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## UNIT 3

# Advances in Science and Technology

Ahmed: What does **OFWT** stand for?
Nabila: It stands for **O**bserve, **F**orm, **W**atch and **T**est.
Ahmed: I think these are the four steps scientists normally follow in their work, aren't they?
Nabila: Yes, they are.

**Vocabulary**: (p48)
benefits = advantages
events = happenings
on your own = independently
pseudo = false, fake, not genuine

**One of the advantages of being** scientifically literate is that you can ask and find answers to questions derived from curiosity about everyday happenings. **Another advantage is that** you can understand how the world works and think critically and independently. **A third one is that** scientific literacy allows us to identify pseudo scientific claims.

Yousra: In your opinion, which is the most significant **breakthrough** in technology?
John: For me, the internet is the most significant one. I really can't do without it.
breakthrough = advances

## EXPRESSING PURPOSE

**Structure**

| | |
|---|---|
| to + infinitive | Souad goes jogging every morning **to keep fit** and healthy. |
| for + noun | Akram met Mr. Johnson **for an interview**. |
| for + ……ing | Posters and brochures are used for interviewing people to study. |
| in order to + infinitive | Adults go to literacy classes **in order to** learn how to read and write. |
| so that + modal | He trains very hard **so that** he can be ready for the next Olympic Games. |
| so as to + infinitive | She left home early **so as to** be on time for the interview. |

We should all be scientifically literate **so as to** identify pseudo scientific claims.
Salma learnt Italian **so as to** get a better job.
Hicham likes to meet foreigners **so as to** practise his languages.
Journalists should be tactful **so as not to** offend readers.
They left home early **in order not to** miss the train.
Amina works very hard **so as not to** fail her exams.
I took off my shoes and walked upstairs **so as not to** wake my parents.
When I have a lot of homework, I sometimes do it immediately **in order not to** forget it.
He went out for a walk **in order not to** get sleepy.
Could you repeat the message slowly **so that** I can understand.

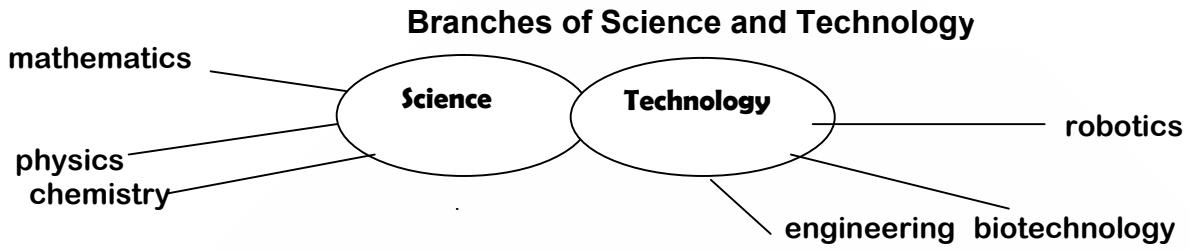
**Other ways of expressing purpose**:

An investigation is carried out **for the purpose of** determining the cause of the accident.
Research is being done **with the aim of** developing a cure to bird flu.
The association is raising money **with the objective of** building a street children center.
He went to the clinic **with the intention of** doing a general check-up.

**Vocabulary:** (p50)
fundamental : important
headways : progress, strides
Scientists are making **headways** in many technological fields such as biotechnology and cellular phones technology.



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Technology is applied science. It focuses on designing tools and systems for practical purposes **whereas** science focuses on general knowledge by investigating natural phenomena.

**The Simple Past Tense**: (review)

When I **returned** home from work, I **decided** to watch TV. I **took** the remote controller and **zapped** to my favourite channel. But, the electricity **went** off a short time later. I **took** my mobile phone and **called** my friend to help me fix the problem. He **was** busy on his computer sending and replying to e-mails or chatting. I **couldn't** use the vacuum cleaner to clean the carpet, so I **had** to take a brush and do it manually. I **couldn't** use the microwave oven to heat my dinner and **was obliged** to have cold. After dinner, I **couldn't** use the dishwasher and again, with my own hands, I **washed** all the dishes.

## Making and responding to complaints about behavior

| COMPLAINING | APOLOGIZING | ACCEPTING/REFUSING APOLOGIES |
|---|---|---|
| **Sorry to say it, but you…….**<br>**Enough is enough!**<br>**I'm not satisfied with the way you…**<br>**I've been patient long enough, but…**<br>**I just don't know how to say it, but…**<br>**I'm afraid I have to make a serious complaint.**<br>**Oh. I've got a bit of a problem here; you see...**<br>**Sorry to bother you, but…**<br>**Look, I'm sorry to trouble you, but…** | **I do apologise.**<br>**Sorry about that.**<br>**I'm very sorry.**<br>**I'm awfully sorry.**<br>**I'm terribly sorry.**<br>**Sorry to hear that.**<br>**Oh, dear. I'm really sorry.**<br>**I just don't know what to say.**<br>**I'm sorry. I didn't realize.**<br>**I can't tell you how sorry I am.** | **It's O.K**<br>**Never mind.**<br>**It's not important.**<br>**Don't worry about it.**<br>**I see no reason why I should.** |

| Rejecting a complaint |
|---|
| **-Well, I'm afraid there's nothing we can do about it actually.**<br>**-I'm afraid there isn't much we can do about it.** |

*Susan: **I wish you wouldn't** make so much noise when I'm busy working.
Tom: **Oh, I'm terribly sorry! I didn't realize** you were working.

*Hamid: **I'm sorry to say this, but** I really didn't like the way you talked to your mother.
John: **Oh, I'm awfully sorry. I didn't realize** I was so rude.

*Barbara: I was waiting for you in the coffee shop but you didn't come.
Steve: **I'm awfully sorry**, darling. I really forgot it.
Barbara: **Don't worry about it**.
Steve: Another time perhaps.

## At a hotel

*A: **Excuse me, but** there is a problem with the heating in my room.
B: **Sorry to hear that** – I'll get someone to check it for you.

*Man: **I'm afraid I have to make a complaint**. Some money has gone missing from my room.

Receptionist: **We're terribly sorry**, sir.

## Expressing Certainty and Uncertainty (p56)

| EXPRESSIONS OF CERTAINTY | EXPRESSIONS OF UNCERTAINTY |
|---|---|
| **undoubtedly – crystal clear – no one can deny – won't be – are sure – certainly – must be** | **may –could – might – unlikely - probably – I doubt if… - It's improbable that…..-I think /guess etc** |

**Expressing certainty**:

**Here are some phrases you can when you are sure that something will not happen in the future.**
**For example, to the question " Do you think that scientists will find a cure to AIDS in the near future?", you may respond as follows:**

| | | | |
|---|---|---|---|
| Yes | I'm | absolutely sure<br>quite sure<br>certain<br>positive | they will. |
| | definitely.<br>certainly.<br>of course. | | |

| | | | |
|---|---|---|---|
| No, | I'm | absolutely sure<br>quite sure<br>certain<br>positive | they won't. |
| | definitely not.<br>certainly not.<br>absolutely not. | | |

## Expressing uncertainty:

**When you are not sure whether something will happen in the future, you can use these useful phrases:**

| | | | | |
|---|---|---|---|---|
| Well, | it's possible.<br>there might be.<br>it could happen.<br>it's not possible. | **I suppose** | but | I wouldn't like to say for certain.<br>I'm not really sure.<br>I doubt it.<br>I have my doubts.<br>it's doubtful.<br>it's highly unlikely.<br>it's improbable. |
| | you never know of course.<br>no one can say for certain. | | | |

**Functional meaning of modals**:

must: certainty, obligation, ( 100% necessary to do something.)
mustn't: prohibition ( 100% necessary not to do something.)
may: possibility – probability ( it's about 50% possible )
might: possibility ( less than 50% possible )
needn't: ( lack of necessity )
should: advice ( it's a good idea )
shouldn't: ( it's a bad idea )
can't : impossibility

**When I leave school, I may go to a university of science or I can even get a job at a laboratory.**
**This must be the laboratory – there are instruments and products of scientific research.**
**I'll probably come back to see the manager next week if I am free.**
**I think / guess they are going to offer me a job as I have the ideal profile.**
**They will certainly interview me about my past experience as they usually do.**
**I guess / think their wages are high and their technology is advanced.**
**I certainly will enjoy myself working in this laboratory; I am fond of science and technology.**
**Computers are likely to replace teachers in a few years' time.**
**It's positive that the problem of unemployment will be solved if drastic measures are taken.**
**I bet the rate of illiteracy in our country will decrease in the next decade.**
**We needn't raise taxes. We have made a lot of money out of phosphates sales this year.**

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PAST TENSE : simple and continuous (**review**)

I **was having** lunch in a small restaurant near the office. She **was sitting** at a table near the window. I **wondered** why she **was looking** at me. Did she know me? I didn't think I **had** ever seen her before.

Suddenly she **stood** up and **walked** slowly towards me. I still remember my feeling exactly. I **wanted** to run away, but I **knew** I **couldn't**. She **stopped** by my table and **smiled** down at me. She **had** on a purple dress. I think it **had** a flower pattern and she **was** amazingly beautiful. 'Excuse me,' she **said**. 'Have you got a pen?'

**Phrasal verbs** (pages 56,57)

bump up: increase
turn down: (1) refuse an offer, reject an application. She turned down the new job because she didn't want to move.
turn down: (2) lower the volume or intensity of a TV, radio, or other machine. → I'm studying! Please turn down the TV.
put down: insult, make someone feel stupid
ease off: reduce pressure
look forward to: be excited about the future

**Phrasal verbs 2** (p58)
progress → along, behind, through, on
communication → across, through, over, between
relationships → together, up
getting involved in an activity → in, into
ignoring problems → around, aside, off

My project work is **coming along** nicely.
I've **fallen behind** with my work.
We **sailed through** our exams. We learnt a lot before the exams.
Just **keep on**. You have been doing a good job.
Let's all **join in** when I sing the Moroccan National Anthem.
When I can **get into** my work, I really enjoy it.
I can't **work round** this problem.
We need to **put aside** our differences.
I **laughed off** his criticism.
We **got together** in our first year at this school.
The whole group **rallied together** to protest against child labour.
Two students from each class **pair up** to produce a short play.
I don't seem to be able to **get through** to them.
The message **came over** clearly.
Something interesting **passed between** them.
She **eased off** the accelerator to let the car slow down.

**Reading**: (pages 60,61)

A: What did Graham Bell invent?
B: He invented the telephone.

To do any job well requires hard work, **perseverance** and the ability to focus on your aims without being distracted.
perseverance: determination



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**Abdellah: What would you like to be in the future?**
**Habiba: I'd like to be a laboratorial.**

## CONDITIONAL TYPE 3 + WISHES

**Rule: Conditional type 3**

| FORM | USE | EXAMPLE |
|---|---|---|
| If + past perfect + would have + past participle | To describe hypothetical conditions in the past and the results that the speaker imagines were possible | If the leaders **had been** wiser, the war **wouldn't have broken** out. |

**Rule: Wishes**

| FORM | USE | EXAMPLE |
|---|---|---|
| I wish / wished / If only + past participle | To express past wishes | My grandfather wishes he had had a cell phone in his childhood. |
| | To express regret | If only there hadn't been many victims in the second world war. |

**Text: If I had time, I would have done it**

**"My brother Jamal won a national award for his latest scientific invention. We celebrated it last night. A lot of people came. We had a lot of food. Unfortunately, I ate so much that I had a stomach-ache. I couldn't get up in the morning because I didn't sleep early. I didn't go to school. I missed several lessons. I didn't do the test. The teacher gave me a bad mark because I forgot to do my homework."**

If Jamal **hadn't eaten** a lot, he **wouldn't have had** a stomach-ache.
**If** he **had slept** early, he **could have got up** in the morning.
He **wouldn't have missed** several lessons **if** he **had gone** to school.
**If** he **had gone** to school, he **would have done** the test.
The teacher **wouldn't have given** him a bad mark **if** he **had done** the homework.

**I wish I hadn't eaten** so much last night. I felt terrible then.
**If I hadn't eaten** so much last night, I **wouldn't have felt** terrible.

**I wish** my father **had bought** me computer last year. I could be a programmer then.
**If** my father **had bought** me a computer last year, I **could have been** a programmer then.

Health authorities **wish** people **got immunized**. They could improve their health then.
People **could have improved** their health **if** they **had got immunized**.

Nabil **wishes** his satellite receiver **hadn't stopped** working. He could watch the live conference about the nuclear danger on the environment.
Nabil **could have watched** the live conference about the nuclear danger on the environment **if** his satellite receiver **hadn't stopped** working.

**Dialogue:**

Student: **Could you give me an idea about** biotechnology, please?
Teacher: Yes, of course. Biotechnology (or bioengineering) **refers to** any change of an organism's genes for practical purposes like disease control, better crops, cloning of plants and animals,…Biotechnology **is** closely **related to** genetics which **can be defined as** the scientific study of genes, i.e. variations in the characteristics – resemblances and differences – of organisms and how these characteristics are inherited from generation to generation. Modern genetics is as much concerned with the organism level of this process as it is with cellular and molecular levels.
**Thanks to** biotechnology, farmers are able **to get rid of** unwanted characteristics of plants and keep the ones that they desire. One example of these is the new type of potatoes that resist invasion by dangerous insects.
Advances in genetic engineering **have made it possible** to decrease the need for fertilizers by breeding plants that produce their own form of efficient fertilizers**… However**, there are some negative **side effects** that must be worked out. **An example of this**, is a decline in the quality of taste, which would definitely outweigh the benefits of a long shelf life or resistance to insects!
Student: Is it used to control some of the human diseases?
Teacher: Yes. The use of genetic engineering in humans promises some extraordinary benefits, **one of which** is cure and prevention of many types of diseases that come from faulty genes.
Student: Thank you very much, sir.
Teacher: Not at all.

**Expressions of concession and addition:**

## Link your Sentences

**When diplomats met to form the United Nations in 1945, one of the things they discussed was settling up a global health organizations. As a result, World Health Organisation was set up on 7 April 1948- a date we now celebrate every year as World Health Day. WHO is responsible for providing leadership on global health matters. It also accounts for shaping the health research agenda such as setting norms and standards, providing technical support to countries, monitoring and assessing health trends. Since health is a shared responsibility, WHO's job is to provide equitable access to essential care and collective defence against transnational threats. In brief WHO's greatest concern must always rest with disadvantaged and vulnerable groups; that is to say, the groups who often live in remote rural areas or shanty towns and have little political voice.**

**Although the school is far away, Zahra attends all afternoon classes.**
**Although he is rich, Adil does not give alms to the poor.**
**Although international organizations work hard, they can't solve all the problems.**
**Although globalization has a positive impact on Moroccan women's situation, there is still fear of losing local tradition.**
**Although it was raining, we went out.**
**Though the school is very far from her village, Fatima insists on attending all her lessons.**
**In spite of his wealth, Adil does not give alms to the poor.**

**In spite of the fact that** he is wealthy, Adil does not give alms to the poo
She gets higher marks **despite** studying in difficult conditions.
**In spite of** being illiterate, some women use the magazine's pictures as resources for dressmaking.
**In spite of the rain**, we went out.
**In spite of the fact** that it was raining, we went out.
**Despite** spending much time at work, working women are able to perfectly manage their households.
It's true that a lot of women and girls have access to education. **Yet**, their situation is far from perfect.
**Along with** being busy with his professional career, Rachid is a good father.
Zahra has got an award from the UNESCO **because** she was the first to fight illiteracy in her village.
Her parents were illiterate. **Consequently**, they didn't send her to school when she was young.
Fouad is **not only** good at volleyball **but** he is **also** a fantastic handball player.
Helen Keller was a woman of luminous intelligence, high ambition and great accomplishment. **In addition**, she devoted her life to helping others.
Moroccan women need education **as well as** health care.
Women have demonstrated considerable leadership in community, **as well as** in public office.
**However**, they still suffer from negative stereotyping.
UNESCO works to promote fields of interest **such as** education, science, and culture.
Greenpeace works to preserve the environment. **Besides**, it is an non-profit organization.
Some Moroccan women are illiterate. **However**, they benefit from pictures in magazines.
Educated women have a big influence on society. **Moreover**, they contribute to the welfare of their families.
Educated women look after their houses. They **also** work outside their homes.