ulis: EDP Sciences.*

The Passive Voice in Process Descriptions: exercises

Put the verbs in the following process descriptions into the passive voice. Pay attention to your choice of verb tense.

Example Process 1: ***Reverse Osmosis Water Desalination***

Reverse osmosis is a widely used method for desalinating seawater. This technique **[develop]** _____ in the mid-20th century as a solution to increasing water scarcity. Early prototypes **[test]** _____ in laboratories before being deployed in coastal areas.

In this process, seawater **[draw]** _____ into the system through an intake pump. Once inside, the water **[filter]** _____ to remove large particles such as sand and debris.

Next, the water **[pressurise]** _____ using a high-pressure pump. This step is critical because the pressure allows the water to pass through a semi-permeable membrane while leaving salts and impurities behind. The membrane **[design]** _____ to allow only water molecules to pass through, blocking larger molecules like salt and bacteria.

The filtered water **[collect]** _____ in a storage tank, while the concentrated brine **[discharge]** _____ back into the sea. During this process, energy **[recover]** _____ using specialised devices to improve efficiency and reduce operating costs.

Reverse osmosis systems **[use]** _____ worldwide in regions where fresh water is scarce. Over the years, these systems **[improve]** _____ significantly through advances in membrane technology and energy recovery systems.

Future innovations **[expect]** _____ to further enhance efficiency and reduce costs, making desalination more accessible for developing regions.

Example Process 2: Wind Turbine Operation

Wind turbines **[install]** _____ in regions with consistent wind patterns. The first modern turbines **[develop]** _____ in Denmark in the early 20th century to harness renewable energy. The blades **[rotate]** _____ by wind force, which generates kinetic energy. This energy **[convert]** _____ into electricity using a generator housed in the turbine nacelle. Excess electricity **[store]** _____ in batteries or sent to the grid. Modern turbines **[design]** _____ to operate efficiently even in low-wind conditions, and further advancements **[anticipate]** _____ in the next decade.

Example Process 3: Fluid Mechanics and Pipe Flow Testing

In fluid mechanics, pipes **[inspect]** _____ for leaks and structural integrity before testing begins. The first systematic testing protocols **[introduce]** _____ in the 19th century as engineers began studying fluid dynamics in detail. Today, a dye solution **[introduce]** _____ into the pipe system to trace potential leaks. The flow rate **[measure]** _____ using specialised sensors, and pressure changes **[record]** _____ for analysis. Results **[compare]** _____ with theoretical models to validate the system design. Over time, testing protocols **[refine]** _____ to improve accuracy and safety.

Key Functions & Grammar: Purpose & Processes[3]

Purpose is concerned with questions of "**why**" or for "**what reason**" something is done.

Nouns

the purpose – function – use – aim – goal – target – objective

*Metal is increasingly used in architecture for structural **purposes**.*
*The main **objective** of hydrology is to study the physical and chemical processes of the water cycle.*

Verbs

it is designed to/for – is devised to/for – is responsible for – functions as – operates as – provides – supplies

*The new safety measures were **designed to** reduce the risks of contamination.*
*A cooling system was **devised for** the preservation of clinical specimens.*
*The haemoglobin **provides** the extra oxygen.*

Other expressions

in order to – so as to – so that

"*In order to*" and "*so as to*" have the same meaning as "*to*", and are used to emphasise the idea of purpose
"So that" is followed by a clause composed of subject + verb

*Platinum contacts should be used **to** prevent oxidisation.*
*Platinum contacts should be used in **order to** / **so as to** prevent oxidisation.*
*Platinum should be used **so that** oxidisation can be prevented.*

[3] *Jans, V., Blattes, S. and Upjohn, J. (2006) 'Unit 10, Purpose & Process', in Minimum competence in scientific English. Les Ulis: EDP Sciences.*

Process is concerned with questions of "how" or "in what way" something is done.

Adverbial and propositional phrases

by means of – through – thanks to – via – therefore – thus – thereby

*The brain was damaged **through** lack of oxygen.*
*He switched off the computer, **thereby** losing all the data.*

Verbs

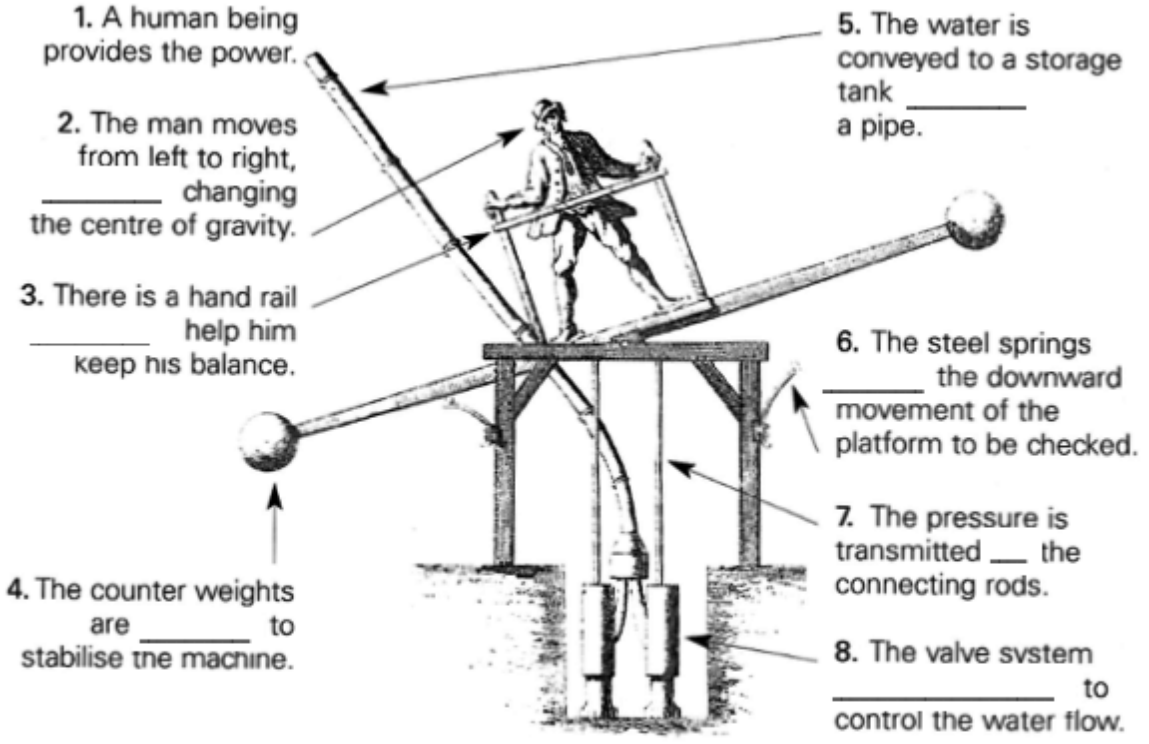
to enable – make (it) possible (for) – allow – permit

*The carbon compounds are responsible for the chemical reactions that **enable / make it possible** for the cell to grow.*
*Visibility was poor - the plane was not **allowed / permitted** to land.*
*The Erasmus grant **enabled / made it possible for / allowed / permitted** them to go on studying.*

An 18th century water pump.

Complete the gaps with an appropriate word or phrase from the list below:

by means of – makes it possible – designed – in order to – thereby – responsible for – via – by means of – enable



9. In the past, it was essentially the lack of power systems that was _____ industrial stagnation.

Guide to Tenses for Engineering Students

1. Present Simple: *"It works."*

- **To describe things that are always true or regularly happen.**
  - *"Water boils at 100°C."*
  - *"This material resists high temperatures."*
  - *"The team meets every Monday."*

- **To describe how something works or is done.**
  - *"First, the wires need to be connected."*

2. Present Perfect: *"It has been tested."*

- **Results or consequences in the present**: To focus on what has happened up to now.
  - *"We have completed the simulation."* (The result is relevant now.)

- **To describe things that have happened at some point in the past** (no specific time).
  - *"I have worked with this type of software before."*

- **Recent actions**: When no specific time is mentioned.
  - *"He has just fixed the issue."*

3. Preterite / Past Simple: *"We tested it yesterday."*

- **Completed actions in the past**: To describe something that happened at a specific time.
  - *"We ran the tests last week."*
  - *"She presented the report in December."*

- **Stories and sequences**: To narrate past events in order.
  - *"First, we collected the data, then we analysed it."*

4. Future Tenses: "It will be tested."

- **Will**: For predictions or decisions made on the spot.
  - *"We will complete the project next month."*
- **Going to**: For planned actions.
  - *"We are going to test the prototype tomorrow."*

The Present Perfect has no equivalent in French. Whilst the structure looks similar, the Present Perfect is NOT the same as the *Passé Composé*. If you would use the *Passé Composé in French,* you should probably consider using the Preterite in English.

- **Do not use Present Perfect** to specify a time in the past.
- If there's a clear **past time reference** (*last year, in 2020, yesterday, etc*), use the **Preterite**.
  - *Incorrect*: "We have tested the prototype yesterday."
  - *Correct*: "We tested the prototype yesterday."

Part 1: Choose the correct tense (Present Simple, Present Perfect, or Preterite) and fill in the blanks with the appropriate form of the verb in parentheses.

1. The company _____ (**test**) its latest prototype last week.
2. Engineers _____ (**improve**) battery efficiency over the last decade.
3. The machine _____ (**operate**) at a high temperature during normal conditions.
4. We _____ (**finalise**) the report yesterday and submitted it to the client.
5. She _____ (**collaborate**) with several teams on this project so far.
6. This material _____ (**conduct**) electricity more efficiently than copper.

Part 2: Correct the errors in the following sentences. Pay special attention to tense usage.

1. *We have built the prototype last year.*
   Corrected Sentence: _____
2. *The experiment has taken place yesterday.*
   Corrected Sentence: _____
3. *He works on the project for three months now.*
   Corrected Sentence: _____
4. *The results were just published.*
   Corrected Sentence: _____
5. *They completed their analysis and have shared the results with us last week.*
   Corrected Sentence: _____

Part 3: Engineering Focus

Read the short paragraph and fill in the blanks with the correct tense.

*Our team _____ (**develop**) a new algorithm to optimise energy efficiency. This algorithm _____ (**analyse**) data from various sensors in real-time. Last week, we _____ (**test**) the algorithm in a simulated environment, and the results _____ (**show**) significant improvements in energy usage. We _____ (**receive**) positive feedback from industry experts so far.*

Part 4: Find and correct the errors in the following paragraph.

Last year, engineers has started working on the new wind turbine design. The team has conducted several tests since then. Recently, they finish assembling the first prototype and it performs well during initial trials. It is expected to generate 20% more energy than current models.

Notes:

Giving a Presentation

A Friday Evening Discourse at the Royal Institution; Sir James Dewar on Liquid Hydrogen, painting, Henry Jamyn Brooks, 1904. Royal Institution UK, accessed 26/01/2023 https://commons.wikimedia.org/wiki/File:Henry_Jamyn_Brooks_-_A_Friday_Evening_Discourse_at_the_Royal_Institution;_Sir_James_Dewar_on_Liquid_Hydrogen,_1904.jpg

Guidelines for Group Presentations

Selecting the content

Generating and organising your ideas: first brainstorm to generate a lot of ideas. Then, create a mind map to begin to explore the scope of what you can cover, what you will leave out, and how your points will relate and follow on from each other.

Organising the structure

Audiences need strong orientation and clear reminders of what has been covered:

Say what you will say
[Introduction]
↓
Say it
[Main Body]
↓
Say what you said
[Conclusion]

The Introduction

- Tell them who you are and why you are giving this presentation.
- Tell them what the presentation is about and what you will be covering.
- Tell them what your objectives are.
- Tell them what's in it for them.
- Use an opening attention grabber (image, question, shocking statistic, story, etc.).

The Main Body

- Give details of your topic in a logical, smoothly linking order.
- Use anecdotes and real examples to illustrate your points.
- Show the relevance of the content to the bigger picture.

The Conclusion

- Summarise and highlight your main points.
- Tell them the benefits that your solution/ conclusion will bring to them.
- Tell them what you want them to do next.
- Use a closing attention grabber (image, pertinent quotes, food for thought, etc.).
- End on a high. DO NOT END BY SAYING ***"That's it!"***
- Ask for questions.

Visual Aides

- Use a professional looking templates.
- Number slides for easy reference.
- Cite all data sources and images
- Process Description: Include diagrams or flowcharts to enhance clarity.
- Data Presentation: Use clear charts (e.g., bar, line, or scatter plots).
- Avoid overly complex visuals—focus on readability.
- Ensure that any numbers are correctly formatted for an English presentation.
- CHECK YOUR SPELLING

General tips

- Keep your audience engaged by
    - Maintaining eye contact, adapting your body language and varying tone and pace to keep their attention.
    - Breaking up content using *short* videos, animations, or live demonstrations (where appropriate) to add variety.
    - Asking rhetorical questions to re-focus attention (e.g., "What happens if this parameter changes?").

- Ensure that you practice the presentation as a team to ensure smooth transitions between speakers.

- Have a backup plan: Save slides on a USB and email them to yourself for easy access. Make sure that your computer is compatible with the projector in the room.

- Time Management: Use a timer to keep on track during the presentation.

Signposting Language for Presentations

Signposting enables the audience to know what to expect next instead of being lost in a lot of complex information.

Starting the Presentation *Introduce the topic, outline the structure, and establish a professional tone*	• Good morning/afternoon. My name is [Name], and I am presenting today alongside [Name 2] and [Name 3]. Together, we will address... • Welcome to this presentation on [topic]. This topic is particularly significant because… • The subject of today's presentation has substantial implications for [field/ industry]. • Our primary objective today is to provide a comprehensive understanding of… • The aim of this presentation is to demonstrate… • We will begin by examining [point 1], followed by a discussion of [point 2], and conclude with [point 3].
Transitioning Between Sections *Ensure seamless progression from one part of the presentation to the next.*	• Let us now proceed to the next section, which focuses on… • Having discussed [previous point], we will now turn our attention to… • To summarise, this section has demonstrated that… • This leads us to the next topic, which examines… • Building on this foundation, let us now consider... • At this juncture, I would like to hand over to [Name], who will elaborate on… • Now, [Name] will take you through…
Presenting Data and Trends *Clearly communicate and interpret data for the audience.*	• This graph illustrates the relationship between… • Here, we observe data representing… • As demonstrated in the chart, there is a notable increase in… • The data reveals a steady decline in… • It is worth highlighting that… • A particularly noteworthy aspect of this data is…
Concluding the Presentation *Leave a strong impression and summarise key takeaways.*	• In conclusion, we have demonstrated that… • To summarise, this presentation has outlined… • Our recommendation moving forward is to… • Thank you for your time and attention. We are now happy to address any remaining questions.
Managing Questions During Q&A *Facilitate a professional and thoughtful exchange with the audience.*	• We now welcome any questions you may have regarding the presentation. • If there are any points requiring further clarification, please feel free to ask. • Could you kindly elaborate on your question? • To confirm, are you asking about…? • Thank you for your question. The explanation is as follows…

Presentation practice tasks

Task 1: Your new love for …

Choose a scientific or technical field/problem/phenomenon/product that you are indifferent about, and speak about it enthusiastically for 3 minutes. Use your voice, emphasis, and body language to convey your newfound love for this topic. If you can make this topic sound exciting, then you have what it takes to passionately talk about what you are ***really*** *interested in.*

Task 2: Three Minute Thesis

Give your own "Three Minute Thesis" on a scientific/technical project that you are working on or a scientific field that you are passionate about.

Task 3: Break your own news in engineering

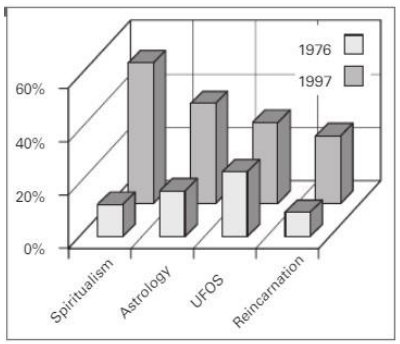
Tell your classmates about the latest news in the field of your studies / specialisation using the template on breakyourownnews.com. Your presentation must be 3 minutes long and include the use of presentation phrases. Download the image and "share" your screen when you present. Expect questions from your audience members. https://breakyourownnews.com

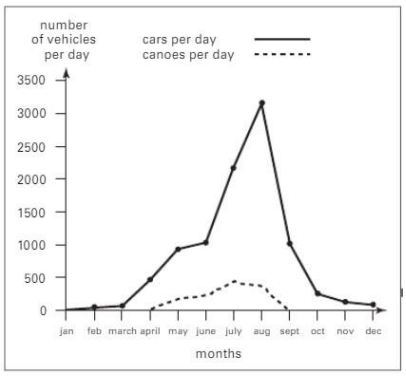
Task 4: Tell a Photo Story

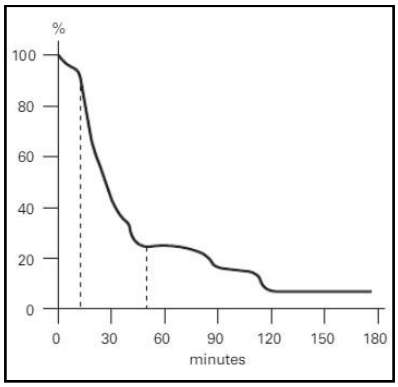
Practise your storytelling skills, which proves to be one of the best ways to engage an audience and help them retain the information you're sharing. Your teacher will show you an intriguing photo and have you prepare a 3-minute compelling story based on this photo. Link your story to a scientific/technical topic. End your story with this sentence: "This story illustrates..."

Task 5: Graphs

Create a scenario that might reflect the data captured in each of the graphs below. Describe each graph in detail using the appropriate language (3 minutes). Each graph should be presented with a different focus - entertaining / inspiring/ optimistic/ pessimistic/ currently relevant.







Article: How to be a good listener

Stephen Moss, The Guardian, Mon 20 Jan 2020 09.00 CET

Content adapted and reused courtesy of Guardian News & Media Ltd[4]

Read the following article.

Find at least 5 important reasons to develop your listening skills.

How to be a good listener: my mission to learn the most important skill of all

Kate Murphy's new book, You're Not Listening, suggests that many of us – absorbed in our own thoughts and dreams, occupying our little digital bubbles – have lost the ability to listen, creating an epidemic of loneliness and isolation.

[…]

"Bad listeners are not necessarily bad people," Murphy says in her book, but being unable or unwilling to listen is not an attractive characteristic. It's time for a spot of re-education. […]

"Everybody is interesting if you ask the right questions," says Murphy. "If someone is dull or uninteresting, it's on you." […] **Everyone is so intent on expressing their own opinion, or they're so distracted by technology or by their own thoughts, that it's making us isolated, misinformed and intolerant.** I wanted to raise awareness of the value and great joy of listening." She spent two years analysing academic research on listening and interviewed numerous people who are paid to listen intensely – "spies, priests, psychotherapists, bartenders, hostage negotiators, hairdressers, air-traffic controllers, radio producers, focus group moderators". The result is a fascinating guide to something we assume we do automatically, yet for the most part do very badly.

To be able to really listen, you have to get rid of your own ego, your own thoughts

Murphy doesn't claim to be a naturally good listener, but says she is a "practised" one. "Anyone can get good at it," she argues. "The more people you talk to, the better your gut instinct. You're able to pick up those little cues." She says t**he fact we now spend so much time communicating electronically means we are losing the ability to pick up all those face-to-face cues**. Without them, she explains, "you're not going to get the full context and nuance of the conversation".

Bad listeners may not be bad people, but Murphy says **the effects of bad listening are profound**. "Anyone who has shared something personal and received a thoughtless or uncomprehending response knows how it makes your soul want to crawl back into its hiding place," she writes. "Whether someone is confessing a misdeed, proposing an idea, sharing a dream, revealing an anxiety or recalling a significant event – that person is giving up a piece of him or herself. And if you don't handle it with care, the person will start to edit future conversations with you, knowing: 'I can't be real with this person.'" […]

"To be able to really listen, you have to get rid of your own ego, your own thoughts," says Gillian Rowe, a psychotherapist based in Tunbridge Wells. "It's almost impossible to do, but you've got to try to put all that aside." She says that, when she works with couples, she asks them to listen to each other and then repeat what the other has just said. "That might sound like quite an easy exercise to do," she says, "but invariably they will put their own twist on it and change it." Ego-free, agenda-free listening is hard.

[…]

Murphy argues that our growing failure to listen has dire political consequences because we are no longer willing to engage with our opponents' points of view. In the US, for instance, "senators used to meet in a communal dining room where they talked to each other and were exposed to each other in a way where they could really listen, whether it was about politics or something else. They humanised each other. Now people are intent on being separate and demonising one another. It's not just that they don't agree. They think the other person is bad, is an evil person. You can't start listening if you think the other person is fundamentally an idiot or a bad person." She says you only grow when you listen to opposing viewpoints – a powerful argument for escaping from our social-media echo chamber.

[…]

The real art of listening lies in caring, profoundly caring, about what you are being told and about the person who is telling their story. In her book, Murphy offers an encomium to the people she has interviewed during her career. "Without exception, they have expanded my worldview and increased my understanding," she says. "Many have touched me deeply. People describe me as the type of person who can talk to anyone, but it's really that I can listen to anyone." Curiosity, empathy, a genuine interest in other people. The art of listening is really the art of being human.

[4] *How to be a good listener: My mission to learn the most important skill of all (2020) The Guardian. Available at: https://www.theguardian.com/lifeandstyle/2020/jan/20/how-to-be-a-good-listener-my-mission-to-learn-the-most-important-skill-of-all (Accessed: 31 January 2024).*

Technical Writing

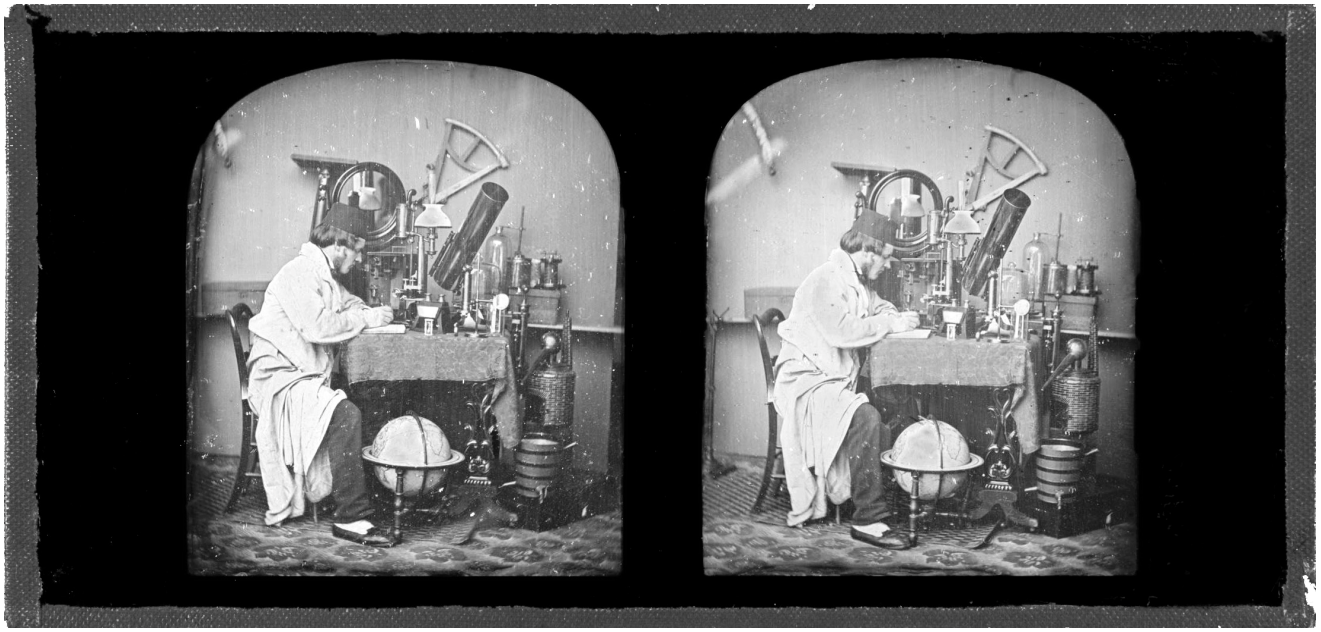


Image. Stereoscopic daguerreotype of a scientist, tinted glass. c.1850.Private Collection.

Written Style: Style & Grammar Checklist

Common Grammar and Structure Errors

Articles: *a*, *an*, *the*, [no article]
French Influence: Articles in French are used differently, often leading to omissions or overuse in English.
Rule: Use *the* for specific items, *a/an* for singular, non-specific items, and omit articles for generalisations in plural or uncountable nouns.
☺ *The algorithm improves energy efficiency.* (Specific algorithm)
☹ *Algorithm improves energy efficiency.*
☺ *A new sensor was tested.* (Non-specific sensor)
☹ *The new sensor was tested.* (when it's the first mention, use a)
☺ *Fluid mechanics is a fascinating field.* (Generalisation—no article)
★ **Tip: Think of *the* as pointing to something both speaker and listener know about.**

Prepositions
French Influence: Prepositions are often translated directly, resulting in incorrect usage.
Rule: Prepositions often don't translate literally. Learn common collocations and phrases.
☺ *The program runs on Linux.*
☹ *The program runs under Linux.*
☺ *The device operates at high pressure.*
☹ *The device operates with high pressure.*
★ **Tip: Use a prepositions reference sheet for technical terms (see example on page 44.).**

Verb Forms and Tense Usage
French Influence: French students tend to overuse present tense or mix tenses incorrectly.
Rule: Ensure consistent tense for methods and results; use future tense for implications.
☺ *We tested the system and observed an error.* (Past for completed actions)
☹ *We test the system and observe an error.*
☺ *This device is designed to reduce emissions.* (Present passive for current facts)
☹ *This device was designed to reduce emissions.* (Incorrect tense for ongoing use)
★ **Tip: Practice consistency—avoid changing tenses within the same section.**

Word Order
French Influence: French word order differs, especially for adverbs and adjectives.
Rule: Adverbs generally follow the verb in English, and adjectives precede nouns.
☺ *The algorithm performs efficiently.*
☹ *The algorithm efficiently performs.*
☺ *It is a powerful engine.*
☹ *It is an engine powerful.*
★ **Tip: Read aloud—awkward word order often becomes clearer when spoken.**

Plural Forms and Uncountable Nouns
French Influence: Over-pluralisation or incorrect singular forms.
Rule: Uncountable nouns (e.g., equipment, data, software) remain singular; pluralise only countable items.
☺ *This software is compatible with Linux.*
☹ *This software are compatible with Linux.*

☺ *We need more information.*
☹ *We need more informations.*
★ **Tip: Memorise uncountable nouns commonly used in your field.**

Pronoun Agreement
French Influence: Mismatching pronouns and their antecedents.
Rule: Pronouns must match their antecedents in number and clarity.
☺ *Each engineer must test their design.*
☹ *Each engineer must test his design.* (Avoid gendered pronouns if antecedent could be plural)
☺ *The turbines operate efficiently because they are well-maintained.*
☹ *The turbines operate efficiently because it is well-maintained.*

Personal Pronouns
French Influence: French academic writing often accepts *I, we, you,* more readily than English technical communication, leading to overuse.
Rule: Use first-person pronouns sparingly, prioritising objectivity. Replace *I* with the passive voice or third-person phrasing unless emphasising team effort. Avoid addressing the reading directly with *you* in English technical writing.
☺ *The experiment was conducted under controlled conditions.*
☹ *I conducted the experiment under controlled conditions.*
☺ *We propose a method to optimise energy output*. (use *we* only in collaborative contexts)
☹ *I propose a method to optimise energy output.*

Third-Person Pronouns for Neutrality
French Influence: French uses context to clarify pronouns, which can lead to unclear referents in English.
Rule: Use it, they, or this carefully, ensuring each pronoun has a clear antecedent. Avoid unnecessary pronouns.
☺ *The pump regulates the flow, and it maintains stability.* (*it* refers clearly to "the pump")
☹ *The pump connects to the system, and it stabilises. (it* is ambiguous—does it mean the pump or the system?)
☺ *The device stabilises under high pressure.*
☹ *It stabilises under high pressure*. (unclear referent when starting a sentence with *it*)

Linking Words
French Influence: Overuse of formal or inappropriate connectors.
Rule: Use connectors naturally and sparingly, ensuring logical flow.
☺ *Therefore, the results confirm our hypothesis.*
☹ *Thusly, the results confirm our hypothesis.* (*Thusly* is unnecessarily formal)
☺ *However, further research is needed.*
☹ *But, further research is needed.* (Avoid beginning a sentence with *but*)

Sentence Length and Complexity
French Influence: Long, complex sentences are common in French but harder to process in English.
Rule: Aim for clarity with shorter sentences and clear punctuation.
☺ *The sensor detects anomalies. It sends the data to a control unit.*
☹ *The sensor detects anomalies and sends the data to a control unit where it is processed for further analysis.*
★ **Tip: Break long sentences into manageable parts.**

Preposition Reference Sheet

	Verb/Adjective/ Noun	Correct Preposition	Example	Common Mistake
Technical Terms	Depend	on	The performance depends **on** the material.	~~depends of~~
	Focus	on	This study focuses **on** renewable energy.	~~focuses in~~
	Based	on	The design is based **on** user feedback.	~~based about~~
	Apply	to	This method applies **to** all systems.	~~applies for~~
	Adapt	to	The system adapts **to** changes quickly.	~~adapts with~~
	Capable	of	This engine is capable **of** high output.	~~capable to~~
	Interested	in	Engineers are interested **in** AI tools.	~~interested by~~
	Composed	of	The mixture is composed **of** two gases.	~~composed by~~
Place and Position	Located	in	The sensor is located **in** the pipeline.	~~located at~~
	Placed	on/in	The object is placed **on** the surface.	~~placed at/into~~
	Inside/Outside	of	The fluid flows inside **of** the chamber.	~~inside in/at~~
	Connected	to/with	The device is connected **to** the circuit.	~~connected at/ on~~
	At (specific point)	at	The valve is located **at** the midpoint.	~~located on/in~~
Cause and Effect	Result	of	This is the result **of** overpressure.	~~result from~~
	Due	to	The failure was due **to** poor design.	~~due of/because of~~
	Responsible	for	He is responsible **for** the project.	~~responsible of/ to~~
	Caused	by	The error was caused **by** human factors.	~~caused from~~
	Effect/Impact	on	The change has a significant impact **on** the output.	~~impact to/in~~
Data and Graphs	Increase/Decrease	in	There was an increase **in** temperature.	~~increase of~~
	Compare	with/to	We compared the results **with** previous tests.	~~compared of/at~~
	Measured	in	Pressure is measured **in** pascals.	~~measured by/ with~~
	Expressed	as/in	The data is expressed **as** a percentage.	~~expressed by~~

Time	During	during	The test was conducted **during** the experiment.	~~during **of**~~
	Since	since	It has been stable **since** Monday.	~~since **from**~~
	For (duration)	for	The pump has run **for** 5 hours.	~~for since~~
	At (specific time)	at	The process began **at** 10 a.m.	~~at **on**~~
Processes and Methods	Operate	at/with	The engine operates **at** high efficiency.	~~operates **in**~~
	Control	by/with	The system is controlled **by** a microprocessor.	~~controlled **with**/ **in**~~
	Involved	in/with	He is involved **in** the project.	~~involved **to/on**~~
	Use	of/in	The use **of** renewable energy is increasing.	~~use **in/at**~~
Materials and Substances	Made	of/from	This pipe is made **of** steel.	~~made **by/in**~~
	Composed	of	The alloy is composed **of** copper and zinc.	~~composed **from/in**~~
	Covered	with/by	The wires are covered **with** insulation.	~~covered **of**~~
Communication and Documentation	Discuss	about/on	We discussed **about** the solution.	~~discuss **of**~~
	Write	about/on	The report is written **on** fluid dynamics.	~~written **of/for**~~
	Report	on	The paper reports **on** the findings.	~~reports **about**/ **to**~~

★ **Practice Collocations:** Prepositions often pair with specific words. Memorising common collocations is key.

★ **Avoid Literal Translation:** French prepositions rarely match English ones. Focus on context.

★ **Check in Context:** Use dictionaries or technical references if you are in doubt.

Spelling

Why Spelling Matters in Technical and Professional Communication

1. **Spelling reflects your professionalism**
   In technical fields, precision is everything. Correct spelling shows attention to detail—an essential skill for any engineer. Whether you're writing a project proposal, publishing a report, or sending an email, misspelled words can make your work seem rushed or careless.

2. **Spelling affects clarity and understanding**
   Spelling errors can confuse your audience, especially if you're communicating in a non-native language. A misspelled word might seem minor, but it can create misunderstandings that slow down a project or lead to costly errors.

3. **Spelling impacts credibility**
   When you submit a report or deliver a presentation, you're representing yourself, your team, and your work. Spelling mistakes can unintentionally undermine your credibility, even if your technical ideas are brilliant.

How Spellcheckers Can Help

Spellcheckers are tools built into almost every writing platform—Word, Google Docs, email apps, etc. They are easy to use and can save you from common mistakes, by:

- Highlighting mistakes automatically helping you spot errors quickly.
- Suggest Correct Spelling
- Reviewing suggestions helps you recognise patterns in your mistakes (e.g., confusing their and there).

When to Use Spellcheckers

Emails: A quick spellcheck can ensure your email looks professional.
Reports: Proofread important documents after running the spellchecker to catch anything it might miss.
Presentations: Double-check slides for spelling errors—visual aids should reinforce, not distract from, your message.

Why Spellcheckers Aren't Enough

While spellcheckers are excellent tools, they're not perfect. They can miss:
- Homophones (e.g., principle vs. principal)
- Technical terms not in the dictionary (e.g., specialised industry jargon)

- After running a spellchecker, always proofread your work. Better yet, ask a colleague to review it!
- For technical terms, most spellcheckers let you "add to dictionary" so they aren't flagged as errors.

Notes:

Written Style Evaluation [practice exercise]

This exercise is in the same format as the one you will be given during the Written Style evaluation. A further example is available for consultation on Moodle.

The information below gives a rapid history of aspirin. All the information is given in the form of notes. You must transform it into complete sentences, writing only one sentence per number.

Be careful to put all verbs into the appropriate tense and form, add all necessary prepositions and articles, and provide all missing links. Leave no information in parentheses. You may change the word order. [250-300 words]

One of the most commonly used drugs is also one of the oldest: aspirin, Aspirin, or acetylsalicylic acid, is similar to a component of the bark (écorce) and leaves of the willow tree (saule).

1) aspirin's long history -begin - 4000 years
   Egyptians & Greeks - use - leaves - willow tree → reduce pain & fever.
2) 1763 - Royal Society - publish article - written Edward Stone
   recommend use of powdered willow bark - treatment malaria (*paludisme*)
3) active ingredient of willow = salicin
   not isolated until 1829
   French pharmacist - Pierre-Joseph Leroux -extract - crystals of salicin
4) salicin effective in treating inflammation's
   also cause irritation of stomach
5) Felix Hoffmann - German chemist - father suffer from inflammatory rheumatism - search for product - without side effects
6) October 10, 1897 - Hoffmann (work for Bayer Pharmaceuticals) publish paper - explain method - obtain acetylsalicylic acid (ASA) = modern aspirin
7) French chemist & German chemist - already produce ASA - 1853 & 1855
   not realise importance of discovery
8) 1900 - Bayer obtain patent (brevet) for aspirin
   make fortune - sell new product - worldwide
9) aspirin in public domain -since 1919 - (Bayer patent expire)
10) today - hundreds of companies manufacture product
11) 11,600 tons - aspirin - sold - every year
    = about 30 aspirin / person / year
12) now - aspirin > 100 years old
    doctors just begin understand how aspirin works
    new uses still found

Plagiarism

The following information was translated from the original French content available on the INP Library website. [5]

What is plagiarism?

- According to the Petit Robert, it is a “literary theft”. Plagiarism is taking someone else's words or ideas and presenting them as your own
- Plagiarism is punishable by penalties that may compromise the continuation of your studies
- The use of extracts from documents, whatever the nature of the document and the length of the quotation, is always subject to copyright

Some examples of plagiarism

- Copying a fragment of a book, magazine or web page in its entirety without putting it in quotation marks and/or without mentioning the source
- Illustrating work with images, graphics, data from external sources, without indicating their source
- Summarising the idea of an author by expressing it in your own words, omitting to indicate the source (the name of the author and the references of the work used)
- Translating a text, even partially, without mentioning its source
- Using the work of another person and present it as your own, even if this person has given his consent
- Having another person or artificial intelligence do the work, partially or completely, even if you pay for it

How to cite text documents

- The word-for-word reproduction of an extract from a written work (available in printed or electronic form, taken from a book, an article, a website, etc.) is authorised provided that it is clearly identified. as a quote (quotation marks are used AND the source is clearly referenced on the page and in the bibliography)

The drafting of a bibliographic reference is subject to standards

- Any type of document (including websites) can be described in the form of a bibliographic reference
- Paraphrasing is also permitted provided the source is cited in the same manner

Citing other types of documents (images, recordings, etc.)

- The use of an image (graph, photo, drawing, etc.), a slide taken from a slideshow (PowerPoint or other), animated images, and sound recordings (etc.) is always subject to the citation of the source as a reference
- In some cases, the reuse of this type of document may be subject to prior authorisation, or even payment of a fee
- For this type of document, it is recommended to use free sources. Attention: the fact of being “free of rights” does not exempt you from citing the source

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[5] Toulouse INP. Bibliothèque [online]. Available at: https://bibliotech.inp-toulouse.fr/fr/se-former/eviter-le-plagiat.html (Page consulted on 26/01/2023).

Avoid plagiarism: techniques and tips

- Use royalty-free resources, in particular for the re-use of illustrations:
- Use resources under a Creative Commons licence, for example when you want to reuse an image, a video, all or part of a slideshow, etc.
- Clearly indicate the origin of any information taken from external sources (printed or web pages), as soon as you:
- Refer to another person's idea, opinion or theory, even if you express these ideas in your own words
- Use data, graphics, illustrations produced by others
- Quote someone's words verbatim or excerpts from written documents.

Before submitting your work, check that

- all quotes are in quotation marks (“ … ”)
- you have completely and personally reformulated the original excerpts, i.e. you have not replaced a few words of the original passage with synonyms
- all quotations, but also ideas and concepts taken from existing works, are accompanied by their complete reference.

Citing your sources

- gives credibility to your words and certifies that research has been done
- allows the reader to check the references used, indicates the way to find additional information
- gives the author due credit.

Plagiarism is punishable by French law and subject to penalties.

If plagiarism is detected, a score of zero may be assigned to the assignment concerned.

Depending on the importance of the plagiarism, the student may be referred to the INP Disciplinary Committee which will determine any other sanctions to be taken, which may go as far as exclusion.

Image: Euripides Joannidi, İstanbul Üniversitesi Devlet Konservatuvarı. Albumen print, c.1896. Private collection

Plagiarism: Exercise

A group of students has been assigned four published articles about the feasibility of a manned trip to Mars. After having read the articles, each student is required to write short paper on the subject.

Published articles assigned to be read:

(1) Abercrombie, A.J. and Flinton, R.C., 1992, Unmanned planetary missions in the 21st century. NASA website; www.nasa.gov/mars/missions/missions.html [accessed January, 2018]

(2) Arthur, C.A., Clinton, W.J., and Kennedy, J.F., 1994, Planning a manned mission to Mars. Proceedings of the 14th Lunar Conference, Lunar Planetary Institute, San Diego, CA, pp. 122-134.

(3) Brown, Katherine N., 1997, Mars and man: A union whose time has come. Icarus, vol. 45, pp. 227-243.

(4) The case for a manned mission to Mars. NASA website; www.nasa.gov/mars/missions/manned.html [accessed February, 2018]

Final paragraph from (3) Brown (1997):

During the 1960s the nation put human beings into space and eventually sent them to the moon and back. History has recorded this effort not only as an enormous technological achievement but also as an example of Americans' ability to cooperate to achieve a national goal. Getting to the moon was important, but the real frontier has always been Mars. If we declare our intention to send a man to Mars before 2010, we will be affording the human race the opportunity to realise an ancient dream. The technology necessary to accomplish this already exists; all we need now is the will to go.

Look at the examples of plagiarism on page 47 then read the following excerpts from student papers . Which of the students are guilty of having plagiarised Brown (1997) and how could they have avoid this?

Barbara

Brown (1997) argued, "If we declare our intention to send a man to Mars before 2010, we will be affording the human race the opportunity to realise an ancient dream."

Natasha

K.N. Brown stated, "If we declare our intention to send a man to Mars before 2010, we will be affording the human race the opportunity to realise an ancient dream." (3)

Melanie

A manned Mars mission this decade will give people a worthwhile goal to achieve.

Pierre

Brown (1997) thinks that a manned Mars mission this decade will give people a worthwhile goal to achieve.

Maria

Brown (1997) thinks that if we declare our intention to send a man to Mars before 2010, people will have a worthwhile goal to achieve.

Eduardo

Brown thinks that "[i]f we declare our intention to send a man to Mars before 2010…," people will have a worthwhile goal to achieve (3).

Kevin

"If we declare our intention to send a man to Mars before 2010, we will be affording the human race the opportunity to fulfil an ancient dream."

Amanda

If we declare our intention to send a man to Mars before 2010, we will be affording the human race the opportunity to fulfil an ancient dream.

Oral Presentation: Key Vocabulary

Whilst you are not expected to develop a faultless native accent (whatever that may be!), it is not acceptable to mispronounce keys words - *which you have chosen* - in your presentation. Use the following list to make notes of the pronunciation and make sure that you practice!

Notes										
Sounds like…										
Phonetic Transcription										
Vocabulary										

Notes										
Sounds like…										
Phonetic Transcription										
Vocabulary										