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MINISTRY OF EDUCATION

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2025-2026

MORAL, SOCIAL AND CULTURAL STUDIES

Grade 12

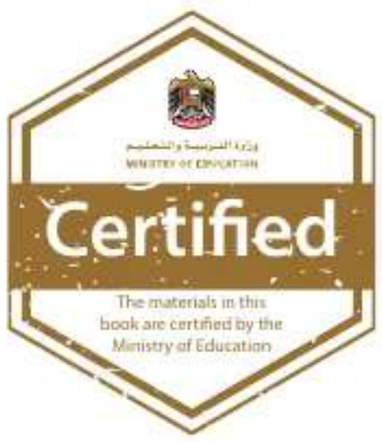
Moral, Social and Cultural Studies

Student Book

Grade 12

Volume 3

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Icon indicates the book type (**Example, Course book**)

Number 3 has been shaded to represent the **volume of Course book**

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Those who take the lead take it by doing three things. First, science to be able to manoeuvre; second, knowledge to be able to heavily invest in education; and third, a very wise leadership with a clear vision and a roadmap to the right direction.

His Highness Sheikh Mohammed bin Zayed Al Nahyan

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Unit 8: Living a Moral Life

Lesson 1: Getting Started 8

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- **How to plan the work on the project effectively?**
- **What style should I adopt for my project?**
- **What skills will I need to complete the project?**
- **How to ensure the work on the project will help my learning?**

Lesson 1: Getting Started

- **What action words should I use in my project?**
- **What should I consider when planning my project?**



Key Vocabulary

account for	**illustrate**
consider	**investigate**
criticise	**justify**
determine	**respond to**
evaluate	**summarise**
examine	

This activity examines some very specific words that you may often come across in assessment and which are very important when undertaking a piece of work like this project. These words are often referred to as 'command words'. They indicate what knowledge, understanding and skills you are required to demonstrate.

The following table is to encourage you to think about what these words mean and how you can demonstrate the knowledge, understanding and skills required through your project work. It is important to keep these in mind as you progress through your project. The marks or grade that you are awarded may be determined in part by how well you demonstrate the skills required.

Activity 1: Thinking Task

Be careful about deciding what to put in the table below. Many of the words may appear to have similar meanings. Read all the words first and think about the sort of project you might be planning, so that you consider how to use them in your particular project.

Table 1 *Project Words Activity*

Project Words	Definition/Meaning	Example	Use in Project
account for			
analyse			
assess			
comment			
compare			

Project Words	Definition/Meaning	Example	Use in Project
contrast			
consider			
criticise			
define			
demonstrate			
describe			
determine			
discuss			
evaluate			
examine			
explain			
find out			
illustrate			
investigate			
justify			

Project Words	Definition/Meaning	Example	Use in Project
measure			
prove			
respond to			
record			
review			
summarise			

Recording Your Initial Ideas

This is an important part of your overall project. It will help you trace and record the development of your ideas for the working title and type of project you intend to produce. Your working title and proposed project type may become your final title and project type, or you may change either or both of these after some thought and planning.

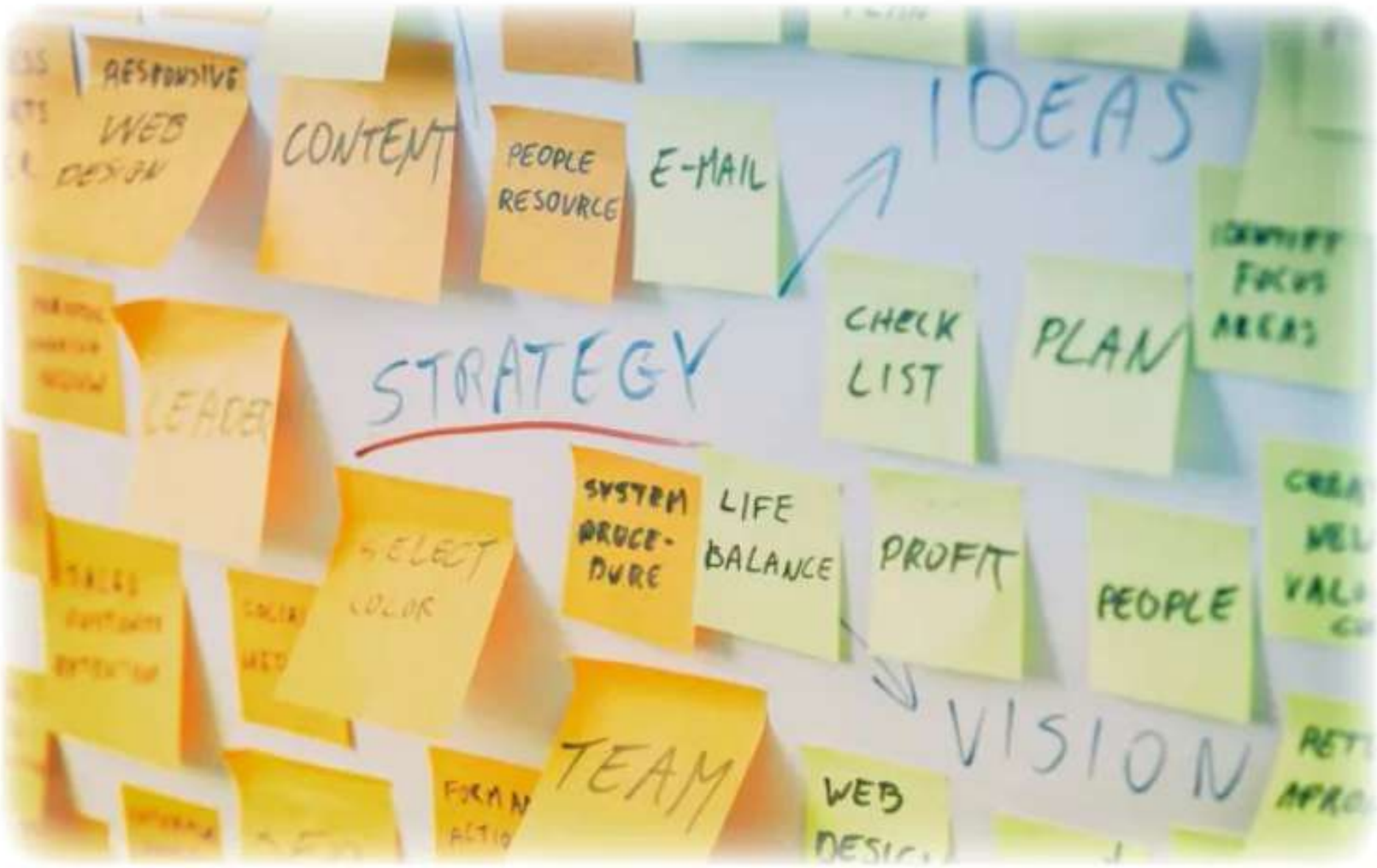
Top Tip

Good planning will lead to a good final project.

Project Planning

The following are important things you should take into consideration when planning your project:

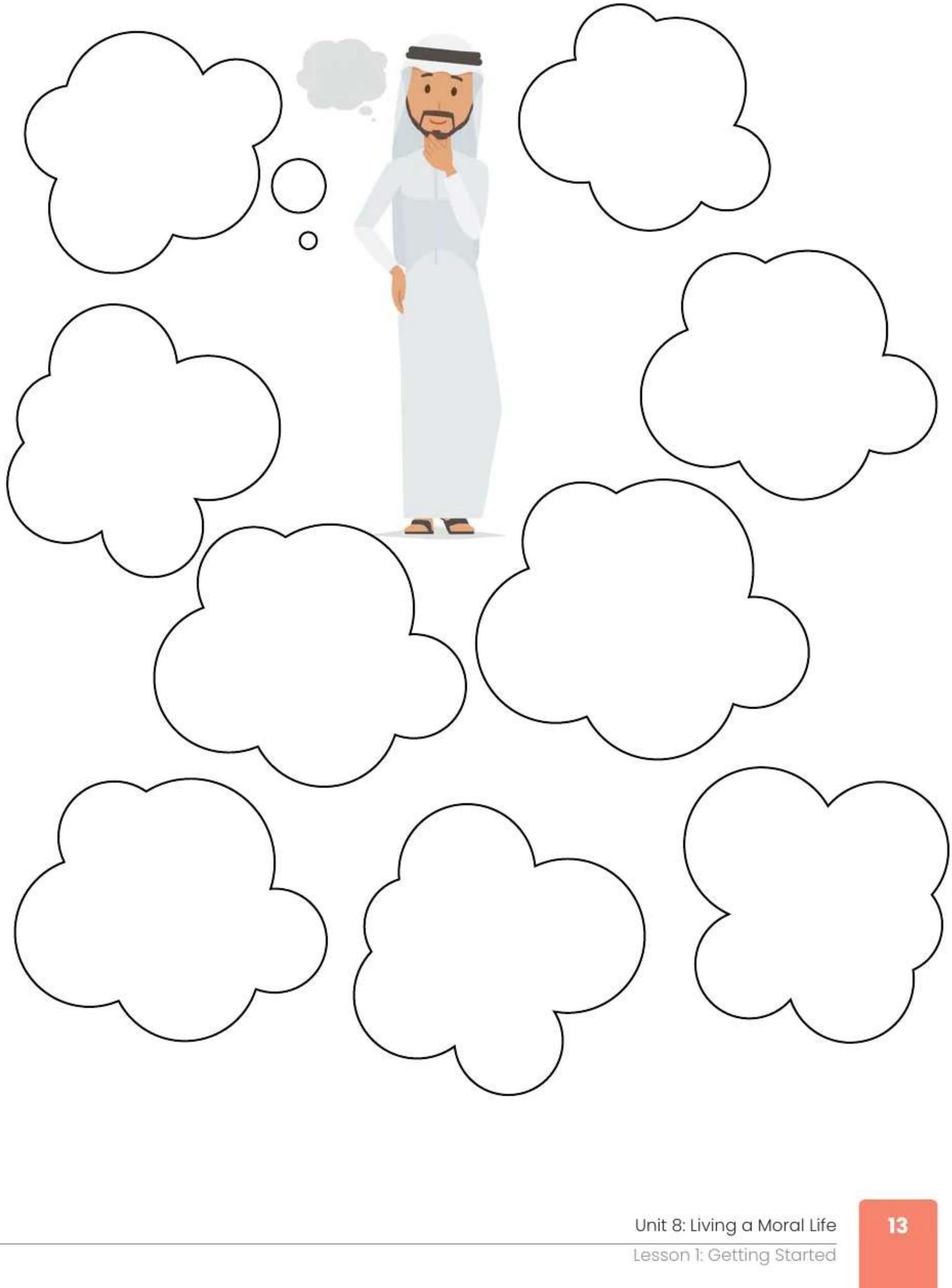
- What type of learner are you? Do you like doing something practical or do you like research and writing?
- Do you want to work as an individual or is there an opportunity to develop a small group project?
- Are there other commitments that you have to consider when planning your project?
- How might this project help you as you progress from school or college, possibly to university or into employment?
- Are you going to need evidence of things you have done to help you complete your project?
- If so, where, when and how are you going to get this?
- Who else may need to contribute to your project outcome?
- If someone else is working with you on any element of your project, do they understand the project and their role in it?



Project planning can take many forms including 'brainstorming' – coming up with lots of ideas and then narrowing down later by discarding ideas that are not practical or not relevant to the final project.

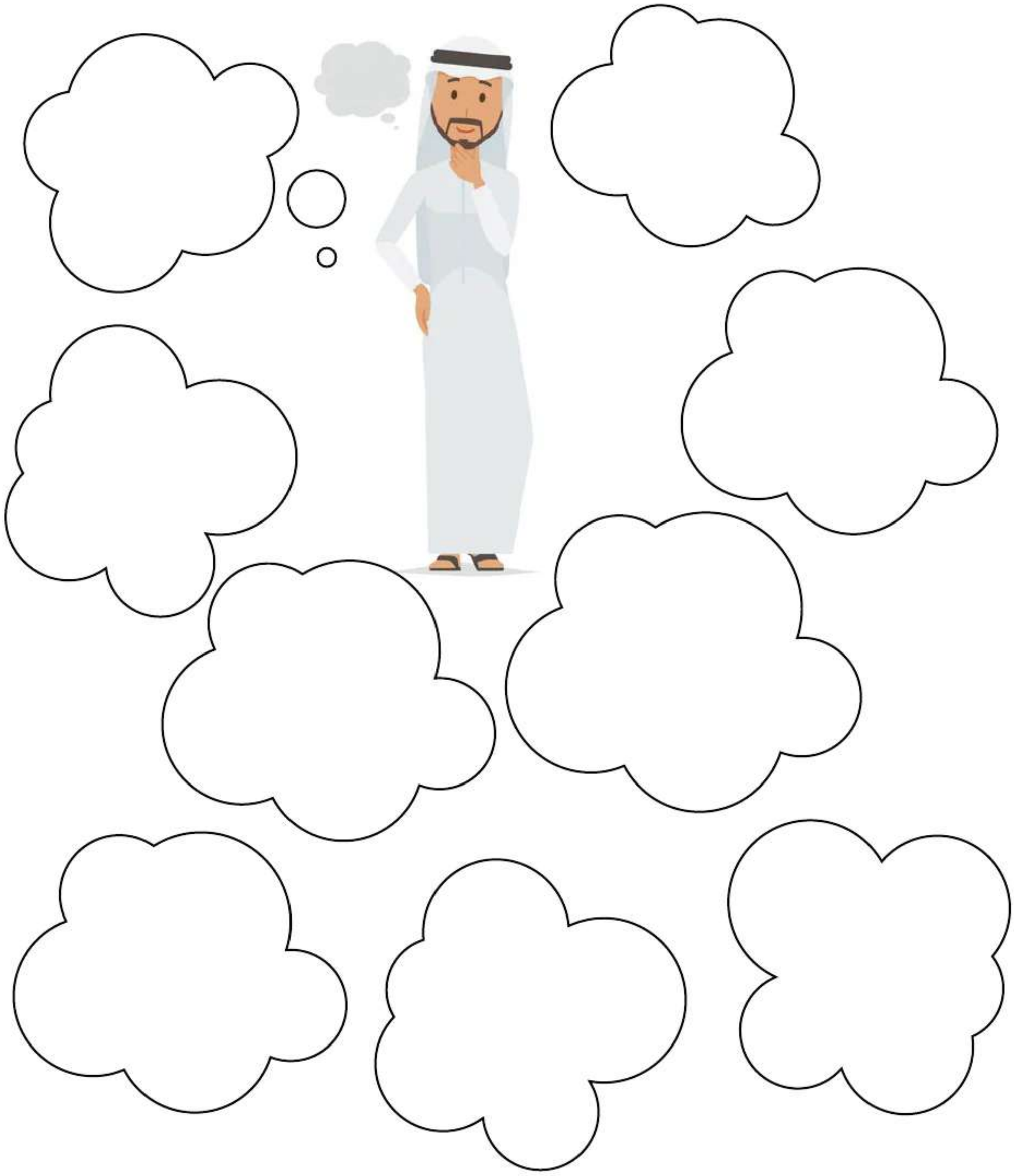
Project Format

Use this page to start to consider what format your project might take. Add your ideas to the 'think bubbles'.



Project Content

Use this page to start to consider what content your project might include. Add your ideas to the 'think bubbles'.



Project Planner

The following table should be completed to support your project planning and development and be kept as a record of your work, thought processes, ability to use feedback and evidence of development. The first row is completed as an example of what you might add.

Table 2 *Project Planner*

Action	Target Date(s)	Deadline	Comment
Example: *Project content planning*	*13 March*	*30 March*	*I have completed this but need it checked by my teacher.*

Top Tip

Maintain your project planner as evidence of:

- Planning
- Responding to advice
- Reflection



State planning is based on the need to diversify the economic base by developing industry and agriculture so that they become additional sources of income along with oil and an alternative resource if oil is depleted.

Sheikh Zayed bin Sultan Al Nahyan (May Allah have mercy upon his soul)

Reflecting on Your Initial Ideas

You might think that you have some great initial ideas, and it may be that one of these ideas will eventually form the basis for your project. Sometimes, however, the first ideas are not always the best. This is because we may be too ambitious in what we aim to do, and don't really appreciate the consequences of our ideas, or the fact that they may take far too long to complete. This is where reflection can be used to good effect.

Activity 2: Action Task

The aim of this task is to encourage you to consider the implications of your ideas and reflect on them. As a result of your reflection, you may change your mind about your ideas and then think of something completely different. This is fine and is an important part of reflection. A bit of time spent at this stage can make your progress a lot easier and less challenging than it might be without proper reflection.

Table 3 is a suggested way of organising your reflection sheet. Based on this suggestion, you can create your own using a spreadsheet or a table in a word processing application. The first row has been completed for you as an example.

Table 3 *Reflection Sheet*

My Idea	Positive Reasons for This	Possible Difficulties and Issues	My Quick Plan
Example: *I want to undertake a community project working with young children.*	*This fits with my future career plan to be a teacher.*	*I need to find a placement that can offer me this opportunity.*	*Consider if there is anyone I know who can help me.*

My Idea	Positive Reasons for This	Possible Difficulties and Issues	My Quick Plan

Checklist for Initial Ideas

In this section, we provide a checklist for your initial ideas. This is designed to encourage you to consider key questions. You can then begin to narrow down the focus of your project, and this will enable you to plan more effectively.

Top Tip

A bit of time spent at this stage can make your planning much easier.

Activity 3: Action Task

The aim of this task is to encourage you to consider your early thoughts. If you are able to respond positively to every question, it suggests you are on the right track with your project. If you can identify any areas that need an adjustment to your plan you should note these. This is fine and is an important part of reflection.

Table 4 *Checklist*

	Yes/No	If *No*, What Are Your Next Steps?
I have a clear idea of how completing this project will be of benefit to me.		
I have written a plan that outlines my project proposal, so that anyone who reads it will have a clear idea of the project's scope, content and intended format.		
I have considered the time I need to take to complete my project and how I will make that time available.		
I have looked at the other subjects I am studying and have considered any elements on which I will base my project.		
I have considered what restrictions I have in terms of time and resources available.		
I have looked carefully at the assessment criteria and understand the requirements of the project.		
I have considered my project title and type. I feel confident it will give me scope to produce a successful project.		
I have looked for and critically analysed sources. I am confident that I can find sufficient information to complete my project.		

	Yes/No	If *No*, What Are Your Next Steps?
I have considered the moral and ethical issues involved.		
I have thought through any health and safety considerations.		
My project title will give me scope to research and draw conclusions that are supported by the research undertaken.		
I have considered the impact of my project on the local community.		

Assessing My Skills

When you are deciding what sort of project to undertake and how you are going to present it, you need to decide what skills you already have and those you need to develop further. There are a number of skills you will need to possess/develop to produce a good project. This skills planner will help you think carefully about what you are good at and what you are less confident or knowledgeable about. For any perceived gaps you will need to plan where and how you will enhance these skills.

Table 5 *A Guide to Developing Skills for Your Project*

Skill Required	Things to Consider
Research	• How to use the Internet safely and to your advantage • How to use books and other resources from libraries • How to find out information from primary sources through things like surveys or questionnaires
Collecting and analysing data	• Types of research • Evaluating search methods • Evaluating sources for reliability and bias

Skill Required	Things to Consider
Health and safety and ethics	• Contacting people • Data representation • Data protection
Time management and planning	• Keeping plans • Breaking down tasks • Setting objectives
Reading skills	• Note taking techniques • Using Mind Maps • Recording • Referencing
Critical and analytical thinking	• Analysing data • Detecting bias in articles
Editing	• Developing critiquing skills
Becoming a reflective learner	• Reflecting on your experience • Critically evaluating your performance • Assessing your project outcome
Presentation skills	• Speaking skills • Using visual materials in a presentation

Activity 4: Thinking Task

Table 5 refers to the following issues:

- Evaluating sources for reliability and bias
- Data protection

What do you think is meant by these two issues, and why are they important skills in developing your project?

If you are able to develop these skills and use them to produce your project, you are well on the way to a very good project, and also on the way to developing skills that you will use throughout your life.

Activity 5: Discussion Point

Critical and analytical thinking are considered vitally important skills for young people to develop. But what does 'thinking and analysing critically' mean?

Discuss the meaning of these skills in groups, and then get together with other groups to see how similar your group's ideas are to others'.

See if you can agree on a common understanding of what critical and analytical thinking means and how it might be demonstrated in your project.

Activity 6: Action Task

The aim of this task is for you to assess your own skills and development needs.

Complete Table 6. You may complete this individually or as a part of a group.

When doing so, remember that this skill is individual to YOU! The reason for doing this is for you to evaluate the skills at your starting point with a number of key learning skills required. This helps to identify those you will need to gain or develop further in order to produce your final project.

Again, the table is a suggested outline, and you can reproduce your own in a spreadsheet or word processing application. The first row has been completed as an example.

Table 6 *Skill and Development Needs*

Skills Needed	Existing Skill Level			Development Plan
	Good	Average	Needs Improving	
Presenting to an audience		✓		*The next time I get the opportunity to present something, I will volunteer. I will also seek advice about this from someone who presents regularly.*

Developing Your Project

To be able to reflect on your project, you should, at all times, focus on the planning and overall management of your project. You need to ensure that your Project Journal provides clear evidence of your planning and development, from your initial ideas right through to the final assessment.

Tips for Managing Your Project

It is worth having a separate plan with specific dates and targets. Keep a clear record of whether your targets have been met and clear evidence of changes to the plan over time. Be careful about noting any changes and include reasons for the changes. Perfecting a title is vital to the overall success of your project. You should be able to explain and justify how your topic style and content developed.

Tips on Using Resources for Your Project

When you decide upon a topic, you must ensure that it will be possible for you to find suitable sources of information for your research. This will be especially important if you are doing an academic research project. Resources and sources of information should be cited/ referenced and reviewed for accuracy and bias.

If you are producing an artefact or undertaking an activity, you should still ensure resources are reliable, referenced and reviewed.

The following points should be considered when using sources of information. There is information later in this guide to explain all these terms and concepts:

- Try to access a range of different sources of information e.g. books, academic journal articles, quality newspapers, and make sure they are suitably referenced in your project.

- Create a bibliography, i.e., a list of all the sources used in a project which includes author names, title of the source, publisher, date, web addresses and so on.
- Be prepared to question the reliability of sources.
- When you are using information sources from websites, if you cannot identify the author or publishing institution, then you should not assume that this is a reliable source of information.

Tips on Structuring Your Project

If you are unsure about your project structure, there may be a tendency for the content to drift off in other directions. At an early stage, draw up and agree with your teacher what your final project is probably going to look like and what it will include. You can then refer to this at any stage to ensure that you remain on track:

- Keep going back to your project title when you write your project to make sure you keep focused.
- Be creative in problem solving, and record and reflect on the strategies you have used.
- Try to avoid writing just a descriptive report. This could look as if you are reproducing what others have written before, or simply recalling past events. Remember you are aiming to extend your analytical and critical thinking.
- Respond to any advice you are given from your teacher.
- Proofread, spell check, and grammar check your project. Do not let small and avoidable mistakes count against you. Good quality presentation and accurate use of language and grammar are important in conveying a clear message. It also shows the reader that you have taken care in the presentation. This is a good habit to develop, as use of language and good grammar can be awarded marks in some higher education assessments.

Tips on Concluding and Reviewing your Project

Make sure you

- explicitly state whether or not you met all of your aims
- comment on why/why not
- evaluate the success of your final project
- think carefully about how you will explain your findings to an audience if you are giving any sort of presentation
- are able to fully explain the stimulus for any devised piece of art or creative writing
- are able to explain the impact of your project on your community, where appropriate.

Activity 7: Action Task

The aim of this task is to develop your presentation skills. Some of you may choose a formal presentation as your project format, and you will need to develop a set of skills to make this as effective and informative as possible. Even if you do not intend for a presentation to be your chosen project outcome, at some stage of your education or career, perhaps for the purpose of a job interview, you will need to give a formal presentation.

Your teacher will ask every student, as part of their project development, to complete the following task:

Prepare a THREE-MINUTE presentation to explain to your class:

- The outline content of your project
- The style of your project – the type of project, format, what you are trying to achieve, and what the outcomes might be
- Your reasons for choosing these for your project
- How your project links to the MSC Programme



Preparing a Good Presentation: A Refresher

Questions to Ask Yourself before You Start

- How long have I got? Ensure you know this, plan for it and practise it.
- Who is my audience? Think what they are likely to know at the start and what do they need to know by the end.
- What do I intend to achieve? You must have an outcome in mind.
- What do I need to plan for? You may need sound or Internet access for links.

Things to Consider

- **Style** – is it eye-catching or steady?
- **Content** – Is there enough? Is there too much? Is it all relevant? Is it pitched at the right level for my audience?
- **Delivery** – Body language, eye contact, clarity of speech - have you practised using these effectively?
- **Supporting information** – Do you need to provide handouts? Are there links for the audience to follow? Is there more information after the presentation is complete? If your answer to any of these is 'yes', check the information for quality and accuracy.

Key Elements of a Good Presentation

- **Accessibility** – Can you see the important messages? Are your colours and transitions helping or hindering?
  You need to consider here whether anyone in your audience may have a disability such as colour blindness. You can ask your teacher for advice on preparing what are known as 'accessible' presentations.
- **Accuracy** – Is your information correct, both grammatically and factually?
- **Engagement** – Are you guiding and informing the audience rather than simply reading what they could read for themselves?

Do ✓ and Don't ✗

Part of a good presentation involves remembering what to do and what not to do. Below are some of the 'Do' and 'Do Not' tips associated with giving presentations. These are here to help you.

Table 7 *Presentation skills, Dos and Don'ts*

Do ✓	Don't ✗
Maintain eye contact with your audience. Think of yourself as a lighthouse spreading your light all around the room. You want everyone to feel they are part of your presentation.	Simply read the content of your presentation slides to the audience. You should assume that your audience can read what you are presenting. Remember, it is not what the slides say that is important, it is what you say.
Maintain a steady delivery pace. It is very easy to speak very quickly and try to get too much information across. It is worth practising your presentation in front of a mirror, and timing yourself to get an idea of your pace. You may be surprised at how different your timing can be from one practice session to the next.	Overload each slide with too much text. This is linked to the previous point. Typically, your slide should include no more than five items.
Use graphics and animations appropriately. They should enhance your presentation, not detract from it. Avoid having too much happening on screen - the important messages can be lost because the audience is concentrating on the animations rather than on you! Remember, you are giving the presentation not the presentation software!	Include features and animations just for the sake of it. You do not want to distract your audience with too many animations and transitions.

Do ✓	Don't ✗
Check the understanding of your audience. The longer your presentation, the more important this is.	Rush your presentation. Wait until you are sure that the content of the slide shown has been absorbed before moving onto the next.
Be ready to answer audience questions and prepare for these in advance. Make it clear at the outset whether questions can be taken during the presentation or at the end.	Break from the format you have outlined at the start. Be clear with the audience about the format to be followed, for example, when you will take questions.
Explain at the outset what your presentation is about. This gives you and the audience a clear starting point and focus.	Ignore your audience. If you are asked something pertinent that will contribute to a better understanding by the audience, do not to dismiss this, as you may risk losing your audience's attention and interest.

When the presentation is complete:

- Leave time for any other discussion points and questions.
- If there is a question that falls outside of the scope of the topic and you do not know the answer, be honest and do not bluff. Your audience will know if you are. You can say something like "I am sorry that is not something I am familiar with, but it is certainly something I will follow up on and get back to you".

Top Tip

There is a useful alliteration, known as the '5-Ps', which is worth remembering: **Plan**, **Prepare**, **Practise**, **Perfect**, **Perform**.

Feedback

The giving and receiving of feedback is an invaluable part of developing and perfecting your skills.

As a presenter, and also as part of the audience, you will be expected to both give and receive feedback. This feedback should be recorded and be part of your evidence of skill development for your project.

You can use the table below to record the key points from the feedback you receive and to note the improvements you intend to make for a future presentation. You should use the green tick and red cross symbols to highlight these. Make sure to use this list to offer constructive feedback to your peers after their presentation.

Think carefully about the Do ✓ and Don't ✗ guidance above when you give and receive feedback. The first row has been completed for you as an example of the type of comments you might make.

Table 8 *Presentation Record*

Aspect of Presentation	Feedback Received	Improvements Required
e.g., Presentation style Could the audience read the information?	*The colour combination of font and background made it hard to read.*	*I need to reconsider the slide design and font colour, and check this on both a small and large screen before my next presentation.*
Timing Did I adhere to the timescale set?		
Presentation style Could the audience easily read the information I had prepared? Was there too much, just enough or too little on each slide?		

Aspect of Presentation	Feedback Received	Improvements Required
Content Did I give enough information about the topic? By the end of the presentation do the audience know more about the topic than before I started? Do they understand what I have presented?		
Audience engagement Did I manage to keep my audience engaged? Are there aspects about my delivery that I need to consider? Was the topic I chose easy to follow? Did I speak clearly? Did my posture and body language mean that everyone became part of the activity?		
Quality Was my information accurate and did I present everything accurately? Was my spelling and use of technical language correct?		
Use of graphics and photographs Have I used images to enhance my presentation? Are they relevant, or do they detract from the content? Do I need permission to use any images from copyright holders?		
Ability to respond to questions Did I have confidence in knowing answers to questions that were directly related to the content? Is there more I need to find out?		

Lesson 2: Styles of Project

- **What are possible styles of a good project?**
- **What style should I adopt for my project?**



Key Vocabulary

approach	mood board
format	sketchbook
artefact	prototype
commitment	placement
arrangements	clearance

In Lesson 1, you were asked to think about the type of project you might undertake. You also looked at your skills in relation to your proposed project style. The following information offers guidance to you on each style of project. This is not comprehensive, as you may have another idea for a project that requires an entirely different planning **approach**. You must always check with your teacher that your idea is acceptable for development and submission as your Term 3 Project.

What Will My Project Be?

Below are some suggestions of the types of projects that you might want to produce.

A Piece of Written Research

This type of project is most likely to be of an academic **format**. Written research should be formal. It will include proper referencing, source identification, and a bibliography. Details on how to complete them follow in later lessons. This style project will focus on a specific issue and should ask challenging and sometimes controversial questions about that issue.

A written research project can often be the most academically challenging and time-consuming, yet intellectually rewarding, style of project. In planning the approach to a written project, you will need to consider the following:

1. You will need to plan out the approximate length of the piece. Seek guidance from your teacher on a target number of words to meet the assessment criteria. Typically, you might be expected to write anything up to around 3000 words. As a guide, an A4 page of typed script includes around 500 words so a 3000-word piece would be around 6 pages in length.

2. Ensure you have a clear question for your piece. You can devise the question but do check with your teacher that it is appropriate. The question should be broad enough to enable you to write in detail about the topic/s involved but specific enough to allow you to provide an answer to the question in your paper.

3. Plan your work.

   a. Typically you might begin a written piece of work introducing the subject matter or topic and noting how and why the question you are trying to answer arose. This helps provide an outline to the reader of what the piece is about.

   b. You might then choose to follow up with a brief review of what other people might have written or said about the topic or subject matter. This is sometimes referred to as a 'literature review'.

   c. Next you might provide an outline about how you went about researching and studying the topic.

   d. Next, present the results of your research or investigation.

   e. Finish off by summarising the results and providing a conclusion which directly addresses the question.

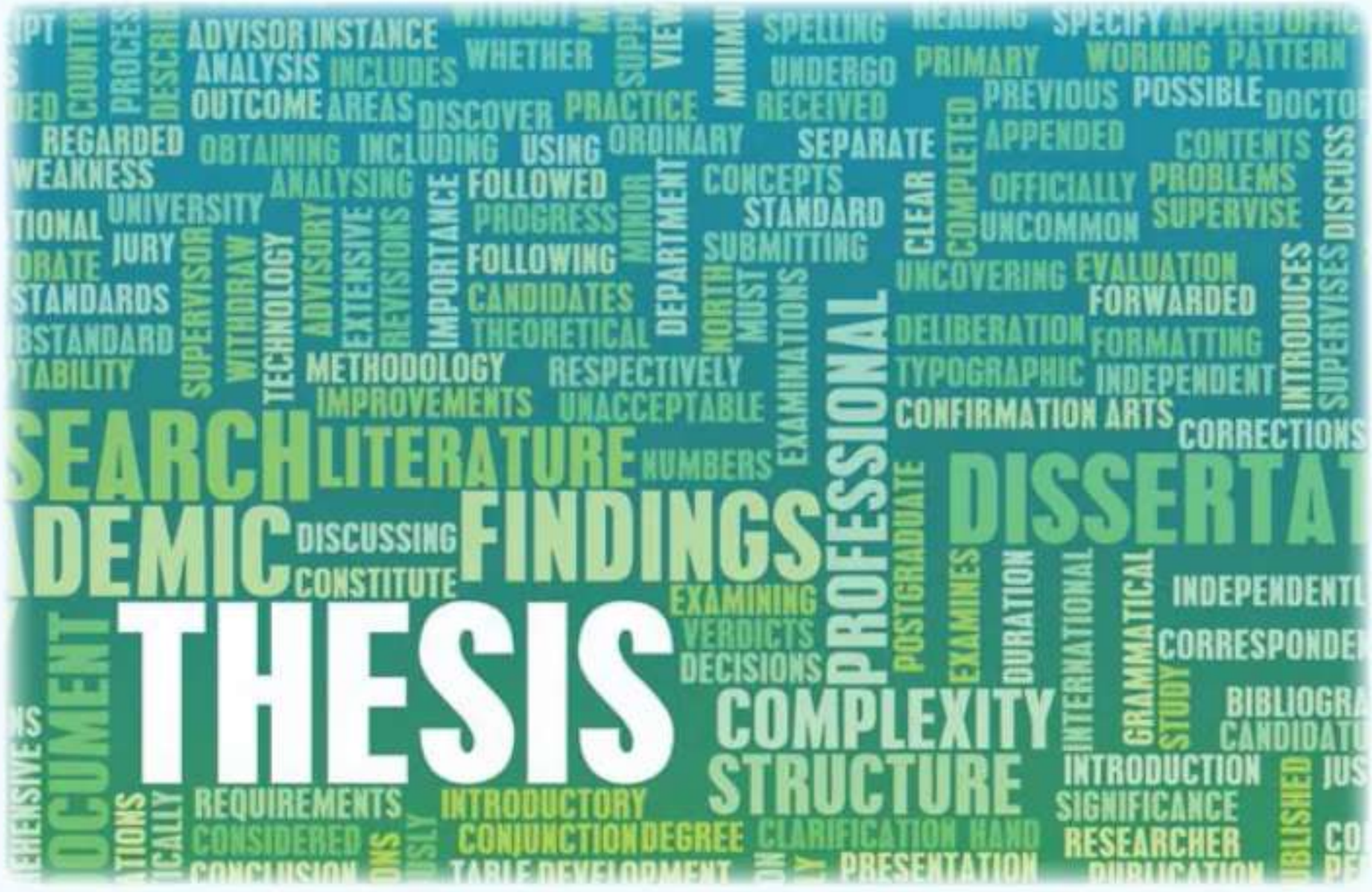
4. Ensure that you consider the 'command words' in the question as noted in Table 1 in Lesson 1 of this unit. If your question includes the phrase: 'To what extent...' then you will need to directly address this. Through your research and investigation, you might arrive at the conclusion that the extent of whatever it is, is extremely strong/ important. For example, **quite strong/important, of some strength/ importance or possibly not very strong**. If your question includes the word 'evaluate', then you must make judgements

and place levels of importance on outcomes that you discover. If it includes the word 'analyse', then you will have to break down the topic/issue into smaller parts to show how everything fits together.

5. Be prepared to have your written work reviewed. This might be by your teacher, parents or someone else who can give you some feedback on things you can improve, amendments you might reasonably make, or where your writing could be made clearer or more accurate.

6. Use your project journal to help you plan, prepare, and think through what you are going to include, and importantly, what you can leave out.

Top Tip



Only embark on a written research project if you enjoy researching and analytical writing. However, doing your project in this way is helpful if you are planning to go into higher education, as the skills you will learn will be valuable.

A Poster Presentation

A poster presentation is developed as a single visual representation of your research and findings that can be viewed by an audience to understand your topic. Posters are often used to share information, and are an important part of many conferences, seminars and exhibitions. They may be used to present quite complex material, and so it is important that the information on them is well laid out, legible and attractively presented.

Only embark on a poster presentation project if you enjoy researching and then presenting in a visual format. It does not matter if you do not have artistic or creative skills, this style of project may help you develop these. The temptation to fill the space with as much material as possible should be avoided; poster presentations should never be as dense as a printed page.

Important things to consider include:

1. Aim to have your poster around one metre by two metres in size. This enables you to provide enough information on the poster and also means it becomes easier for people to read and see the content.

2. Ideally, you need to ensure your poster is legible at a distance of about one metre away. This means you have to consider the font size and the detail you include to make sure it is readable.

3. Plan the layout. There are two common main layouts:

    a. Panel layout - this is where the poster is comprised of different 'panels' which may include text, images, diagrams, charts and so on, each produced as a separate 'panel' and then stuck onto the poster. This method allows you to easily see how the whole thing works together and allows you to move the panels

around to get the best layout before finally sticking them to the poster. When thinking about the layout, try to think about how people view posters; do people look at posters from the left to the right or right to left or is it from the top to the bottom? Thinking of this is important to help you identify the flow of the layout of the items you include on your poster.

b. The one-piece layout - to use this layout it is best to start with a template. Several templates are available in various apps online.

4. Think carefully about the content you want to include in your poster. To help you in this, consider the purpose of the poster, what information you want your audience to see, read and understand. Will they be expecting some reasonable detail or just a brief outline? Are you trying to convince your audience of your argument, promote a way of thinking and behaving, or report the findings of some research?

5. Think carefully about the colour scheme you use. Ideally, you want colours that provide a clear contrast; avoid using pastel colours as these can be hard to see from a distance and remember to consider those with disabilities who may be looking at your poster. This includes, among others, those who may suffer from colour blindness.

Top Tip

When making a poster it is essential that you carefully consider its visual appearance as well as its content. Finding the best approaches to producing a one-piece poster can take a little while. Make sure you start working on your poster in plenty of time. Using a template could save you some time.



Research posters are a popular method of presenting new ideas at academic conferences. Producing a research poster might help you develop useful skills if you intend to go into higher education.

A Formal Presentation

A formal presentation will involve delivering information on your project content to an audience.

You could use one of the digital presentation packages available online to create the background for your presentation. If your project outcome is a presentation, your teacher will be assessing you using presentation assessment criteria. You should check with your teacher how you will be assessed and plan your presentation to ensure that all of the assessment criteria will be met.

Top Tip

If you are a confident speaker and can elaborate on a topic using just a few prompt words or graphics on a slide, then this may be the format for you. Take note of all the advice offered earlier in this guide and do not forget to practise!



There are lots of things to consider when doing a presentation as outlined earlier in this lesson, but it can be a rewarding experience for the presenter and the audience.

Creating an Artefact for Your Project

You have an opportunity through your project to create an **artefact** or object, something that reflects your artistic or creative skills and interests. Completing your project through the production of an artefact may be of particular interest to you if you are a keen artist, studying art or design or have an interest in cultural dress, art forms, or music. What you submit as your project cannot, however, be a piece of work that you are already using for assessment in another subject; it must be specifically created for the Term 3 Project.

There is considerably more advice here for this style of project, as it is not as fully supported by the Skills Section in this guide, which concentrates more on written research. Note, however, that guidance on product development, patents and design rights may also apply to an artefact.



We need to work hard and strive to push forward the work of this nation and defend it with the same spirit and courage that our ancestors used to do.

Sheikh Zayed bin Sultan Al Nahyan (May Allah have mercy upon his soul)

Compared to a written research project, creating an artefact has a very different set of demands. You need to consider in advance what these may be.

Time is likely to be your most valuable asset; how are you going to use it? You could take time undertaking academic research, or researching cultural or comparative information, before starting to create your artefact.

The project planning sheets used earlier in this guide should have helped you to decide what best suits your needs and skills.

In undertaking the creation of an artefact, you must consider research, development and production time, as well as access to and cost of resources. When you start on something creative, you will know that to achieve perfection it takes time to change, adapt and finalize, so do not view it as an easy option. You will also need to record the progress at every stage, any changes you make, including the reasons for them, as well as your reflection. You will also need to have the authenticity of your artefact verified. All of this will need to be planned and completed to ensure it contributes to your project.

Top Tip

An artefact can often take more time to develop and perfect than a piece of writing. Always allow more time than you think this might take.

Table 9 *Checklist for Planning Your Artefact-Based Project*

Artefact	Yes/ No	Planning
Do I have an idea in mind?		Yes – check this with your teacher to ensure it is appropriate for the project.
		No – consider what skills and interests you have, and how these may link to the project.
Is this an artefact which reflects people, a community, a culture, a religion, or the environment?		Yes – are you able to access information or other artefacts to enhance your research?
		No – how does it then relate to the project?
Do I need specific access to machinery or resources, or are there specific skills I need to start?		Yes – how am I going to achieve this?
Have I got a formal arrangement in place to access existing artwork for research purposes?		Yes – use this as evidence for your project.
		No – ensure you seek this.
Do I know how many hours per week I must work on my artefact?		Yes or no – ensure that you plan and stick to it.
Do I need to visit galleries or museums? Will this require me to make transport **arrangements**?		Yes – ensure these are built into your planning. Do not leave this until just before your visit.

Artefact	Yes/ No	Planning
Do I know what I want to achieve from any comparison or research through looking at existing pieces of art?		Yes – set this out in your initial approach to any artist or art owner, and in your project title.
		No – consider this. Link it to your project, and ensure that you can view what you need to. (This can of course be done online.)
Does the development of this artefact link to my future career plans?		Yes – outline in what way.
		No – does it need to?
Other comments		

If you have considered all of the planning points, you should now consider the following:

- Where will I need to visit to see existing pieces of art?
- Who can I speak to about current opportunities?
- Are there public galleries, private collections or artists that can enhance my research?
- What support might I need? Who from?

Your first step is to establish contact. This is true whether your approach is speculative, seeking specific access to somewhere or something, or whether you know exactly where you want to go and what to do. You should do this formally, through an email or letter. Do not forget to use your communication as evidence.

Your teacher will support you in creating a formal approach to an organisation or venue through the communication Action Task in Lesson 3.



When approaching any potential contact for help, it is always sensible to write a formal letter or email. Be polite, courteous and use formal language to introduce yourself and your request.

There are a range of galleries and museums in the UAE that may be of use or interest to you. There are additionally private collections, which may be more difficult to access, and also national and international galleries that allow art to be viewed online if they cannot be visited in person.

If your project is a musical piece or a drama or dance composition, you may also wish to visit theatres to contribute to your research and use them according to the advice given here about galleries and museums, which you may also consider visiting. Choose those that are local to you and house the art or artefacts that will help you with your research. The list below helps get you started.

Abu Dhabi:

https://www.abudhabi.com/v/museums/
https://www.abudhabi.com/v/galleries/
http://etihadmodernart.com/
http://www.louvreabudhabi.ae/en

Dubai:

http://www.themajlisgallery.com
http://www.thethirdline.com

http://www.dubaicity.com/al-fahidi-fort-historical-landmark/
http://www.saruqalhadid.ae/

Fujairah:

Fujairah Museum http://www.fujairahtourism.ae
Dibba Society for Culture Arts and Theatre

Sharjah:

The following indicate the locations of different parts of the Sharjah Museums group (you can get further details of the different museums by going to the home page of the Sharjah Museums Authority – http://www. sharjahmuseums.ae/):

Sharjah Art Museum, Arts Area, Al Shuweiheen, Sharjah, United Arab Emirates

Sharjah Museum for Arabic Contemporary Art, Arts Area, Al Shuweiheen, Sharjah, United Arab Emirates

Maraya Art Centre, Al Taawun Road, Al Qasba, Sharjah, United Arab Emirates https://www.sharjah.com/v/museums/

Artefact Development

With any creative piece of work, you should consider what has provided the stimulus. Whatever the stimulus is, this should be recorded and referenced. If there is context to the artefact, such as a link to culture or religion, this will also need to be explained.

If you are creating an artefact, you must show every stage of development and influence. This can be done in a number of ways:

- **Mood board**
- **Sketchbook**
- **Prototype**

Mood board

Mood boards are a relatively easy way to communicate your design and creative ideas to others, and to act as a reference point as you develop your work. Mood boards can include all of the following – and much more. They are totally individual to the creator. Consider what you might add to your mood board:

- Photographs
- News cuttings/articles
- Your own sketches
- Texture and textile samples

Like any piece of creative work, ideas can come from anywhere and at any time, so always be on the lookout for inspiration. The following tips will help you in your development:

Top Tips

- Always have a camera with you. You never know when something can inspire you and contribute to your ideas (this is, obviously, much easier with smart phones).

- Do not rely on digital research. Although the Internet contains a wealth of resources, these likely belong to someone else. These resources are not innovative and may cause you to shape your project according to what you find.

- Select the format for your mood board. Is it virtual or physical?

- Use text to explain and expand on your mood board content.

- Make your mood board theme an obvious link to your project, and make sure that items can be linked together.

Sketchbook

A sketchbook can contain all the features of a mood board but should also show sequential development rather than a simple gathering of ideas and influences.

A sketchbook would usually contain more text than a mood board to explain the content and how it has contributed to your project. A well-presented sketchbook can provide much of the evidence to support an artefact project.

Prototype

If your artefact is a product rather than a piece of creative artwork, you can develop a prototype to show developmental phases. A prototype is the original, or model on which something is based or formed. A prototype is one of the first units of a product that is manufactured and then tested, so that the design can be changed, if necessary, before the product is manufactured commercially.

For the purposes of your project, the prototype does not have to be a miniature replica of your final project product, but rather reflect a late developmental stage. If your final product varies from the prototype, you should record, reflect, and evaluate the changes in the final product.

Using Photographs

Ideally, photographs would be your own and contemporary, but you can also use other people's photographs or images linked to news articles or academic research. In all cases these must be referenced as someone else's work. Using your own photographs will require you to add date, time, and location of the photograph, and you must ensure that if a photograph has a person in it, that you have their permission to use the image.

Creating an Innovative Product

If you are a creative or innovative design student, you may wish to design or make a business-related product, associated with moral education, as your project. This type of project will require a very different style of research.



A prototype is an early version of your artefact and allows you to review what you have done, what you have learned, and what you need to do to improve the final version.

Before you embark on your project, consider the following:

- Do you intend to design and build something totally new, something that currently does not exist in any format and is related to moral education? If so, information on patent and copyright in the Skills Section will be of interest and importance to you.
- Do you have a specific market in mind? If so, will you need to determine who or what this market is and undertake market research?
- Have you got access to the specific machinery, and technology that you will need? If so, are you competent at using this machinery, or are you creating just a virtual design? Will you need to gain permission to use the machinery?

You should ensure you have thought about all of these things early in the planning stage and agreed these with your teacher. Ask yourself the following important questions:

- Is your project linked to what your customers or audience actually want and need?
- Will your project outcome (the product you create) be fit for purpose?

Factors Involved in the Planning

Once you are confident that this is the right approach to your project, you can start planning. Use the following ideas to help you.

Undertaking Business-Based Research

There are many ways to undertake business-based research. These are things you may do and consider:

- Contact a business that has experience in a related field.
- Talk to people who may be interested in your innovation. They may have ideas to offer and give you additional problems to solve.
- Consider user values and any environmental impacts – these are the key aspects of the project.

Important Stages in Developing your 'Innovation Cycle'

Use your research to inform your planning and decision making. Then ensure that you have a clear time plan for research, planning, development and production. This may also include planning for a prototype; you want to know that your idea can materialise into a product! Consult someone with expertise as your product is developing. An 'expert' may help you foresee any logistical problems. Finally, allow time, materials and scope for modifications.

Top Tips

There are good Internet resources available to give you tips and guidance on product development.

Remember to list your sources!

Volunteer Placement Project



Volunteer projects can cover a wide range of tasks and activities which allow you to give something back to your community.

You have an opportunity through your project to undertake volunteering – a **placement** that contributes to your local or another community. Completing your project through a placement may be of particular interest if you are already linked to an organisation, or if you want to find an opportunity to develop skills or experience that you may need for your future career.

Unlike a written academic project, completing a placement has a very different set of demands. You need to consider what these are in advance of seeking a placement.

Once again, you need to consider carefully how best to use your time. You could take time undertaking academic research or giving time through a placement.

The project planning sheets should be used in deciding what best suits your needs and skills.

In undertaking a placement, there is a key word you need to understand: **commitment**. When you agree to a placement, it may be that an organisation relies on you to be there and do what you have agreed to, so do not view it as an easy option. You will need to record the contribution you are making and reflect on this. You will need to have your contribution verified by a placement supervisor. All of this will need to be planned and completed to ensure it contributes to your project.

Use the following checklist for planning. It will help you decide if this is the right style of project for you, and how you can access what you need to complete a successful project. If there are more 'No' answers than 'Yes' answers, you may find yourself short of time to get this placement arranged and completed.

Table 10 *Checklist for Planning*

Placement	Yes/ No	Planning
Do I know where I can do my voluntareering?		Yes – contact and agree.
		No – consider where.
Do you know whether this placement focuses on individual people, a community or the environment?		Consider the differences.
Can I start this project without any specific **clearance** (for example, security or safety checks) or specific skills?		No – how am I going to obtain them?
Have I got a formal arrangement in place?		Yes – use this as evidence for your project.
		No – ensure you ask for this.

Placement	Yes/ No	Planning
Do I know how many hours per week I am able to commit?		Yes – ensure that you negotiate and agree this and communicate any change required.
		No – establish this before you approach the organisation.
Can I attend my placement without having to reschedule existing commitments?		No – ensure these are planned and communicated.
Can I get to my placement without making special transport arrangements?		No – ensure these are planned before you commit. Do not leave this to consider until just before your first visit.
Do I know what I want to achieve from this placement?		Yes – set this out in your initial approach to the organisation and in your project title.
		No – consider this; link it to your project and what you agree with the organisation, and ensure that the placement can deliver this aim.
Does this placement link to my future career plans?		Yes – outline in what way.
		No – does it need to?
Other comments		

If you considered all the planning points but have not yet secured a placement, you should now consider the following:

- Where can I do this?
- Who should I approach to request this opportunity?
- What support might I need? Who from?

Top Tip

Allow time for approaching an organisation, for them to respond, and for you to make all the arrangements necessary to start when you need to.



Your first step, whether your approach is speculatively seeking a placement in general, or whether you know exactly where you want to go, is to establish contact. You should do this formally through an email or letter. Don't forget to use your communication as evidence of how you have planned and developed your proposal.

You teacher will support you in writing a formal letter in the communication Action Task in Lesson 3.

Lesson 3: Developing Your Skills for a Quality Project

- How to find the information I need for my project efficiently?
- Why are critical thinking skills important?
- How to understand the data I gather?



Key Vocabulary

reflect	patent
evaluate	authority
specific	bias
copyright	statistical significance
bibliography	pilot

The following section of this guide outlines the key things you will need to read, learn, understand, and apply according to the content and style of your project.

Some of the content here is for developing higher-order skills that you may not use if you are doing a placement, presentation or product-based project, but they are skills that will definitely be of use to you in your continuing education. If at any stage you are unsure of what you are doing, and whether it complies with the information and guidance provided, you should check this with your teacher in a one-to-one progress discussion.

Understanding Research

Your MSC Project may be the first time in your education that you are undertaking proper research. Previously you may have looked for answers to questions, or tried to find out different answers to questions or tasks set by your teacher. This is much simpler than undertaking broad research in order to complete a project with a title and style of your choice. To create an excellent project, research and planning are important skills to master.

Top Tip

Before you start researching, you must plan it and understand how to do it. Take time to do this before embarking on the wrong sort of research.

The following information should help you to do this effectively and to contribute to your project outcome. It will not matter whether you are doing a project that is based on academic research, creating your own artefact or product, or comparing two pieces of contemporary art; you will need to research thoroughly and efficiently.

Your starting point must be to decide on the questions you wish to answer. Your project title might be in the form of a question. This will give you some structure to start with, but also should lead you to other questions in order to come to conclusions or present and validate arguments.

Top Tip

Every time you answer a question, it is likely to lead to another one. For a truly good project, be prepared to spend half of your time researching!

Here are some ways in which research might be undertaken. You should also think of others that might be more relevant to your project title and style:

- Reading academic articles and reports
- Comparing opinions from various specialists and experts
- Looking at how a product is manufactured or constructed, including finding out what materials are used
- Establishing links with a business or an expert individual that is related to your topic
- Use of the data already gathered

Research is a dynamic process; one thing can lead to uncovering another. However, you should be careful because if you are planning an academic research project, you can very easily get drawn away from your topic.

Key Concepts in Undertaking Research

The following are key concepts in undertaking thorough research:

- Asking questions
- Recording
- Understanding

- Problem solving
- Testing
- Analysing
- Evaluating your research

When you think you have done these, you will need to ask more questions and retest.

Research can be time consuming and, sometimes, frustrating, but generally it is an exciting process. It can lead you to the following:

- Coming across new technical terminology to learn and use
- Finding a new line of enquiry – but be careful you do not venture too far from your topic
- Introducing a new argument that you have not previously considered
- Arriving at an unexpected confirmation of your hypothesis
- Developing a sudden and clearer understanding of a concept
- Developing new ideas that can be directly applied to your project

Whatever you uncover through research, make sure you record this, **reflect** on it and **evaluate** its usefulness for your project. These are key points to remember at all stages to help you manage your project.

Searching the Internet for Information

If you are using the Internet for your research, you need to learn how to search efficiently and accurately. By simply typing a word into a search engine you can come up with thousands or even millions of results (hits), and then take a very long time trying to find exactly what you are looking for. You need to know how to narrow and focus your search.

Tips for Modifying Your Search

Establish what type of site you are searching for and see if there is a search term for it. Is it something to do with education in the UAE? If so, it will be a government site and will always have 'government.ae' in the site name.

Establish what type of resource you are searching for and see if there is a search term for it. For example, you might want to look at a PowerPoint presentation that has been developed around a certain topic. In that case, add the word 'PowerPoint' or 'ppt' to your search. If you were looking for a PowerPoint presentation on volunteering you might type in 'volunteering+ppt+UAE'. This will tell the search engine to look for content which includes these key words.

If your hits do not give you the results when you have included an exact key search word, try using a synonym (another word that means the same).

Try modifying results by using speech marks "..." in your search. For example, if you are using a two-word search, your results will be based on both of those words and you will potentially come up with thousands of sites which include either of those words. This means that the hits will include all references to both words individually. Using the speech marks will ensure that the words are used together and deal with your search subject only. For example, if you search: "volunteering in the UAE" the search engine will look for sentences that contain that **specific** phrase. Compare the results you get with this approach with the same phrase without the speech marks.

Searching for a specific quotation will also be simplified by using speech marks, but this time by putting them round the whole quotation. This means you will have searched for the quotation as a single item, and it should result in fewer hits.

Other Search Tips

If you are unfamiliar with a word you have come across or its origins are in a different language, you may wish to find a definition of a particular word. You could start with going to a dictionary site and from there searching for the definition of your word, or you could search for Define then add your word.



Searching for content and information on the web can be time consuming – efficient use of the search tools provided by search engines can help you find useful information more quickly.

Understanding What Is Yours to Use

When you look at everyday objects, advertisements and logos and almost everything else that you see, it is important to realise that all of these things will have been created by someone. This may be an individual person or an organisation. The person or organisation will have invested considerable resources to develop their final product or reach an outcome. They may have invested money, thought, time, or all of these. There are laws and rules that exist to protect what they have invested to create their product.

In undertaking your project, you might wish to protect your own work in the same way, especially if you are making something that is innovative.

Understanding Copyright

There are many things that can be protected by **copyright**, such as books, photographs, websites, apps or indeed anything that has been created by someone. The person who has created this might be an author, composer, artist, or choreographer for instance. It is their idea that has created the piece of work.

Copyright, which is a legal right given to the creator of something for its use and distribution, exists to protect this work. This does not mean it needs to be registered, but the creator must be able to prove that is their original work, and it must be written or recorded formally to be protected. It can also be saved digitally.

When copyright exists, it means that other people cannot make copies or distribute this work without permission from the author or creator. If something is copyright protected it should be identifiable and have listed the name of the author or creator and the year in which it was created or published.

Copyright in the United Arab Emirates is protected under the Copyright and Authorship Protection Law No. 7 2002.

Understanding Design Rights

There are two types of design rights. They can be Registered or Unregistered. You might identify a product by its design. If you can, it would suggest that it is covered by design rights. One of the most identifiable designs worldwide is the standard shape of all Coca-Cola bottles.

Understanding Trademarks

Organisations will use trademarks for each of their brands. A trademark is a sign, logo or design which identifies a particular product. Let's

consider Coca-Cola again. The word 'Coca-Cola' is a trademark. When you see this word, you will immediately recognise the product to which it refers. The manufacturers of Coca-Cola have registered the name as a trademark. This means that if another organisation tried to use something very similar for a similar product, they could be breaking the law relating to the use of trademarks and could be taken to court by Coca-Cola.

Understanding Trade Secrets

Businesses often want to protect something that is special to their organisation or their product. There are worldwide trade secrets, such as the recipes for Coca-Cola or KFC. Often people who work for such organisations must sign an agreement that they will not share information. This is known as non-disclosure. If they violate this agreement and disclose secret information, they may be liable to prosecution.

Understanding Patents

A **patent** can be applied to anything that has been made or used. Usually, we would see a patent applied to a machine, such as a PC, tablet, or a robot. A patent will be issued by a government or formal office. It is a certificate which verifies that the idea for the invention belongs to that inventor. The inventor must explain how the invention works to be allowed a patent. Inventors may find that getting a patent for their product can take a very long time and may be very expensive, and often by the time this is achieved their idea has been used to produce something else.

Understanding Creativity and Intellectual Property

This is probably the most complex to understand as it is often based around ideas. The rules apply to anything that is original. Something does not have to be fully complete for it to be protected by these

rules, or even for it to have value to someone else who wants to use this idea and pass it off as their own. If you have created something, you might want to give it away or sell it. In either case, it should be protected by rules to stop someone else using it or selling it again as theirs.

It is important to understand that if you are using information, images, trademarks, brand names and so on in your project, you may have to seek the permission of the owner for the rights to use it.

A Simple Explanation of Sources of Information

The following is a list of key sources of information which you may wish to consider using as part of the planning and development of your project.

Bibliography

A **bibliography** is also known as a reference list. A bibliography is the name given to a list of all the sources you used, whether or not you directly made reference to them in the text.

Bibliographical Details

The important items to take a note of when you first think a source is useful are: author, title, year of publication, kind of media (e.g., video, radio programme, Internet site, newspaper, magazine, place of publication, and publisher). You can insert the ISBN (International Standard Book Number) at the end of the bibliography entry. For Internet sites, write down the URL (Universal Resource Locator or "address") and the date of access.

The following shows an example of how to reference a book, a video and an Internet site in a bibliography.

A Book:

(Single author)

Ahmad, M. (2007). Our Granddad. The Islamic Foundation.

(Multiple authors)

Rizvi, S. R. and Ahmad, M. (2018). Let's Learn About Obeying Parents. Blurb Publishers.

A Video:

Etihad Airways (2017). Celebrating UAE National Day 2017. Video recording, YouTube, viewed 3rd July 2018, <https://www.youtube. com/watch?v=Z_rvqKK0E3U>.

An Internet site:

The Constitution (2018). The Official Portal of the UAE Government, accessed 03/07/2018, https://www.government.ae/en/about-the-uae/ the-constitution-of-the-uae

Citation

To cite is to point to evidence, **authority** or proof by mentioning the author of the work to which you refer in the text of your work. It is the author's surname and year of publication of the document, for example: (Gross, 1992). This is only if you do not directly quote the author.

ISBN

ISBN stands for International Standard Book Number. It is a unique 10 or 13 digit number for every book published. Because the ISBN is unique, it makes identification easy.

Quotations

These are borrowed words, as they appear or have been spoken without changing them into your own words. They must have speech or quotation marks put round them to show that they are someone else's words. For example:

"We are building a new reality for our people, a new future for our children, and a new model of development."

(His Highness Sheikh Mohammed bin Rashid Al Maktoum, May Allah protect him)

If you summarise someone else's work rather than quoting it directly, you simply use this format:

[Name of author and date] argues that [add here whatever they are arguing]. Then you list the book this comes from in your bibliography or reference list. Readers can then see the precise source of the reference. The date is important because often an author might have more than one work and the date helps to pinpoint the exact resource you are referencing.



Able individuals who do not use their intellectual and mental abilities and do not harness the way Allah Almighty intended for us, will only face diseases, mental and social troubles.

Sheikh Zayed bin Sultan Al Nahyan (May Allah have mercy upon his soul)

Reference List

This is a list of all the books and other sources of information and material to which you referred in your work. Compare this with a bibliography.

Reference

A statement in the text should be linked to the bibliographic details of the document which supports (gives evidence, authority for, or proof of) that statement. You enter this reference into your bibliography.

Plagiarism

A synonym for plagiarism is copying! A legal concept exists called 'intellectual property', which allows authors rights over their writing. Copying from the Internet or from a book is just as illegal as it is shoplifting from any shop! Acknowledging sources is an academic requirement.

Critical Thinking Skills

We all use some critical thinking and appraisal skills to determine the validity of research and everything we see and do in everyday life. This can be what we see, read, hear or are told by any individual or the media.

Activity 1: Thinking Task

Think of some stories related to the environment that you have read in newspapers or on websites. Summarise the different arguments. Do you believe what you are reading or seeing? Think about the questions you might want to ask about where the information you are reading or seeing came from. Who wrote/said it? Why? What audience were they addressing? Are there two different arguments presented and if so, how can they both be right?

Advertisements

One of the purposes of advertisements is to persuade us to buy or use the product being advertised. Some use statistics, for example, '9 out of 10 people say that they noticed a difference when using product X' or, 'In a survey, 97% agreed that they saw a noticeable difference after using product Y'. When you see or read adverts, it might be a good idea to ask some of the questions in the Thinking Task above, and to demonstrate some critical thinking. In short, critical thinking is about not believing everything you see or read, and asking questions to establish more details, information or facts about the issue so that you can become better informed.

For example, in reference to the advert above, you may want to ask how many people participated in the survey – 10, 100, 10 000, 1 million? If only 10 people were asked, does this represent an appropriate sample? What questions were they asked? What does the word 'noticeable' mean in 'noticeable difference'?

Activity 2: Action Task

In this task you will undertake critical analysis. Choose any online newspaper article relating to environmental matters, for example, climate change. Read the article and discuss with your partner all of the things listed under Critical Analysis in the table. When you think you have been able to work these out, complete the table.

Critical Analysis	Answers
Where has the original study come from? What can you infer about the organisation/ scale of the study?	
Is there any bias evident in the reporting by the newspaper? If so, how do you know?	
What do you know about the newspaper? Is it reputable? Is it politically influenced? What sort of reader does it attract? Would any of the above issues affect the report?	
Might the method of obtaining the information be biased? Could there be another explanation for the findings?	

Understanding Bias

It is important to understand bias when you are using data or information from any source. Bias is a preference towards one thing over another, based on opinion rather than fact. If you don't consider whether there is bias, you may simply use ideas and findings that are not reflective of the whole issue. Bias can have a particular impact on your research if you use a questionnaire and its results as evidence for your project.



In different parts of the world, newspapers present views which reflect those of the owner or publisher and can be biased. Part of critical thinking is to question what you read and seek more information from different sources to get a more informed view.

There are four main forms of bias. These are technical terms which you should use if they apply to your project:

- Selection bias
- Performance bias
- Observation bias
- Attrition bias

We need to understand each of these to see their impact on research and findings.

Selection Bias

Selection bias means that there may only have been certain groups of people or things questioned or tested.

Things to check or consider:

- Have certain individuals been excluded from the sample? For example, is it recording results only from one gender or people from a specific age group? Might it have brought different results if others had been included?
- Is there membership bias? Perhaps the group used for the study, are members of something such as an activity club. Then, would you expect them to all have similar thoughts and ideas?



Sometimes, the sample which might be chosen for a survey can be unrepresentative, or the members are all too similar, making the data you collect biased.

Performance Bias

Performance bias can occur when the subjects of the study have a knowledge of which group they are enrolled in. As a result of this, the effects and results may be overstated or understated, as participants will be affected by their personal attitudes, which may depend on the group they are in.

Observation Bias

Observation bias can influence outcomes as the behaviour of the researcher is important when conducting a study. This may be because:

- The interviewer or researcher's own bias is evident in the way questions are written or asked.
- The interviewer or researcher's recall is inaccurate.
- The interviewer or researcher's behaviour affects the participant's response, and this in turn has an impact on findings.



Constructing surveys is a skill. Leading questions can reveal the author's bias by implying the answer. For example, in the question: 'Does drinking fizzy drinks with lots of sugar cause health problems?' it is implied, that the interviewee does have problems and that fizzy drinks always have lots of sugar. A less leading question might be: 'What do you think of the impact of sugar in fizzy drinks?'.

Attrition Bias

Attrition bias is caused by the number of people who originally might agree to be part of a study or survey but then drop out. When a study is planned there must be a target group for its effective completion to allow fully reflective and accurate results. If a significant number of participants drop out from the study, then the results may not be representative of the target group. For example, you might get the agreement of 20 people to take part in a survey. When you send out the survey to each person, you only get five responses even though

all 20 originally agreed to take part.

These are complicated concepts to consider but should be considered when planning and undertaking your own research.

Activity 3: Action Task

In this task you will understand and identify bias.

Complete this as directed by your teacher.

The following activity includes all of the forms of bias mentioned in the text above. Now that you know more about bias, look at the information about a hypothetical company called SlimU, and add your thoughts in the space provided.

SlimU makes products to help people lose weight. It is launching a new product, which, it claims, helps people lose weight faster and more safely than any other product on the market. It is planning to launch an advertising campaign and wants to cite research to back up its claim.



The marketing team propose two research methods to help provide the data to support their claim:

- Method 1: Ask 100 people who buy the product whether they agree they have lost weight by using it.
- Method 2: Ask a random sample of 100 people to test the product, and then ask whether they agree they have lost weight by using it.

Question 1: Which of the methods used will be likely to provide the better statistic for advertising? Why?

_____

_____

_____

_____

Question 2: Which of the methods used would be more meaningful for the consumer? Why?

_____

_____

_____

_____

Applying Critical Appraisal Skills to Your Research

Always ask yourself the following questions and look for the evidence in any reports and research you use in your project:

- Is the research valid? How do you know?
- What are the findings? Are these the only findings?
- How do the findings apply?

Now, let's try and understand how to test and answer these questions.

Is the Research Valid?

Any well-designed study will

- Have internal validity - this will tell the reader that the answers it produces are true and likely to be reproducible.
- Include details of the study originators and its design, so that the reader knows how the study was conducted.
- Highlight any difficulties or problems that there have been with conducting the study.

What are the Findings?

Are the results important? For example, if it is a medical/therapy study it will include details of **statistical significance** and enough information to lead to a significant conclusion, or to confirm or refute the original hypothesis. Statistical significance is the mathematical measure of the likelihood that the link between two variables is not just a coincidence. An important result does not always show that something is better or worse than another thing, for example, if drug A is as good as drug B, but much cheaper this is a significant finding and therefore an important result.

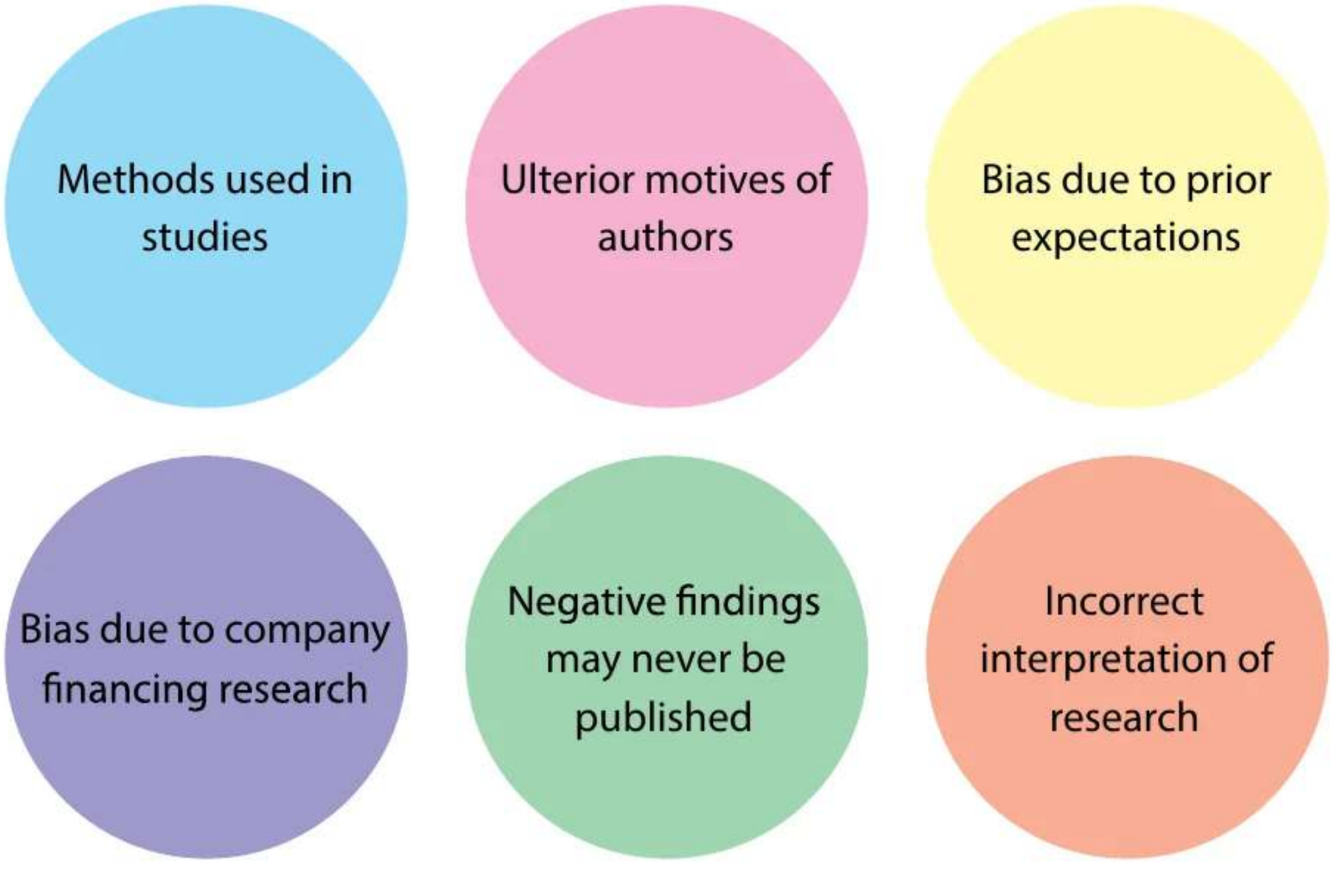
How do the Findings Apply?

Once the results of the study are revealed and have been interpreted, it may be necessary to compare the results with other evidence in your project. You may ask questions such as:

- Are the pieces of research similar?
- Does the evidence prove or disprove your hypothesis?

In conducting research, therefore, there are lots of things to consider. The research is designed to answer the research questions which have prompted the task in the first place. There is little point in carrying out research if the results do not answer the questions, or give you answers which are inaccurate or unreliable because of the way you have designed the research. Figure 1 outlines some of the key flaws in research. These should be borne in mind as you think about how to put your research together, how to ask questions, and so on.

Figure 1: *Ways in Which Research Can Be Flawed*



Devising a Questionnaire

This is one of the most difficult parts of research. Your teacher will guide you through an activity on the use of questionnaires for your MSC Project research.

Now that you have had time to consider aspects of bias you should also consider the following if you decide to devise a questionnaire.

Top Tip

Questionnaires can be the most difficult type of research to undertake. Remember that questionnaires are not any easy option, other forms of research may be more appropriate.

Some Questions to Consider

- What specifically do I want to find out?
- Who am I asking?
- Why am I asking this group?
- How much data will be needed to make the questionnaire valid? (In other words, how many people do I need to ask and how many questions do I need to ask?)
- How much time will it take me to collect my data?
- How much time will it take me to collate and analyse my results?
- Have I got an alternative method of research, if collection of data and information becomes invalid?
- How many questions will be asked?
- How long or easy to answer is my questionnaire? Might this influence contributor involvement?
- Am I going to reproduce paper questionnaires?
- Am I going to devise an online questionnaire? If so, how will the contributors complete it?

- If I decide to use an online questionnaire, can I find a version that can analyse and collate my results?
- Am I asking open questions that require a free text answer? If so are these worded clearly? How am I going to interpret the responses I get?
- Have I taken due account of the ethics of asking questions? How do I protect the privacy of those who take part?

Conducting a Pilot

These are by no means all the things that you must consider in devising a questionnaire. You may wish to devise a simple questionnaire unrelated to your project and try this with a group of friends or family, and then discover for yourself how carefully one must be planned for your project. This is called a **pilot** and is a useful way of checking if your questionnaire works in practice and gives you the information you want.

Activity 4: Action Task

In this task you will work on improving your communication skills. By the end of this session, you will understand how to compile a formal approach to request support for your project, whether this be in securing a placement, arranging a meeting with an individual or organisation, contacting the sponsor of your project (if applicable), or seeking access to an event or activity, for example, a gallery or business.

The final part of this task will be to write a letter of introduction to a person or organisation you will be contacting for support in your research, or completion of your project. Before doing that, you will need to consider types of communication, and how each might be appropriate to the contact you need to make for your individual project.

The table below will help you to start thinking about types of communication and how you use them.
Whether you are approaching somebody known to you or not, your request should have some formality, and include the following points:

- An appropriate way to address the intended recipient – using their formal title (if known)
- An introduction of yourself
- An introduction of the MSC Project – including an outline of your own project
- Details of what support or opportunity you are seeking
- An outline of any key timescales – remember other people can be very busy, and your request may not be a priority
- An explanation of any specific needs you may have
- An explanation that your teacher is willing and able to support your request
- Appropriate contact details for a response
- A note of appreciation

In the table below, list all the types of communication you can think of, and how they may best be used to support you in your project.
The first line has been completed to help you.
When you think you have completed all you can, you will work with other students to discuss and develop your thinking further.
This Activity Task will be completed by you creating a letter of introduction relating specifically to your project.

Type of Communication	When Would I Use This?	What Do I Need to Consider?
email	*To make contact with someone who has already made their email address available to me directly or through a website.*	*Is this formal enough? How to make my approach? How much detail does an introductory email require?*

Type of Communication	When Would I Use This?	What Do I Need to Consider?

Top Tip

Remember – any response is part of your communication trail and should be kept as evidence for your project.

Lesson 4: Recording and Reflection

- **How do I record my progress while working on the project?**
- **What are the characteristics of reflective writing?**



Key Vocabulary

content

feedback

reflective writing

differentiate

descriptive writing

You will have worked out by now that you have all the information and guidance you need through this Student Book and input from your teacher to set about and complete a successful MSC Project. You should also have a clear understanding of your project being about process as well as **content**. If you are unsure about this, you must ask for advice.

Recording Progress

The following template should be completed and kept as a record of your work, thought processes, ability to use **feedback** and evidence of development.

The first two lines of the table give an example of what you might add, just to get you started.

Activity 1: Action Task

Use the template to record discussions and feedback with your teacher, and how this has influenced the development of your project. The first two rows have been filled in to give you an example of how you might record entries.

Table 11: Teacher Meeting Record

Purpose?	Date/time	Attended ✓ Rearranged
Example: *Discuss whether I am choosing the right type of project for me. Should I be thinking of planning an event?*	*4 March*	✓
Example: *I have changed my ideas and want to discuss a new proposed title.*	*6 March*	*Rearranged for 10 March*

Purpose?	Date/time	Attended ✓ Rearranged

Top Tip

Maintain your records of tutorials as evidence of seeking and acting on advice and guidance for your project.

You can copy this page or create your own table using a word processing or spreadsheet programme.

Reflective Writing

By the time you get to this stage in your Student Book, you should be well on the way to having completed your project. All planning and understanding should be in place, and you should be part way through a placement, the development of your artefact, or done most of your research and be thinking of writing up your results.

The final thing you will need to do is to complete a full reflection on the learning that you have gained through completing the MSC Project. This should give you a great sense of achievement.

Good **reflective writing** is a high order skill. By learning it and applying it now to your project, you will learn something that you can translate to your higher education.



Thinking and reflecting on what you have written and what you are producing for submission is an important part of the process in your project work.

The following advice should help you to **differentiate** between descriptive and reflective writing. You may not be able to achieve all of the higher order skills in your project, but you should aim to incorporate what you can. At all times, you should check with your teacher what is appropriate for the style and content of your project.

When you feel your project is near completion, you should read it over and try to assess if you have been reflective enough. Do not forget that you should also check for accuracy of information, spelling, grammar, and consistency in presentation.

Top Tip

Read over your work, but do not assume that makes it perfect. Sometimes we read what we expect to see and what we think we have written rather than what is actually there. Get someone else to read through your project before you submit it for the final time.



Working with a teacher or parent to get them to check your work is a helpful way of supporting your reflection – they may see things you miss.

Descriptive and Non-Reflective Writing

These are some of the characteristics of **descriptive writing**. Your project should not be wholly descriptive. If it is, you will not gain all the marks available to you:

- Your project is simply an account which describes something that has happened and just recalls past experiences or activities.
- Your writing sometimes anticipates the future, but all in the context of an account of an event, activity or findings.
- There are some references to emotional reactions, but there is no exploration as to how reactions relate to behaviours or events.
- Ideas and information are taken on without questioning them or considering them in depth.
- An account of an event or information provided is written only from a single point of view.
- External information is mentioned, but its impact has not been taken into consideration.

- Generally, only one point is made at a time and ideas are not linked.

Characteristics of Reflective Writing

These are some of the characteristics of more reflective writing. Your project should contain at least some reflection. If it does not contain enough, you risk losing marks available to you:

- There is description of events or activities, and where there are external ideas or information, there is some objective consideration and deliberation.
- The project shows some analysis.
- There is self-criticism of learning.
- Details are explored where they have value and relevance.
- There is recognition of the overall effect of the project on you and others. This is particularly relevant to a placement project.
- The project does not focus on one point in time. It fully recognizes that views can change with time. A project that does not do this needs more reflection.

Truly reflective writing, which might be difficult to accomplish at first, meets the following criteria:

- Self-questioning is evident throughout the project, and there is deliberation and some judgement between different views.
- The project considers the views and motives of others and considers these within the context of the project. This is particularly relevant to any social action.
- The project recognizes how prior experience and thoughts interact.
- There is clear evidence of standing back from an event and assessing a situation impartially.
- There is recognition that a position can change with the acquisition of new information and review.

Living a Moral Life

Part of the process of doing your project should include a reflection on the way in which what you have learned during your studies has made you contemplate your own values, moral code and way of living and what this might mean for you as an individual and the community in which you live.

Regardless of the type of project you decide to do, you might include a written section (which may be submitted as part of your project journal) which reflects what your own views and values about your topic, issue, subject matter were before you began the project. You might then provide a critique of these views and values, an honest appraisal of whether you knew enough about the subject matter to have a valid opinion, whether your views were uninformed, naive, immature and so on.

Having identified the values you held at the start, you can then review your project journal and see how your values and views might have changed and what factors caused you to change. This provides you with the opportunity to consider the challenges and issues you faced along the journey of your project and how you confronted and managed them. To help with the process, recall the following four steps:



Without ethics, good behaviour and knowledge, nations cannot build their generations and fulfil their duties.
Civilizations can only be built on knowledge, good character and respect, on knowing the past and looking forward to the present and the future.

Sheikh Zayed bin Sultan Al Nahyan (May Allah have mercy upon his soul)

- Critically assess your current moral perspective.
- Reflect on changes you may wish to make to become a responsible member of society.
- Explore ways in which your integrity may be challenged.
- Explain how you can, as an individual, respond to these challenges.

This further provides the opportunity to then acknowledge your values and views once you have followed your project through. It may be that your values and views have changed considerably in relation to the subject matter you have been investigating or it may be that they have not changed much at all and in fact, your values and views have been reinforced further by what you have discovered and researched along the way. For example, if you have done a volunteer activity with people of determination, your views and attitudes to these people and empathy with their situation and the challenges faced might have changed significantly.

One of the possible outcomes of your studies and doing the project might be that you have made a conscious decision to change your behaviour in some way. For example, you may have changed your diet, taken up a new hobby, changed the way you talk to people, decided to always give up a seat on public transport to elderly people, resolved to reduce the amount of plastic you use each day and so on. All these changes might arise as your studies help you see things from a different perspective and change the way in which you view issues. You can use your project journal to describe how and why these changes have occurred and how you intend to ensure that they will be permanent and not just transitory.

Even though you might document changes in your values and behaviour, it might also be the case that you would like to see further changes in your way of living and in your views which you feel may be beneficial to you and your community. Part of your



reflection, therefore, can include consideration of ways to continue the development of your moral responsibilities, duties and values. It is likely that again, this continued journey would include challenges and obstacles, but you could show how you would use your learning to meet those challenges and what personal characteristics and qualities you might need to help you.

Student's notes

Unit 9: Research

Lesson 1: Introduction 90

Lesson 2: The Research Presentation 107

Lesson 3: Citations and Paraphrases 117

Lesson 4: Citations and Sustainability Report 130

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Lesson 7: Sustainability Topics- Part 2 161

Lesson 8: Project Completion 170

Lesson 9: Presentation 181

Lesson 10: Final Review 191



- **What are the key parts of a formal research report?**
- **How to reference someone else's work in my report?**
- **What are the differences between citations and references?**
- **How to prepare and deliver a professional presentation?**
- **How to evaluate my presentation?**

Lesson 1: Introduction

- How accurate was the referencing in my project for last term?
- What does a professional presentation involve?



Key Vocabulary

professional	insert
quotation	citation
referencing	

Activity 1: Thinking Task

You have probably made a slide show before in school. What is your understanding of what should and should not be included in the slide show? Complete the table with your ideas.

Dos	Don'ts

Activity 2: Thinking Task

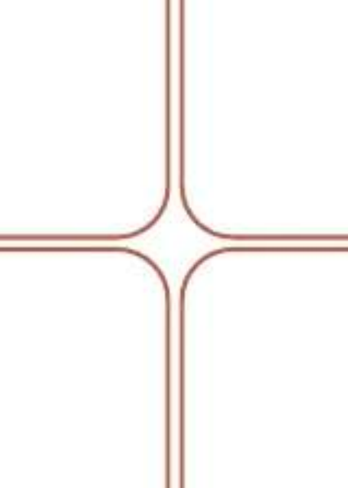
Look at the following slides from a 7-slide presentation.
Identify a problem and a solution for each slide.

SLIDE 1 (COVER SLIDE):

DUBAI

My City - Sustainability

PROBLEM	SOLUTION



SLIDE 2 :

"... the sustainablility of our food and water resources will ensure our sustainable development."

PROBLEM	SOLUTION



SLIDE 3 :

Background

1. Dubai is a city in th United Arab Emirates on the Arabian Gulf

- ★ **It is the second largest emirate with an area of 4,114sq., whish is about 5 per cent of the UAE without the islands**
- Has a dessert climate
- ✓ It is a popular tourist destinantion
- ★ *Growing population*
- **It is a financial and travel centre**

PROBLEM	SOLUTION

SLIDE 4 :

Problems

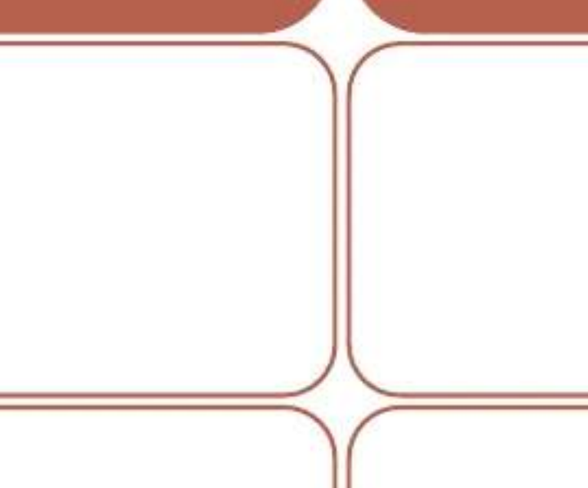
- Population 3,355,900 and growing
- Consumption 145 gallons per person
- Primary Source of fresh water - desalination 89.9%
- Desalination is expensive and contributes to global warming

PROBLEM	SOLUTION

SLIDE 5 :







PROBLEM	SOLUTION

SLIDE 6 :

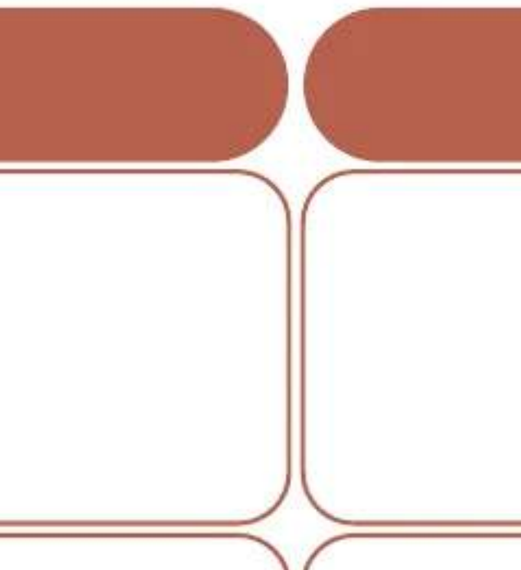
Possible solutions to sustainability in water

- Increase awareness of where the water comes from
- Develop new ways of farming
- Artificial aquifers - Improve drains, catsh run-off
- Increase awareness of the problems
- Teach ways to reduce water waste
- Pump saline excess to the indian Ocean
- Use black water (controversial)
- Replenish water in undergroung aquifers
- Develop salt-tolerant crops

PROBLEM	SOLUTION

SLIDE 7 :

That's All



PROBLEM	SOLUTION

Activity 3: Action Task

Improve the 7 slides in Activity 1. Your teacher may give you a copy of the presentation to change or you can create it yourself. Put your ideas (and any from your classmates) from Activity 1 into practice and make it look more **professional**.



Activity 4: Thinking Task

You have previously looked at creating references for a written report. You must make references when you use information or ideas that are not your own. In presentation slides you must include a citation on the slide AND a full reference that matches it on a slide at the end of your slide show for anything you used that is not your own such as quotations, information and pictures, images, graphics, tables, and so on.

Look back at the seven slides in the previous activity. What is not the student's own information? Write the slide number and what needs to be referenced. Explain why it needs to be referenced.

SLIDE NUMBER AND INFORMATION	WHY DOES IT NEED A CITATION?

Activity 5: Discussion Point

What do you remember about **referencing**? Discuss with a partner.

A reference page is _____
A citation is _____
What are five important things to remember when making the reference page?
1. _____
2. _____
3. _____
4. _____
5. _____
What are three important things to remember when making a citation?
1. _____
2. _____
3. _____

Activity 6: Action Task

Create the references list in a Word document. Once you have done this:

1. In your Word document, go to References, **Insert Citation**.
2. Find the information that needs the citation and place the citation at the end of the quote or bullet point. Do this for all information, correctly matching the citations.
3. In Word, create a reference page and then cut and paste the information into a final slide

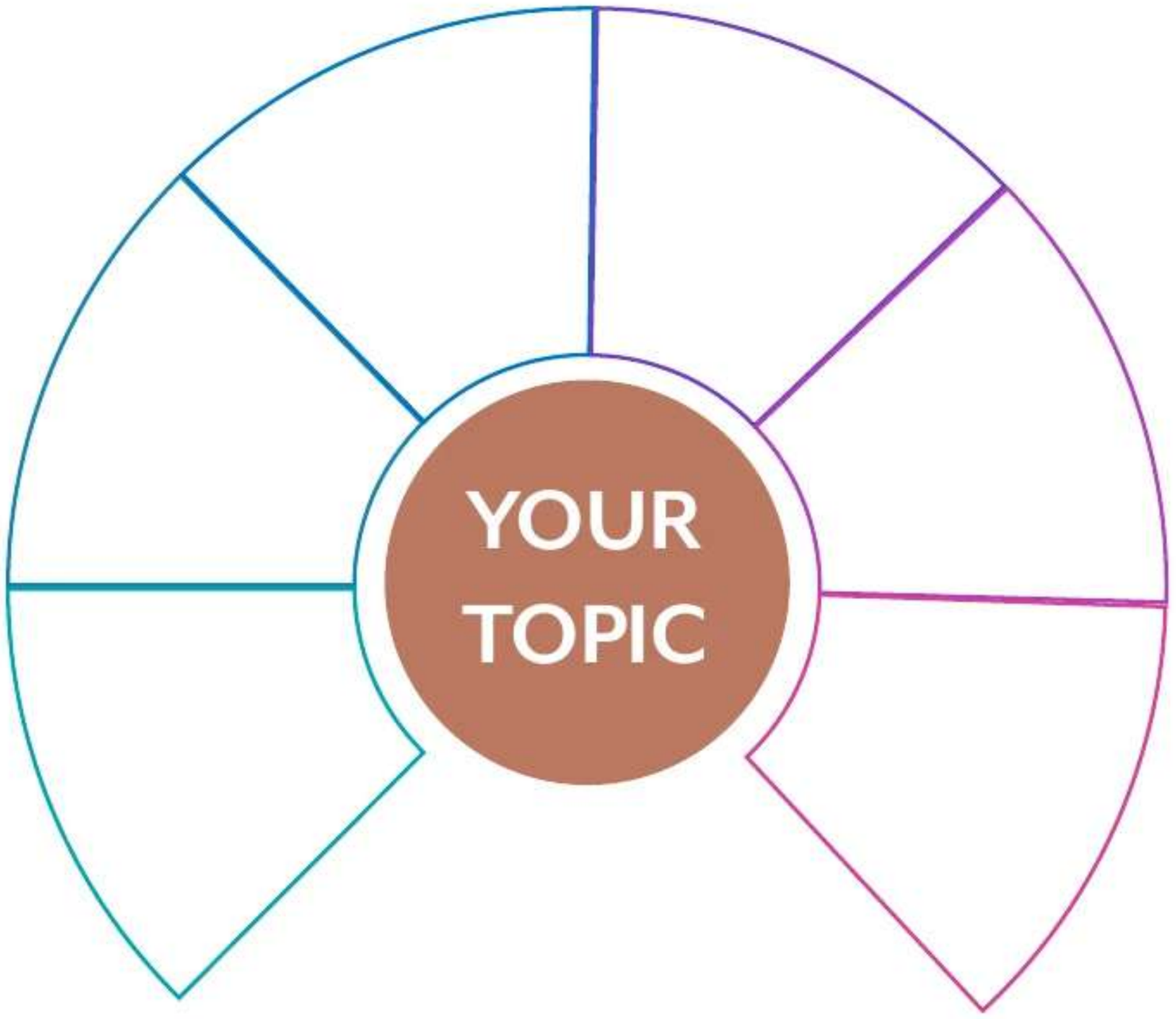
Activity 7: Peer Assessment Task

Now show your slides to the class or teacher and note the feedback you receive. What things did you do well? What things do you need to work on when you come to your own presentation?

GOOD POINTS	NEEDS IMPROVEMENT

Activity 8: Thinking Task

Look back at the project you completed last term. How much do you remember about it? Quickly brainstorm in the diagram the things you remember about the project.



Create a slide show for the project that you completed last term. Include citations where relevant and a final References slide.

The slides do not need to be too detailed but should cover the main areas. Use the headings from last term to help you. Make six slides covering:

- Introduction: Research Question (s)
- Background: Literature
- Data Collection
- Data Analysis and Findings
- Conclusion
- References

Activity 9: Peer Assessment Task

Show your presentation slides to the class. You should not spend more than five minutes on this. At the end of the presentation ask the audience for their feedback on the slides.

Audience

Use this table to record your observations as you watch other groups' presentations.

Group 1

What Is Done Well?	What Needs to Be Improved?

Group 2

What Is Done Well?	What Needs to Be Improved?

Group 3

What Is Done Well?	What Needs to Be Improved?

Group 4

What Is Done Well?	What Needs to Be Improved?

Group 5

What Is Done Well?	What Needs to Be Improved?

Lesson 2: The Research Presentation

- **What type of language should be used in a professional presentation?**
- **What are the best presentation techniques?**



Key Vocabulary

audience	discourse marker
demotivate	phrase
distract	posture
concise	venue
graphic	

Activity 1: Thinking Task

Make a graph showing the **audience** attention on the vertical axis and the time on the horizontal one. Think of presentations you have attended. How much attention do most of the audience give to a presentation over time? Draw a line showing this.

Why do you think attention may change during a presentation? Write your ideas.

Gaining and Maintaining Your Audience's Attention



When a presentation is too long or not interesting, the audience becomes **demotivated** and stops paying attention. People in the audience may feel sleepy, start talking or get up and leave. Any of those behaviours can be demotivating for the speaker and very **distracting** for the audience. There are several techniques that can help to maintain the interest and focus of the audience.

Have a Strong Opening and Guide

At the start of any presentation, the audience wants to know some basic information:

- Who is giving the presentation? (And if not known to the audience, what qualifies the presenter to make the presentation?)
- Why is the presentation given? What is the reason for this presentation to this audience?
- What are the stages of your presentation? How is the presentation divided?
- How long will the presentation take? The audience need to know whether they can ask questions during the presentation or at the end, if there is a handout, whether they can get a copy of the presentation afterwards, etc.

☑ Activity 2: Checkpoint

Use the tips above to complete the activity below. Match each phrase **A-H** to the section of the introduction.

Section		Phrase
Who	__	A. … and Peter will be covering…
	__	B. Please save any questions to the end.
Why	__	C. We've divided the presentation into four main areas…
	__	D. We're going to talk about…
What	__	E. … and my colleague is…
	__	F. The presentation should take about 5 minutes.
How	__	G. Our presentation today is on…
	__	H. Good afternoon everyone. My name is…

Be Concise

Do NOT have too many slides or have too much text on the slides. The audience has come to hear the speaker. If there are too many slides, or if there is too much text, the audience will not pay attention. It is much better to rely on pictures and **graphics** with text used sparingly.

Use Discourse Markers

Discourse markers are words or **phrases** that help to guide your audience through your presentation and help them focus on the important points.

Some examples of discourse markers are **firstly**, **secondly**, **finally**, **most importantly**, **on the other hand**, **frankly**, and **consequently**.

Another way to indicate key points of the presentation is to mark transitions between different stages of the presentation, e.g.: 'I'd like to wrap up by emphasizing the main points of this presentation.'

Body Language

- Stand to the side of the screen and look at your audience.
- If you are presenting with a colleague, indicate with an open palm when you mention their name ('My co-presenter today is..." or "I'd now like to hand you over to... who will talk about...").
- Use your arm and indicate areas on any picture or graphic that you want the audience to focus attention on ("if you look here, you can see...").
- Mark off points on your fingers (firstly, secondly, etc.).
- Smile – but look serious if the point you are making is not amusing.
- **Posture** – be aware of how you are standing, look relaxed and professional.

Practice, Practice, Practice

- Practice will make sure you are confident and appear professional.
- Use a timer to practise your presentation.
- Leave time for questions.
- Check how your presentation looks on a big screen, if necessary.



- Have the correct connecting accessories for the **venue's** equipment.

Activity 3: Writing Task

Use the tips above to write short answers to the questions.

1. Why will the audience not listen if you use a lot of text?

2. What can the speaker do to focus the attention of the audience?

3. What are discourse markers?

4. What should you do instead of pointing with a finger to indicate?

5. What can you do to appear professional and knowledgeable?

Activity 4: Action Task

Use the information in the tips above and prepare a presentation for the slide show you produced in Activity 7 in Lesson 1. Your presentation will be three to five minutes.

Introduction	How will you introduce your presentation?
Being Concise	Which parts can you make clearer?
Images	Where will images work well?
Discourse Markers	Where will discourse markers be needed?
Body Language	What do you need to consider?

Activity 5: Peer Assessment Task

The key to a successful presentation is practice. In your group, take turns to practise your presentations. As you watch your group members, answer the questions.



Is the timing correct (3 to 5 minutes)?
Was the voice easy to follow – not too fast and not too slow?
Does the speaker use discourse markers?
Was body language used effectively?
Does the speaker use the slides well?
Does the speaker start and finish well?

Activity 6: Self-Assessment Task

Present to your class. Remember to stick to the three to five minute time limit and to do the things you practised in the activities.

At the end of your presentation, ask the class if they have any questions.

Self-Assessment: How do you think you did in the presentation?

Give yourself a score and write down a reason for it. You can discuss this with your teacher to see if your teacher agrees with you.

1	2	3	4	5
Very poor – almost everything went wrong in the presentation.	**Quite poor** – a few things were ok, but most parts of the presentation had problems.	**Ok** – some things were good, but there were other things that were not.	**Good** – most parts were well done, but a few small things could be improved.	**Excellent** – all parts of the presentation were really good.

Why did you give yourself this score?

Activity 7: Self-Assessment Task

For the research activities, you will keep a journal. There are three areas you can focus on in a journal:

1. Situation (What happened?)
2. Impact (How did it affect you?)
3. Result (What did you learn from this situation? Did you change something in your or others' behavior?)

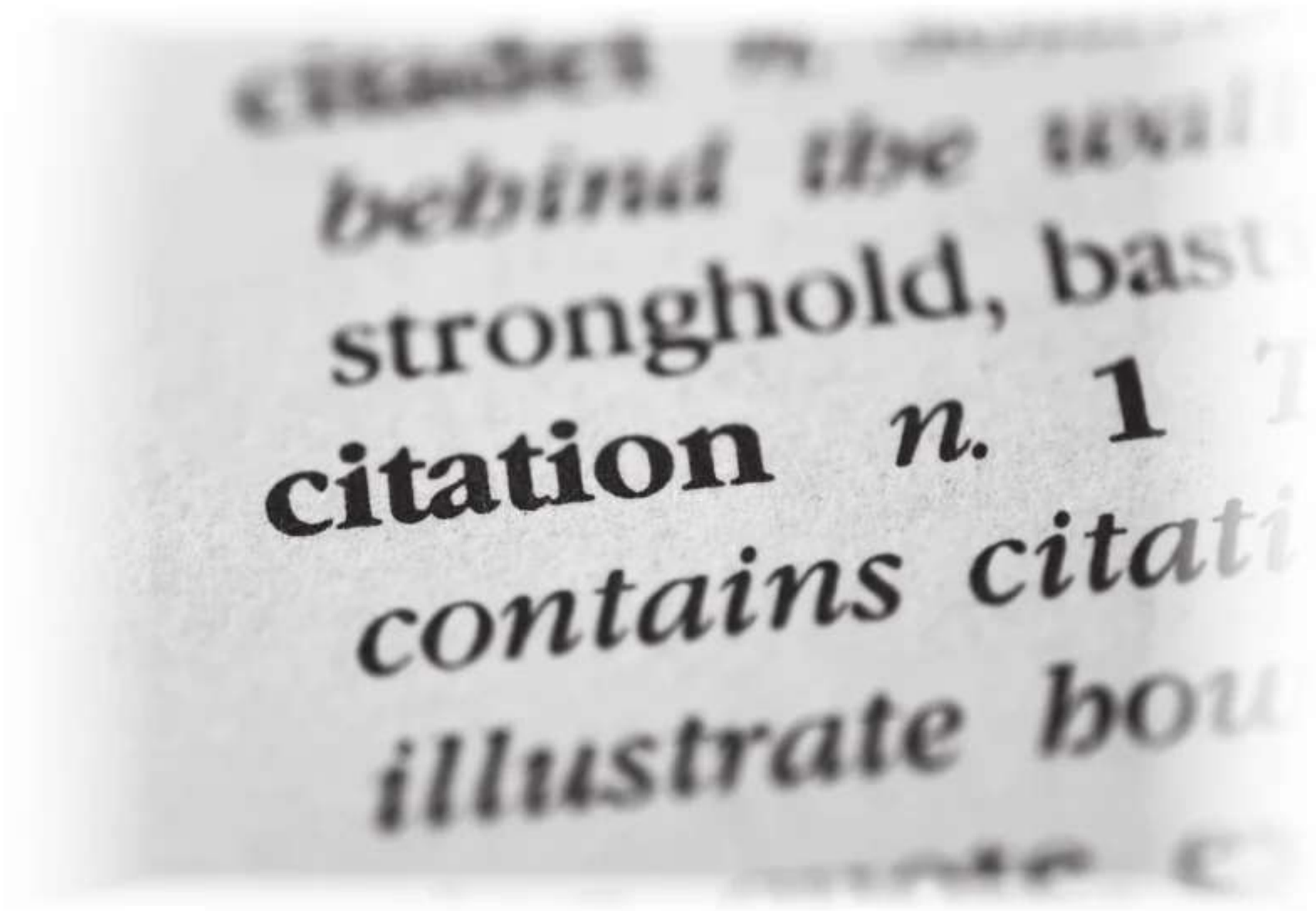
Reflect on the presentation you gave the class, or a presentation you saw someone else giving. What was challenging, unexpected or a useful skill you learned?

Spend five to ten minutes writing one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 3: Citations and Paraphrases

- What is paraphrasing?
- How are citations and references used in a report?
- Why is plagiarism wrong?



Key Vocabulary

plagiarism	context
paraphrase	standalone
source	common knowledge
signal	in-text citation

Activity 1: Thinking Task

Quickly brainstorm what you know about plagiarism.

What is plagiarism?	What can be done to avoid it?

Inserting Citations: Paraphrases

Writers often **paraphrase** when they use information that is not their own in their writing. They include the information from another **source** but write it in their own words. Writers MUST show where information comes from if it is not their own.

For example, this is the information about Dubai's population from the official government website:

> **Population**
>
> The population of the Emirate of Dubai is estimated to be 3,355,900 individuals at the end of 2019, of whom 2,331,800 are males and 1,024,100 females.

We can write this simply in our own words: Dubai had a population of 3,355,900 in 2019.

However, we need to inform our readers where the information comes from to avoid plagiarism. To do this we need a **signal** and citation. The signal announces where it came from and how current the information is, so:

> **According to the UAE government portal (2021), Dubai had a population of 3,355,900 in 2019.**

or:

> **Dubai had a population of 3,355,900 in 2019 (UAE Government, 2021).**

If we do not use a signal, our citation should show all the relevant information:

> **The UAE government portal (2021) states that Dubai had a population of 3,355,900 in 2019.**

Of course, the information should be in context, i.e., not **standalone**, so in a text it would look something like this:

> **Dubai is the second largest Emirate in the UAE, and according to the UAE government portal (2021), had a population of 3,355,900 in 2019. This number is expected to grow with the advent of the Expo. Such a large population places a high demand on water resources.**

However, if something is **common knowledge**, then it does not need to be referenced. Common knowledge is the information that a reasonably educated person would know without having to look it up in a book or online. For example, "Water freezes at 0 degrees centigrade." is an example of information that is considered common knowledge.

Common knowledge can be the information that people within a particular cultural or social would be expected to know. For example, Emiratis would have common knowledge that the union of the UAE was in 1971. For someone from the UK this is probably not common knowledge.

☑ Activity 2: Checkpoint

1. What is the best definition of a paraphrase? ___
   a. Copying exactly what someone else has said
   b. Something you can copy and not reference
   c. Something you rewrite in your own words and reference
   d. Writing your own original ideas on a topic

2. A signal calls attention to ___
   a. using a quotation
   b. where the information came from
   c. something that is common knowledge
   d. our own ideas and thoughts

3. Common knowledge is ___
   a. known by only a few people
   b. found only on the Internet
   c. often falsely believed by a majority of people
   d. what most people already know

Activity 3: Thinking Task

If something is common knowledge, do you need to reference it? Which of the items are common knowledge in the UAE?

1	The UAE was founded in 1971.
2	The UAE is a federation of seven emirates.
3	Abu Dhabi is the largest emirate.
4	The area of the UAE is approximately 71,023.6 sq km of land.
5	The population of the UAE is about 9 million people.
6	Life expectancy in the UAE is just under 80 years of age.
7	Jebel Jais is the highest point of the UAE at 1,934 metres.

Activity 4: Discussion Point

What do you know about the UAE Hope space probe? You probably know that it was launched in 2020 from the space centre in Japan. You also may know that its purpose is to study the weather patterns of the planet Mars. In groups, share the things you remember, and then put that information down in your own words. This is what you already know about the topic.



Activity 5: Action Task

Add more detailed information to your text. Use the excerpt from the UAE government portal. Read it and underline details you can add to the notes you made in Activity 3.

Launch of the Probe Hope to Mars

The probe named Hope (Al Amal in Arabic), blasted off from Japan's Tanegashima Space Centre on 20 July 2020, and in about 200 days from that date, the spacecraft reached the orbit of Mars and began its mission to study the Red Planet's atmosphere. When the probe entered the Martian orbit in the first quarter 2021, the UAE celebrated the golden jubilee of its formation.

The probe travelled 493 million kilometres into space and will orbit the Red Planet for one full Martian year of 687 days to provide a complete picture of the Martian atmosphere. Hope will be the first probe to study the Martian climate throughout daily and seasonal cycles. It will observe the weather on Mars and famous massive dust storms that have been known to engulf the Red Planet, as compared to the short and localized dust storms on Earth. The project involved nearly 200 Emirati engineers and researchers, who worked hard for six years to fulfill the UAE's dream to reach the Red Planet.

Add that information as paraphrases to your notes in Activity 3. Use your own words and add the signal, date and/ or citation correctly.

Write your complete passage in the space provided with correct paraphrases included.

Add a comment after the details you have included to conclude and tie it all together. Create the References page from the web site. (Ask the teacher for help in finding the link.)
The References page is always on a new page at the end of your report (before any Appendices).

Activity6: Writing Task

Try this on your own:

- What do you know about the UAE Nuclear Program?
- What is the name of the nuclear energy plant?
- Where is it located?
- In which year did the first phase open?

Write what you know in the space provided.

Activity 7: Action Task

Now, add some more detailed information to your passage. Use the information from the UAE government portal to find more details.
Do not select all the details. Select what you think is important or interesting.
Check with your nearest classmate, and your teacher before you start writing.

Successful Start-up of Unit 1 of Barakah Nuclear Energy Plant

On 1 August 2020, Emirates Nuclear Energy Corporation announced that its operating maintenance subsidiary, Nawah Energy Company (Nawah), successfully started Unit 1 of the Barakah Nuclear Energy Plant, located in the Aldafrah Region of Abu Dhabi Emirate.

When all four units of the plant start operating commercially, the plant will produce up to 25 per cent of the country's electricity requirements while preventing the release of 21 million tonnes of carbon emissions each year, equivalent to removal of 3.2 million cars from the UAE's roads annually.

Write your completed text in the space provided. Add the information from the reading. Use paraphrases with the correct signal, date or **in-text citation**. Include a follow-up comment that ties it all together.

Activity 8: Action Task

Examine your research project report from last term, particularly the area of Background information/ Literature review.

Can you find any information that you took from a website, a book, or a journal?

1. Highlight all the information that you took from research other than your own survey.
2. Include the information in your own words, and insert the correct signal, date or citation.
3. Check that there is a matching reference in your References list. If not, create one.

Be prepared to show your work to your teacher or the class.

Activity 9: Self-Assessment Task

Reflect on this lesson. What have you found challenging or useful in writing paraphrases or citing information?
Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 4: Citations and Sustainability Report

- What is the difference between a quote and a paraphrase?
- What is meant by sustainability goals?



Key Vocabulary

expert	carbon neutral
overuse	scheme
carbon offset	counteract
strain	

Activity 1: Thinking Task

A quote is when a writer copies the words, sentences or phases exactly from a text. Can you think of reasons why you may want to quote rather than paraphrase?

Reason 1	Reason 2	Reason 3

Inserting Citations: Quotes and Paraphrases

When you want to include information that you have read or heard in a report or presentation, you can do it in a number of ways. The most common way is by paraphrasing.

Why Would You Want to Paraphrase?

Writers paraphrase to demonstrate an understanding of the ideas being expressed. Another reason is to summarise or simplify an idea that is very long or complex.

Even though you are writing the information in our own words, you need to reference it to show that it is not your information. For example: 'Smith (2016) argues that a modern country needs to put sustainability at the heart of what it does'.

Other times you might want to use a quotation: words someone else has said or written, exactly as it was stated. A quotation can be easily identified as it has quotation marks at the start and the end. For example: 'As Smith (2016) argues, "sustainability is core to successful modern governance."

Why Would You Want to Quote?

The main reason is that someone may be an **expert** or respected person on a particular issue. Therefore, what they say needs to be written exactly as they said it. Another reason may be when giving a definition of a key word or concept.

Quotes Within Quotes

A quote may be quoted in another article (it is already within quote marks), for example:

> Abu Dhabi, 3rd November, 2020 (WAM) -- A UAE newspaper said that environmental sustainability is the need of the hour, which the UAE knows full well. "It provides impetus to the country's growth and long-term prospects," stated Gulf Today in an editorial on Tuesday. The paper quotes His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister, and Ruler of Dubai who said, "sustainability is key of the UAE's future readiness," and that the UAE was committed to implementing innovation projects that optimise use of resources and solve critical challenges as part of the country's strategy to ensure environmental sustainability.

The citation would be:

Sheikh Mohammed said that "sustainability is key to the UAE's future-readiness" (cited in Emirates News Agency, 2020).

Paraphrases and quotations are important as they allow writers to support their own ideas. They are a way of including other people's ideas and information in a way that avoids plagiarism. Referencing the information shows where it came from.

A writer must be very careful not to **overuse** quotes and paraphrases. Quotes and paraphrases should be used to support the work of the writer and give it credibility.

☑ Activity 2: Checkpoint

Use the advice above and choose the best answer for each question.

1. Using another person's words exactly is a ___.
   a. citation
   b. paraphrase
   c. reference
   d. quotation
2. Writing information from another person in our words is called a ___.
   a. citation
   b. paraphrase
   c. reference
   d. quotation
3. What is the best reason for using a quotation? ___
   a. Giving directions
   b. Simplifying a complicated concept
   c. Stating a definition
   d. Showing that you understood the concept

Activity 3: Thinking Task

Based on the advice above and the feedback you received from your teacher on the warm-up activity, decide whether the information in the box would be best quoted or paraphrased. Could any of the information be common knowledge and not needing a citation?

Information	Quote	Paraphrase	Common Knowledge
1. The UN has set 17 sustainable development goals to be achieved by 2030.			
2. Sustainability is key to the UAE's future readiness.			
3. The strategy aims to increase the contribution of clean energy in the total energy mix to 50%.			
4. The UAE Government wants to ensure sustainable development while preserving the environment, and to achieve a perfect balance between economic and social development.			
5. The UAE includes more than 5036.24km sq. of protected area, which represents 6.044% of its total area.			

Activity 4: Action Task

Examine your report from last term.

Quotations

Would a quote from an expert improve it? Is there any part that you are unable to put better in your own words? If so, look at quoting instead of paraphrasing.

Don't forget that if you add a quote, you will need to add a full reference on the References page.

Paraphrases

Decide whether your paraphrases would be better as quotes – or whether anything you have paraphrased or quoted could be included simply as common knowledge without citation.

The in-text citations must match the references on your reference page.

Extended Report

The report for this term will be similar to the one you have done. However, you will be taking the solutions that you suggested in your conclusions, researching them further, and including a separate solutions section. You will need to rewrite the abstract and introduction to reflect the improvements. Your conclusion will be completely changed as a result of your solutions.

Over the next few weeks, you will read about some aspects of sustainability. They may not apply directly to the topic of your report, but they will help you to think more critically about your topic.

Activity 5: Thinking Task

The image below illustrates the UN's 17 Sustainable Development Goals (SDGs). What do you think each one involves? What do you think needs to be done to achieve each one? In a group choose four and explain them.



1	SDG	WHAT IS IT?	HOW TO ACHIEVE IT?
2	SDG	WHAT IS IT?	HOW TO ACHIEVE IT?
3	SDG	WHAT IS IT?	HOW TO ACHIEVE IT?
4	SDG	WHAT IS IT?	HOW TO ACHIEVE IT?

Activity 6: Discussion Point

Examine the conclusion in your previous report. Did you propose any solutions? Did your solutions cover more than just economic and environmental issues?

In your groups, look at any solutions offered and decide where you could include more information or cover them more broadly. For example, the solution to the Covid-19 problem involved not only health, but global partnerships and the need for education.

Make notes on areas that you could expand and that may need more research.

Activity 7: Thinking Task

In Lessons 6 and 7, you will examine various aspects of sustainability and the issue of the carbon footprint and **carbon offsets**.
Write definitions for the terms. If you have not seen them before, try to make a good guess.



sustainability:	
carbon footprint:	
carbon offsets:	

Sustainability and Carbon Offsets

The Brundtland Report of 1987 defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Britannica, 2014). What does this mean? Most people view this as concern for the environment. However, sustainability has three main areas: environmental, economic and social. All three are very much tied together.

The world's population is growing and getting older as people live longer. This puts a **strain** on the environment as there is more demand for food and water, space to live, clothing, etc. How do we meet the demand without using up the finite resources on the planet and polluting it further? It puts more weight on the young who will need to help pay for the aging population.

The call is for all people to be responsible for reducing their carbon footprint, not just governments and corporations but individuals too – to become '**carbon neutral**.' The idea is a good one, but how does someone actually work out their carbon footprint accurately? A person can calculate the carbon created in the production of the petrol they use in their car and the electricity they use at home. But what about the carbon used to produce, for example, some milk and the plastic bottle it goes in, and the cost of transporting it, storing it, displaying it in a refrigerator in a supermarket, and so on? There are various systems in place, but how accurate are they really?

Carbon offsetting is an advanced method of countering the carbon created to make a zero balance. For example, if people work out how much carbon they create in a day, they can contribute money to a **scheme** that provides more efficient cookers for people in the developing world. The people with new cookers would not have to burn wood or charcoal, making up for the carbon dioxide emitted elsewhere. In another example, if a company holds an event that produces carbon emissions, the company could invest in a scheme to grow trees that will help to reduce carbon in the future.

In both examples, the actions do not **counteract** the carbon produced now. In another example, if a person car-shares with others who live in the same suburb and work in the same part of town, they all save on our carbon footprint; the passengers use no fuel at all, and the driver offsets the fuel used in his car by helping to reduce the carbon contribution of his passengers.

For developing countries, the situation is more difficult. How do they remain carbon neutral while trying to develop? As with individuals, far more cooperation between nations will be needed to create a sustainable world.

☑ Activity 8: Checkpoint

A. How can a company building a factory in a developing country aim to be carbon neutral? Carbon will naturally be produced during construction. What can the company do to reduce the carbon in other areas at the same time?

B. What could the company do to ensure social sustainability (contribute to improving the life of the people at the same time as making money)?

A. _____

_____

_____

B. _____

_____

_____

Activity 9: Writing Task

Examine the abstract and introduction in your previous report. What will you have to change to reflect the changes to the project report outline? Make some notes in the box.
Change your report outline and format of your table of contents to include a section on solutions.

Activity 10: Self-Assessment Task

Reflect back on this lesson. What have you found challenging or useful in using quotations or paraphrases? Is there anything about the development of solutions for the sustainability report that you are not sure of?

Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 5: Midterm Review

- **What have I learned in lessons 1-4?**
- **What skills and knowledge should I improve on?**



Key Vocabulary

keywords from Lessons 1-4

☑ Activity 1: Checkpoint

Think back on the previous lessons. How would you describe the concepts in the table? Give an example of each.

Concept	Meaning	Example
Referencing		
Plagiarism		
Common knowledge		
In-text citation		
Body language		

☑ Activity 2

Choose the correct answer for the questions below.

1. Which of the terms means using the exact words that someone said?
   a. Citation
   b. Paraphrase
   c. Source
   d. Quotation
2. If you have good posture, what are you doing?
   a. Speaking very clearly
   b. Standing in a relaxed and professional way
   c. Using slides with graphics and charts
   d. Moving your hands a lot

3. If you write in a concise way, you are writing ___.
   a. in a short, clear way
   b. using many phrases
   c. with a lot of examples
   d. a references list
4. What is a source?
   a. Your own ideas and thoughts
   b. Where you found information
   c. A slide show you have made
   d. The people reading your report
5. A discourse marker is used to ___.
   a. get the audience interested
   b. tell people who you are
   c. thank the audience for listening
   d. show what you are going to say next
6. If something demotivates you, how do you feel?
   a. Excited
   b. Uninterested
   c. Angry
   d. Happy
7. Which word describes a person who is very knowledgeable about a subject?
   a. Strain
   b. Overuse
   c. Expert
   d. Scheme
8. Something is carbon neutral if it ___.
   a. results in no release of carbon into the atmosphere
   b. uses technology to capture carbon, so it is not released
   c. releases a lot of carbon into the atmosphere
   d. takes carbon back out of the atmosphere

☑ Activity 3

Match the word (1-10) with the best meaning (a-j).

Word	Meaning
1. Insert	a. Suitably formal for the work environment
2. Format	b. Take someone's attention away from something
3. Professional	c. Something that points to the source used
4. Context	d. Put something in a place
5. Signal	e. The location of an event
6. Audience	f. A short expression, such as 'thank you for listening'
7. Distract	g. The people watching something
8. Graphic	h. Organise something, such as the style of report
9. Phrase	i. An image or picture
10. Venue	j. The situation where something is found

☑ Activity 4:

Use the words in the box to complete the gaps in the paragraph. There are more words than you need.

citation	content	paraphrase	standalone
quotation	phrase	plagiarism	

When writing a report, you may need to include information that you have found from another source. This _____ needs to be referenced so that you acknowledge where it came from. This will also help you avoid _____ as you are not falsely saying that this information is your own. Sometimes you may want to use the exact words that someone has used, especially if that person is an expert, so you would use a _____. Other times you write the information you have taken in your words, which is called a _____. Both of these types of referencing in your writing need a _____ that shows where the information came from.

Student's notes

Lesson 6: Sustainability Topics- Part 1

- **How can transport be more sustainable?**
- **How is sustainability implemented in the UAE?**



Key Vocabulary

sustainable transport	**hazardous**
adverse	**precious metal**
waste management	**economically viable**
dump	**redistribution**
landfill	**disposal**

Activity 1: Thinking Task

What does the term '**sustainable transport**' mean? Write your ideas in the space provided.



Sustainable Transport: Some Considerations

Transport is vital for economies to function. People need transport to get to work, to go shopping and to go on holiday. Products need to be moved from their source to the market.

Most people are aware of the pollution caused by common forms of transport such as cars, buses, trucks, trains and planes. However, by far the biggest polluters on the planet are the large ocean-going tankers and container ships. Probably the second biggest contributors are the two-stroke engine motorbikes and auto-rickshaws which are the most popular modes of transport in developing countries. While there has been a focus on the development of electric cars and trains, hydrogen-powered buses, and carbon-neutral aviation, little thought seems to have been given to how to replace the bigger polluters.



Transport can have equally harmful social consequences. Pollution **adversely** affects the health of people and directly kills people through the rise of cardiovascular problems in many large cities. Many people die in road accidents. Transport poverty exists in places where national and local governments favour certain sections of society over others. People in transport poor areas struggle to get to work, schools and hospitals. It is clear that to achieve sustainable transport means much more than reducing the use of fossil fuels and reducing pollution. To achieve sustainability, we must look for solutions in more than just the area of science.

☑ Activity 2: Checkpoint

Answer the questions below using the reading text above.

1. Where are motorbikes and rickshaws the most popular type of transport?
   a. all over the planet
   b. developing countries
   c. the biggest cities in the world
   d. in holiday destinations

2. What is transport poverty according to the text?
   a. a special type of rickshaw with an engine
   b. a new and cheap form of electric transport
   c. the most polluting types of transport
   d. the difficulty some people have in getting transport

Activity 3: Thinking Task

In your groups, analyse the text. Several facts are stated in it, but where is the supporting proof? Go through the text and underline statements that are described as fact without any details or supporting evidence.
Write four points that you find in the table.

Statement in the Text	What Needs to Have Supporting Proof?	How Are the Facts Supported?
1.		
2.		
3.		
4.		

Your teacher may have advice on where to verify this information on the Internet. Use it to check the facts given in the text. Complete the 'How Are the Facts Supported' column.

Activity 4: Thinking Task

The text above describes issues of transport sustainability around the world. Transport can be internal - within the UAE, and international, between the UAE and other countries.



What types of transport are sustainable now? How can transport within, to, and from the UAE be made more sustainable for the future?

Sustainable Transport Now	Suggestions For the Future

Activity 5: Research Task

Examine the terms. They describe ways of dealing with waste. Write down the definition of each one. If you don't know, look up the meaning.

reuse:

disposal:

prevention:

treatment:

recycling:

Activity 6: Thinking Task

The diagram is a hierarchy of waste management. The top level is the best (most sustainable) way of dealing with waste. The bottom level is the worst (least sustainable) way.
Add the terms to the level on the diagram where you think they should go. Describe what each term is on the hierarchy diagram.

reuse/ redistribution	**disposal**	**prevention**	**treatment**	**recycling**



Sustainable Waste Management: Some Considerations

Much of the waste on the planet is **dumped** in **landfills** without treatment. This results in large areas of land being taken up by mountains of unwanted garbage. Apart from being unsightly, dangerous chemicals can be released into the air polluting the area around and causing health problems for those that live nearby. Plastic bags can be blown away and end up in the stomachs of animals, such as camels on land and whales in the sea, causing their deaths. **Hazardous** waste is often treated to lessen its impact on the environment, but it still leaks into the soil. Nuclear waste cannot be treated. It must be stored indefinitely. Materials, such as plastics or cardboard, are simply put in incinerators, which solves the landfill problem but leads to air pollution.

Many countries have realised that apart from the health hazards, landfills represent a vast resource of materials, such as the aluminium or tin used for canned drinks or food. It is also possible to retrieve the **precious metals**, such as gold and platinum, used in mobile phones. At the moment, it is not **economically viable** to retrieve those materials as a large number of phones would be required. Some of the electronic waste from developed countries is shipped to developing countries to extract the metals. Often acids and other chemicals are used in unsafe circumstances, leading to health problems for those involved. In addition, the unwanted plastic gets dumped in landfills away from the country of origin.

One answer is to encourage reuse or **redistribution**. An example of reusing could be using old jars to store spices or lentils. An example of redistribution could be collecting prepared but unused food and distributing it to food banks for the needy. Hotels could provide sheets and blankets to charities when they are replaced instead of discarding them.

Recycling is very common, with bins for collecting recyclable materials in most populated areas. Cities all over the world are making great advances in this area though usually for materials that can be easily collected from separated **disposal** sites. Recycling is not so common when it is difficult or time consuming to separate items, such as electrical appliances, into their different component parts.

As awareness of the need to recycle has grown, companies have been redesigning their products to make them easier to disassemble. This means that the items can be more easily broken down. Increasingly, this has also led to a movement towards redesigning products completely so that they do not use parts that cannot be recycled. Of course, both of these involve an investment in time and money by companies and governments before they become reality.

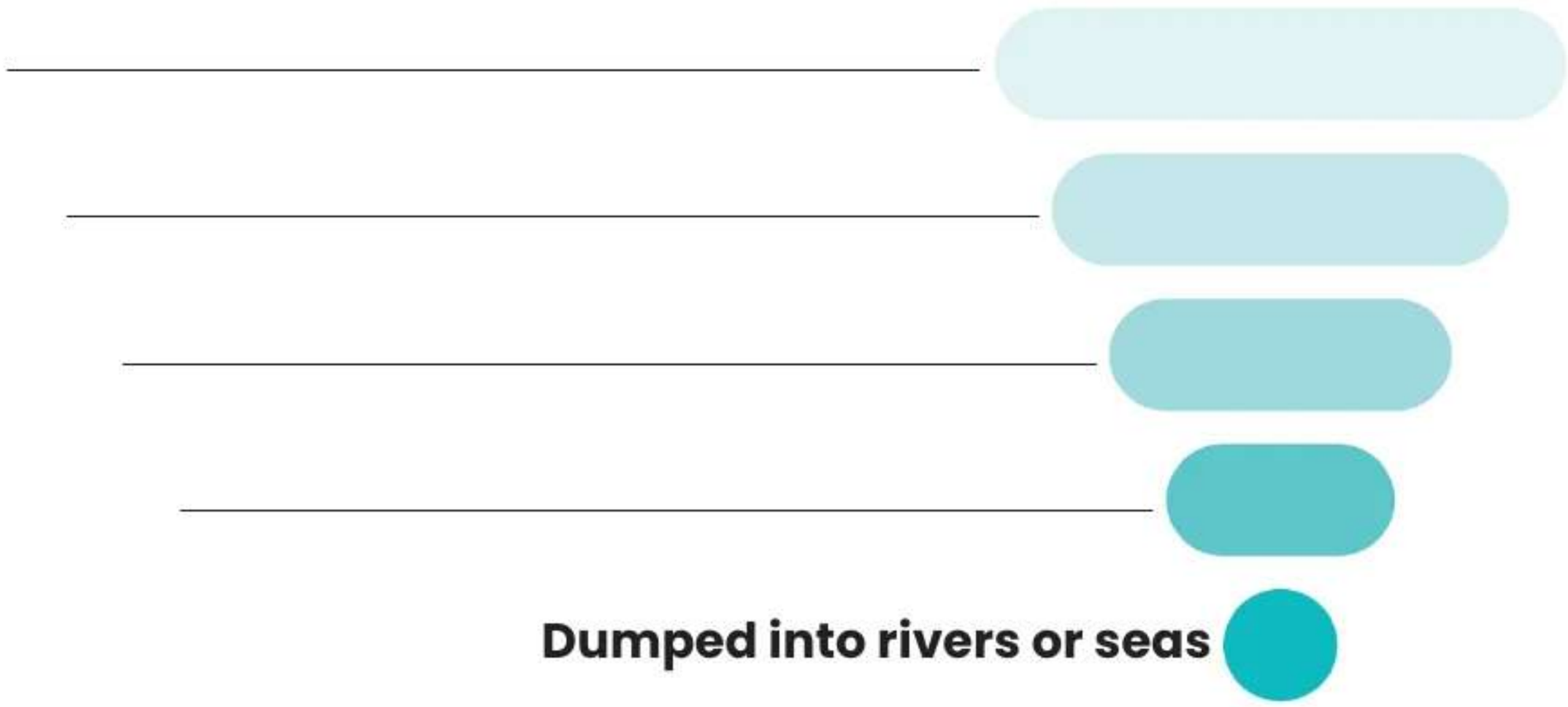
☑ Activity 7: Checkpoint

Answer the questions below, using the reading text above.

1. Why are plastic bags dangerous for animals?
   a. they contain poisonous chemicals
   b. animals can eat them and die
   c. they cover the ground
   d. animals use them for shelter
2. One problem with incinerators is that they ___.
   a. fill landfills
   b. leak into the soil
   c. are stored for a long time
   d. cause air pollution
3. Some companies have made their products easier to take apart so they can be ___.
   a. recycled
   b. thrown away
   c. put in landfills
   d. collected

Activity 8: Thinking Task

The examples in the article refer to solid waste. However, waste can be liquid (dirty or contaminated water, dumped chemicals or run-off). At the bottom level (the most unsustainable) is waste that is dumped directly into the rivers or seas. What might happen at the other, more sustainable, levels? Make notes on the diagram.



Activity 9: Thinking Task

Think about waste management in the UAE. What is currently done about it? What suggestions can you make to improve this?

Waste Management Now	Suggestions for the Future

Activity 10: Self-Assessment Task

Reflect back on this lesson. What have you learned about sustainable transport and waste management? Think about both the environmental and social aspects of sustainability.
Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 7: Sustainability Topics- Part 2

- What is the impact of sustainability on the fashion industry?
- What is the Internet of Things?



Key Vocabulary

sustainable fashion	carbon tax
organic	Internet of Things
trade-in scheme	infrastructure
fast fashion	



Activity 1: Thinking Task

What do you think sustainable fashion is?

Sustainable Fashion: Some Considerations

Sustainability is the latest trend in the fashion industry. Companies are trying to attract customers with their 'green credential' claims. Looking closer, is the fashion industry green?

The major clothing companies have noticed that their customers are searching for information on topics such as **organic** cotton, sustainability and how environmentally friendly the companies are. They have responded quickly by introducing organic and recycled materials and initiating **trade-in schemes**.

To make a profit, clothing companies aim to sell vast quantities of clothing. In an age when consumers appear to be more environmentally aware, clothing companies produce one-season only fashion items called **fast fashion**. Items that are manufactured but not sold must be disposed of when their fashion life ends. The end of the fashion life occurs when producers can no longer sell the clothes because customers no longer wish to wear them.



Even more problematic is the pollution coming from the water used in the processing and dyeing of the materials that contain a variety of chemicals. Washing detergents are released into the water systems every time the clothes are washed.

Often, cheap, fast fashion items are produced in unsafe factories with unacceptable working conditions. In some places child labour is used in the factories. Brands which take care to only deal with ethically produced goods using environmentally friendly materials often cost more to produce. The charges are passed on to the customers. The relatively high cost of green fashion makes it feasible only for people who can afford it.

In some countries, governments have created laws or introduced taxes to encourage companies to produce more environmentally friendly clothing. Fines aim to prevent dumping of excess clothing. Subsidies are awarded for research into new, greener materials and methods of production. In some places a **carbon tax** is added to the price of products to account for the cost of their production and shipping to the environment.

☑ Activity 2: Checkpoint

Answer the questions below using the reading text above.

1. Companies having green credentials ___.
   a. sell food products
   b. pay employees very well
   c. specialize in outdoor clothing
   d. are environmentally friendly
2. According to the text, fast fashion is clothing lines ___.
   a. made very quickly
   b. used by sports people
   c. only used a few times
   d. that are quick to clean
3. Cheap, fast fashion items are ___.
   a. sometimes manufactured using child labour
   b. made to last a long time
   c. kept by the consumers after the fashion trend ends
   d. expensive and available only to privileged people

Activity 3: Thinking Task

Identify four problems mentioned in the text and suggest solutions.

Problem	Solution

Activity 4: Thinking Task

What are some of the sustainability issues that the fashion industry faces? What suggestions can you make to improve this situation?

Fashion Sustainability Issues	Suggestions for Improvement

Sustainable Buildings and Cities: Some Considerations

As the world's population grows, more and more people live in high-rise buildings. High buildings leave more land for agriculture and industry. Construction of high-rise buildings uses a lot of energy. The cities trap heat and air pollution and have more noise pollution. People who live in cities with a lot of high-rise buildings are at risk of an increase in physical health problems as well as mental health problems (fatigue, loneliness, depression, etc.). Food supply and waste management problems may also arise in large cities.

Advances in material design and construction, often aided by use of the **Internet of Things** (IoT), are greatly reducing the impact. For example, window glass can be electrochromic, it can be built to filter light, or its opaqueness can be adjusted according to a sensor reading. New green building materials are being developed that provide greater insulation but weigh less than traditional concrete. These are monitored by sensors to provide information over time on

noise and heat reduction, and any loss of strength due to vibrations or age. This data can be used to improve future building materials and methods.



The IoT is helping to improve our cities by controlling street lighting, air conditioning, elevator use, and traffic signals using cameras and sensors embedded in the roads. To assure that cities are developed in a sustainable way, governments, planners, corporations, and citizens must work together to ensure success. If not monitored carefully, the greenest areas may be inequitably distributed and fail to benefit all of society. Finally, the carbon footprint created by IT itself needs to be considered. For example, every computer turned on, email sent, and especially every BitCoin created consumes electricity.

☑ Activity 5: Checkpoint

Consider the areas of buildings and infrastructure (including IoT) mentioned in the text. Suggest ways these could be made more sustainable.

Buildings	
Area	**Improvements That Could Be Made**

Infrastructure	
Area	Improvements That Could Be Made

Activity 6: Research Task

The government is making every effort to try to make the UAE carbon neutral.

- Do you know about new methods used in the construction of buildings and infrastructure?
- What ideas are being considered for the future?
- What suggestions do you have to make the cities smarter?



Activity 7: Self-Assessment Task

Reflect back on this lesson. What have you learnt about sustainable fashion and cities?

Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 8: Project Completion

- **What changes do I need to make after reviewing my report?**
- **What do I remember about referencing and formatting conventions?**



Key Vocabulary

objective	acronym
realistic	measurable
cost-effective	achievable
convincing	

Activity 1: Thinking Task

What have you learnt about sustainability in these areas? In a group, brainstorm what you think are the three most important points for each area.



Writing Convincing Solutions

When you are presenting solutions in a report you need to present them objectively. If something is **objective**, it is described using facts and supported with data. However, you must also persuade the reader that your solutions are useful and **realistic**.

Useful means that the solution will actually solve the problem identified. Therefore, you need to describe what the problem is and how the solution will solve it.

They must be realistic, in that the solution can actually be developed and used. Does the technology exist, or can it be developed? Is the solution **cost-effective** (can it deliver good results without costing

too much)? If the solution is too expensive, then no organization or government will have the funds to implement it.

To help you write effective and **convincing** solutions, use the criteria described by the **acronym**: 'S.M.A.R.T.'



Specific

You need to describe in detail what the solution is and how it will work.

Measurable

You need to be able to say how we will measure the success of the solution. If the solution aims to stop the use of single use plastic products, how will you measure the success? One measure could be the percentage by which the use of single-use plastic straws is reduced in fast-food establishments.

Achievable

Is it possible to achieve? If a goal was to eliminate all waste, then that would be impossible. A more achievable goal may be to reduce waste by 70%.

Realistic

Is the solution possible using the technology, finances and skills we have? Is it realistic within a short time or a longer time?

Timed

You should give an indication of when the solution could take effect. If the solution is not achievable for a long time, then you should try to break it down into smaller steps with shorter time frames.

☑ Activity 2: Checkpoint

Use the text to answer the questions.

1. An acronym is ___.
   a. a difficult word with many meanings
   b. a word made of the first letters of other words
   c. a word used to help explain goals and solutions
   d. a simple word that is used in sustainability

2. If something is cost-effective, it is ___.
   a. very expensive
   b. cheaper than other things
   c. good for its cost
   d. free to set up

3. If you persuade someone, you ___.
   a. get them to believe something
   b. give lots of our own opinions
   c. ask for help with doing something
   d. tell them to stop doing something

☑ Activity 3: Checkpoint

Match the SMART category (1-5) with the correct example (a-e).

SMART Category	Example
1. Specific	a. This can be done in six months.
2. Measurable	b. This will be done with the current technology.
3. Achievable	c. The plastic recycling scheme will be located in 16 areas and will be staffed by 32 employees.
4. Realistic	d. People are interested in recycling plastic, so they should take part in the scheme.
5. Timed	e. The project will be successful if at least 50% less plastic waste ends up in bins.

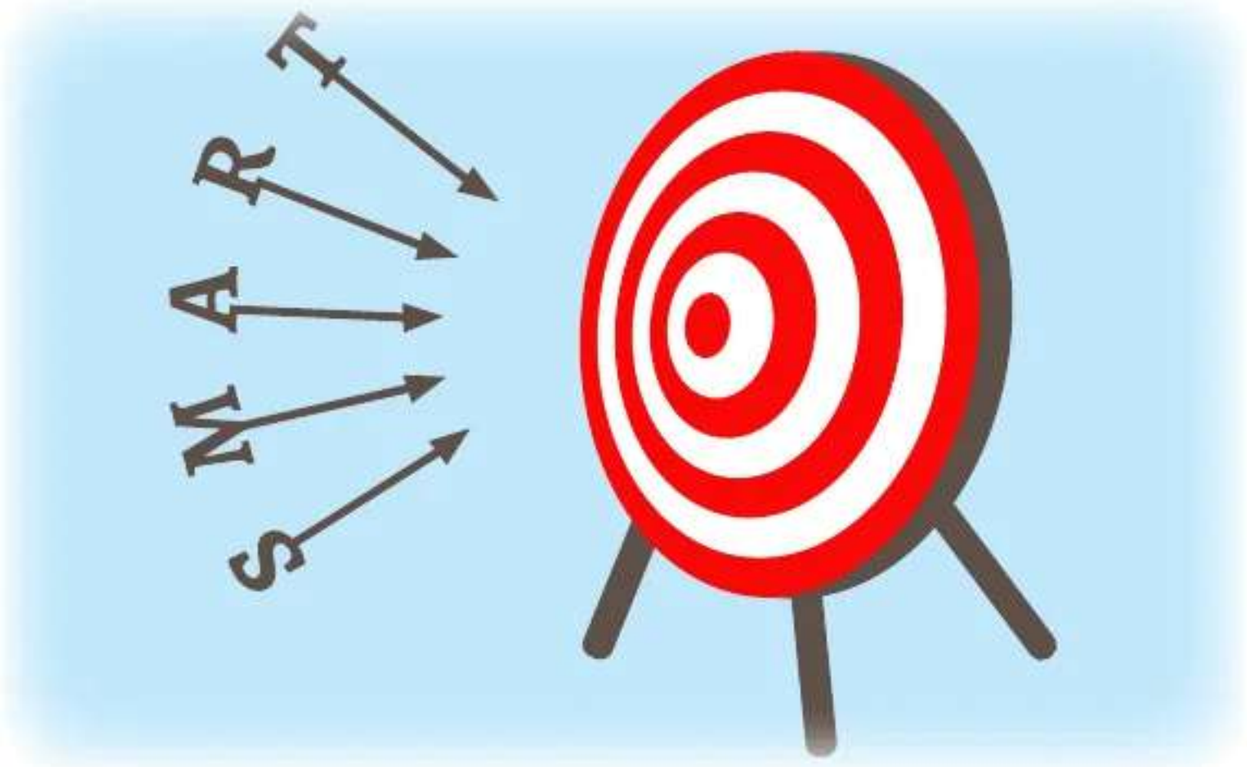
Activity 4: Discussion Task

In your groups, look at the solutions you have developed over the last few lessons. Look back at the warm-up activity at the start of this lesson. How do any of these relate to your topic?
In the table, write two problems connected to your topic and give two solutions.

Problem	Solution

Activity 5: Thinking Task

To help you describe your solutions, write some notes to make the solutions SMART.



Specific	
Solution 1	Solution 2
Measurable	
Solution 1	Solution 2
Achievable	
Solution 1	Solution 2

Realistic	
Solution 1	Solution 2

Timed	
Solution 1	Solution 2

Activity 6: Writing Task

In your group, write the two solutions to put in your report.

- Describe briefly what the problem is.
- Explain the solution, making sure it is SMART.
- Put two solutions in your report in a solutions section.



Activity 7: Thinking Task

Now you have your solutions section, you will revise some of the information in other sections of the report. The revised sections should now reflect the content in the solutions section.



Conclusions:

Read through this again and decide how and where you can mention the solutions as part of your conclusions.

Abstract:

This is the summary of your whole report near the start. It will now need to include your solutions. Write one sentence summarising each solution clearly that you can put in the abstract.

Table of Contents:

You will need to check that the solutions section is included in your table of contents. Also check that the numbering of the pages remains correct.

Activity 8: Self-Assessment Task

You should now go through the report to check the referencing you have been adding throughout this term.
Use the checklist below to help you.

	Does all information that is not your own have a citation?
	Are the citations correctly formatted according to the citation method advised by your teacher?
	Is there a reference page at the end of your report?
	Does every citation in the report match to a reference in the reference page?
	Do the references on the reference page follow the referencing conventions advised by your teacher?

If any of the areas above do not have a tick, make notes below what needs to be corrected. Then in your group make the corrections.

☑ Activity 9: Checkpoint

The final check now before you submit the report is the formatting.

These were the guidelines for formatting the report recommended previously in this course.

Check you have followed these:

Cover Page

This is the first page of your report. It should include at least the following information:

- Title of research project
- Authors (the students writing the report)
- Date

Contents Page

Follow the example given.

Section Headings

Use the section headings given.

Each heading should be given as a title, size 14 font, with a line space under it before the text starts.

References Page

This is the list of all the sources you used and should be the last page of this report.

Page Numbering

Numbering of each page should be in the bottom right of each page and should be in the style of: 'Page 1 of 16'

Text Font Style and Size

This should be Calibri, size 12 and with double line spacing.



Now you are ready to submit it to your teacher.

Activity 10: Self-Assessment Task

Reflect back on this lesson. What was challenging, unexpected or a useful skill you learnt while doing this part of the research project? Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 9: Presentation

- What key information in my report will support my presentation?
- How to deliver the presentation in a professional manner?



Key Vocabulary

closing

checklist

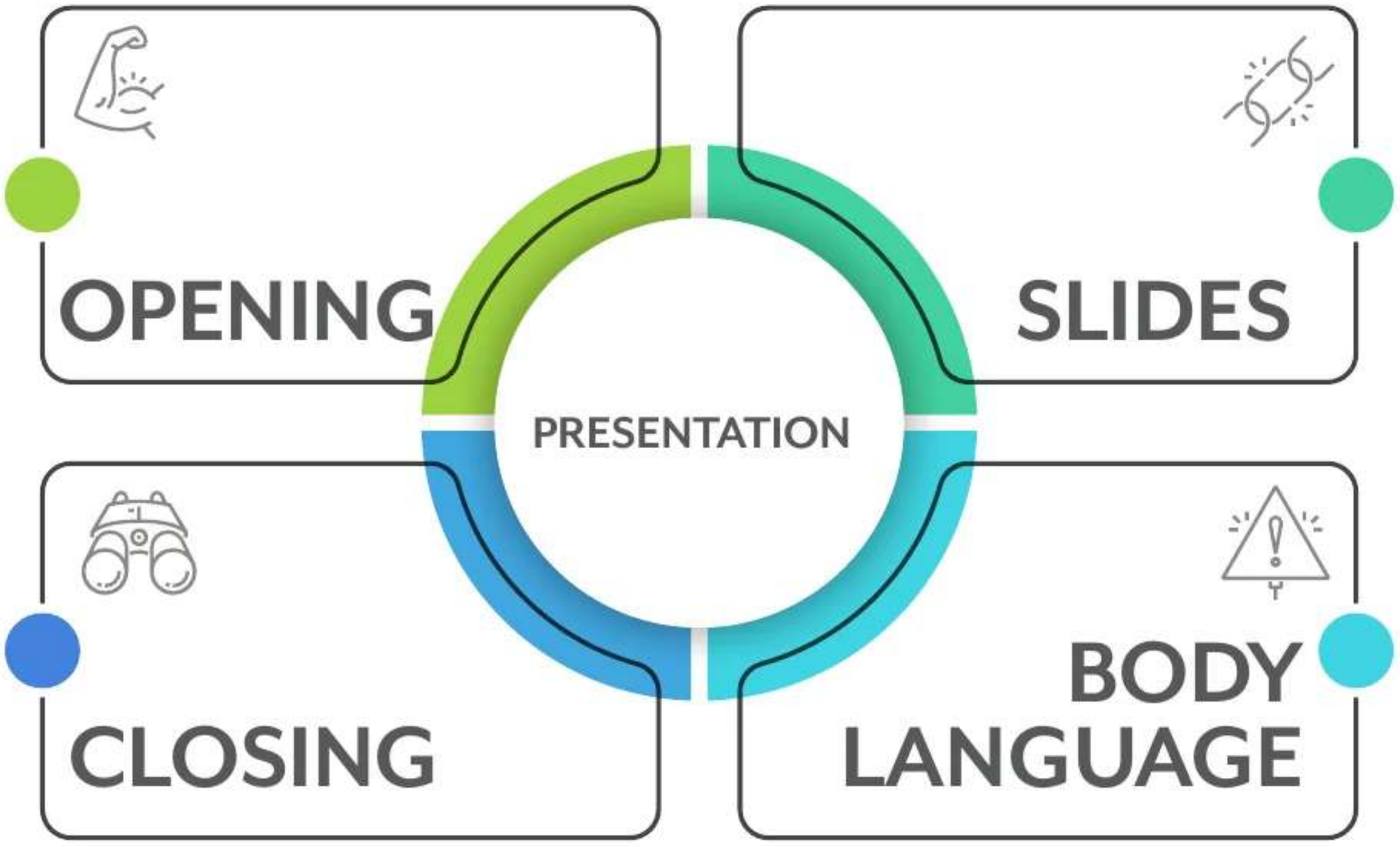
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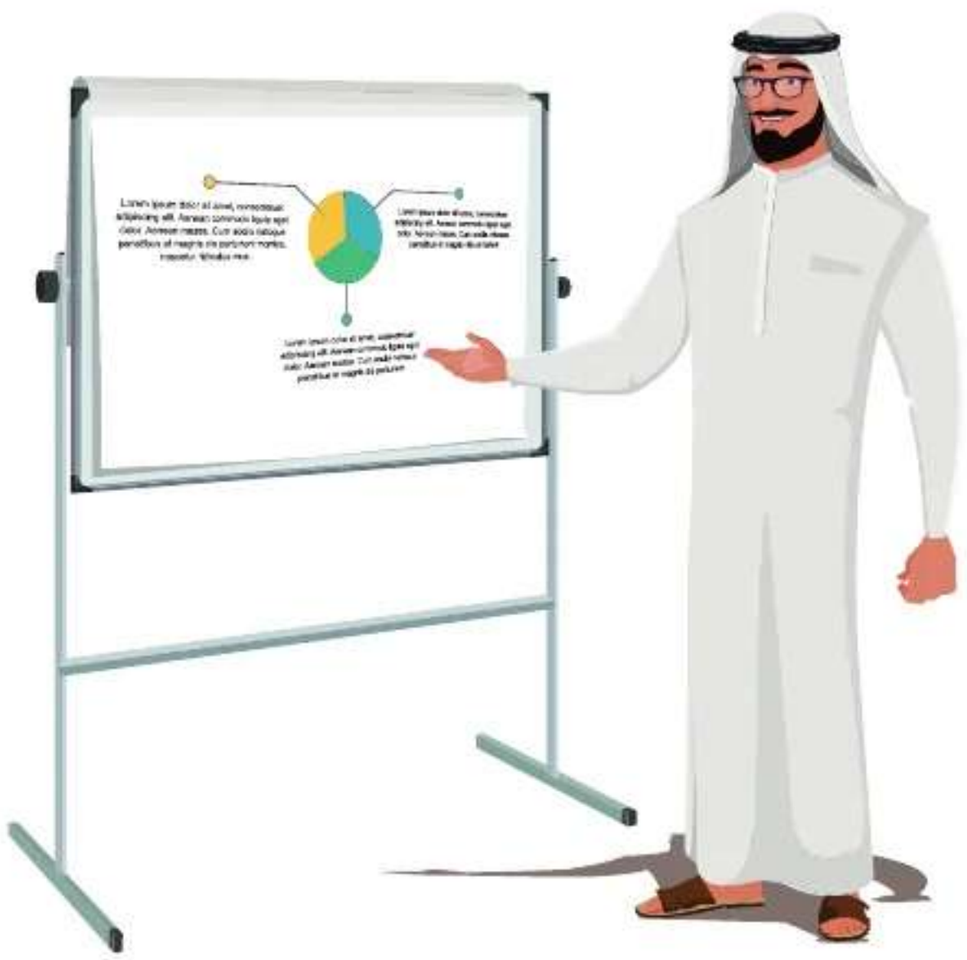
body language

opening

Activity 1: Thinking Task

You are going to give a presentation on your report. To help you with the presentation, review points that make a good presentation. Think back to the presentations you did near the start of this term. What things do you need to work on and develop in the four areas below?





Project Description

You will give a short presentation (five minutes) in your group.

You will prepare slides to support your spoken presentation. You can use PowerPoint to make the slides, and should have six – eight slides.

The presentation should have six sections:

- Introduction to your topic and people in the group
- Description of your sustainability issue – keep it brief
- Problems – describe the main problems in your chosen area
- Solutions – describe a minimum of two solutions. For each solution:
  - Describe it
  - Say why you think it is a good solution
- **Closing** – finish with a statement about the future of your topic area
- References slide



Activity 2: Action Task

Look back at what you wrote in the previous lesson. Write down all the problems and solutions that you mentioned.

Problem	Solution

Activity 3: Action Task

For the presentation you need to have two solutions. Choose two of the solutions from Activity 2 and match each to a problem it solves.

Solution	Problem It Solves
1.	
2.	

Activity 4: Self-Assessment Task

Prepare the slides to support your presentation. You should have a total of six – eight slides.
Look back at the project description at the start of the lesson to see what different slides you should have.
Remember to include citations for facts that need supporting and include a reference for them in the final slide.
When you have created the slides, go through the checklist.

You have...	Yes ✓	No ✗
...included all names on the first slide.		
...used clear language on the slides.		
...only used key words (not long sentences or paragraphs).		
...made citations where needed.		

You have...	Yes ✓	No ✗
...described the problems in the topic area.		
...connected one solution to each problem.		
...used pictures and visuals if needed (and with citations).		
...finished the presentation in a positive and interesting way.		
...a references slide at the end for all citations in the presentation.		

Activity 5: Peer Assessment Task

You have your ideas and your presentation slides ready, so now you need to practise.
In your group, take turns to deliver your presentation to each other. The group members should watch and listen to the presentation and give feedback using the points in the table.

Area	Feedback
Timing – was the presentation about 5 minutes long?	
Confidence – was the presenter confident and did he/she sound interesting?	
Voice – was the presenter's voice clear and easy to understand?	

Area	Feedback
Body language – did the presenter stand and move hands naturally?	
Slides – did the presenter use these well?	
Opening – did the **opening** get your attention?	
Closing – did the presentation end in a clear and positive way?	

Activity 6: Action Task

Your group will deliver the presentation to the class. You will also listen to the presentations from the other groups.
As you listen to each presentation, make notes using the tables.

Group 1	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Group 2	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Group 3	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Group 4	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Group 5	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Group 6	
Topic:	
Problems	Solutions
Which solution will have the biggest effect?	

Activity 7: Self-Assessment Task

You have completed your project and delivered the presentation. Reflect back on the presentation. What have you learned from the experience of giving a presentation?
Spend five to ten minutes and write one or two entries.

Reflective Journal	
Situation	
Impact	
Result	

Lesson 10: Final Review

- What did I learn in Lessons 6 -8?
- In what areas can I improve?



Key Vocabulary

keywords from Lessons 6-9

☑ Activity 1: Checkpoint

Choose the correct answer for each question.

1. If something is hazardous, it is ___.
   a. safe
   b. clean
   c. recycled
   d. dangerous

2. Which method is an example of sustainable transport?
   a. Ocean liners
   b. Jet planes
   c. Electric cars
   d. Petrol cars

3. Gold, silver and copper are examples of ___.
   a. transport poverty
   b. fast fashion
   c. precious metals
   d. carbon tax

4. Transportation systems, electrical systems and buildings are examples of ___.
   a. waste management
   b. infrastructure
   c. landfill
   d. sustainable transport

☑ Activity 2: Checkpoint

Use the words in the table to complete the gaps in the paragraph. There are more words than you need.

specific	measurable	timed	objective
convincing	cost-effective	acronym	

S.M.A.R.T. is an _____ that is often used to help set goals. It reminds people when the goal should be achieved, so it is _____. It describes how you will know you have achieved the goal, so it needs to be _____. Goals also need to consider the cost, in order to be _____. Perhaps the most important part of S.M.A.R.T. is making sure you give clear details so it is _____ and people can easily understand what you are trying to achieve.

☑ Activity 3: Checkpoint

Match the words (1-9) on the left with their description (a-i).

Word	Meaning
1. Fast fashion	a. Produced with minimal use of artificial chemicals
2. Viable	b. A cost put on the burning and polluting effects of fossil fuels like oil and gas
3. Internet of Things	c. A way of being able to exchange used products for new ones
4. Sustainable transport	d. A situation when travel costs more than people can afford
5. Trade-in scheme	e. A way of producing large number of clothes quickly and cheaply
6. Organic	f. Ways of travelling that have low negative effects on the environment and society
7. Transport poverty	g. Possible to implement
8. Carbon tax	h. Clothing that can be reused or easily recycled
9. Sustainable fashion	i. A network of appliances and devices

Activity 4: Writing Task

Use the words below to write a text of about one hundred words about ways to improve waste management in the town or city you live in. Use each key word at least once.

dump	hazardous	landfill	disposal
green	disassemble	brand	

Student's notes

Student's notes