MODULE NAME:	MODULE CODE:
TEACHING FOUNDATION PHASE MATHEMATICS 3A	TMSS6311

ASSESSMENT TYPE: POE (PAPER)

TOTAL MARK ALLOCATION: 100 MARKS

TOTAL HOURS: 24 HOURS

By submitting this assignment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks. No more than 10% of the assignment may consist of direct quotes.***
2. ***Make a copy of your assignment before handing it in.***
3. *Assignments must be typed unless otherwise specified.*
4. *All work must be adequately and correctly referenced.*
5. *Begin each section on a new page.*
6. *Follow all instructions on the assignment cover sheet.*
7. *This is an individual or a group assignment – For group assignments, the group may not exceed 4 members, and all will be awarded the same mark.*

Referencing Rubric

Providing evidence based on valid and referenced academic sources is a fundamental educational principle and the cornerstone of high-quality academic work. Hence, The IIE considers it essential to develop the referencing skills of our students in our commitment to achieve high academic standards. Part of achieving these high standards is referencing in a way that is consistent, technically correct and congruent. This is not plagiarism, which is handled differently.

Poor quality formatting in your referencing will result in a penalty **of a maximum of ten percent being deducted from the mark awarded**, according to the following guidelines. Please note, however, that **evidence of plagiarism in the form of copied or uncited work (not referenced), absent reference lists, or exceptionally poor referencing, may result in action being taken in accordance with The IIE's Intellectual Integrity Policy (0023)**.

Markers are required to provide feedback to students by indicating (circling/underlining) the information that best describes the student's work.

Minor technical referencing errors: 5% deduction from the overall mark – the student's work contains five or more errors listed in the minor errors' column in the table below.

Major technical referencing errors: 10% deduction from the overall mark – the student's work contains five or more errors listed in the major errors' column in the table below.

If both minor and major errors are indicated, then 10% is deducted from the overall mark.

The examples provided below are not exhaustive but are provided to illustrate the error.

Required: **Technically correct referencing style**	**Minor errors** **in technical correctness of referencing style** **Deduct 5% from mark awarded**	**Major errors** **In technical correctness of referencing style** **Deduct 10% from mark awarded**
Consistency The same referencing format has been used for all in-text references and in the bibliography/reference list.	Minor inconsistencies. The referencing style is generally consistent, but there are one or two changes in the format of in-text referencing and/or in the bibliography. For example, page numbers for direct quotes (in-text) have been provided for one source, but not in another instance. Two book chapters (bibliography) have been referenced in the bibliography in two different formats.	Major inconsistencies. Poor and inconsistent referencing style used in-text and/or in the bibliography/ reference list. Multiple formats for the same type of referencing have been used. For example, the format for direct quotes (in-text) and/or book chapters (bibliography/ reference list) is different across multiple instances.
Technical correctness Referencing format is technically correct throughout the submission. Position of the reference: a reference is directly associated with every concept or idea. For example, quotation marks, page numbers, years, etc. are applied correctly, sources in the bibliography/reference list are correctly presented.	Generally, technically correct with some minor errors. The correct referencing format has been consistently used, but there are one or two errors. Concepts and ideas are typically referenced, but a reference is missing from one small section of the work. Position of the references: references are only given at the beginning or end of every paragraph. For example, the student has incorrectly presented direct quotes (in-text) and/or book chapters (bibliography/reference list).	Technically incorrect. The referencing format is incorrect. Concepts and ideas are typically referenced, but a reference is missing from small sections of the work. Position of the references: references are only given at the beginning or end of large sections of work. For example, incorrect author information is provided, no year of publication is provided, quotation marks and/or page numbers for direct quotes missing, page numbers are provided for paraphrased material, the incorrect punctuation is used (in-text); the bibliography/reference list is not in alphabetical order, the incorrect format for a book chapter/journal article is used, information is missing e.g. no place of publication had been provided (bibliography); repeated sources on the reference list.
Congruence between in-text referencing and bibliography/reference list All sources are accurately reflected and are all accurately included in the bibliography/reference list.	Generally, congruence between the in-text referencing and the bibliography/ reference list with one or two errors. There is largely a match between the sources presented in-text and the bibliography. For example, a source appears in the text, but not in the bibliography/reference list or vice versa.	A lack of congruence between the in-text referencing and the bibliography. No relationship/several incongruencies between the in-text referencing and the bibliography/reference list. For example, sources are included in-text, but not in the bibliography and vice versa, a link, rather than the actual reference is provided in the bibliography.
In summary: the recording of references is accurate and complete.	In summary, at least 80% of the sources are correctly reflected and included in a reference list.	In summary, at least 60% of the sources are incorrectly reflected and/or not included in reference list.

Overall Feedback about the consistency, technical correctness and congruence between in-text referencing and bibliography:

_____

_____

Portfolio of Evidence (PoE) — Background

Portfolio of Evidence: Teaching Foundation Phase Mathematics: Numbers and Operations

Introduction

For this module it is important that you demonstrate your understanding of TFP Mathematics 3A: Space and Shape as it applies to your context and experience.

This Portfolio of Evidence needs to be developed as you progress through this module. The questions in this assignment all form part of a single Portfolio of Evidence (POE) to be submitted at the end of the module.

Module Assessment — Background and Instructions

As explained in your Module Guide, this modules assessment structure is comprised of: three activities. In order to prepare you for these activities, there will be two Compulsory ICE tasks that must be submitted for marking to your lecturer as per their timeline. These need not be included in the POE and will be done through the course of your module at various times decided by your lecturer. The aim of the two Compulsory ICE tasks is to render additional support to you so that you can be able to complete your Summative PoE effectively.

You will have three lecturer facilitated touch points which will be scheduled prior to the expected completion of the POE activities as per pacer. This is an opportunity for you to receive developmental feedback for your three POE activities which you will be working on throughout the module and will submitting as a summative at the end of the module.
PS: Activities will only be marked on the final summative submission.

The assessment weighting for this PoE is as follows:

Assessment Name	Weighting
ICE	10%
Summative POE	90%

NB: Failure to submit your final portfolio of evidence by the prescribed time and date (as per PAS) will be treated as an absence from an examination, and not as a late assignment. Please refer to the IIE 009 Assessment Strategy and Policy (updated January 2015) for further details. The final portfolio will be required to be submitted through Turn It In/ Safe Assign.

COMPULSORY ICE TASKS

COMPULSORY ICE TASK 1

Consult the prescribed textbook. Briefly describe the three kinds of knowledge according to Piaget.

Submit your brief descriptions of the knowledge types through learn.

Your lecturer will decide on a time for the completion of this task.

COMPULSORY ICE TASK 2

Section A

Consult CAPS Mathematics Gr R-3. Make sure that you are aware of the time allocation for teaching Space and Shape Grade 2 Term 3. How much time can be allocated to the teaching of the lesson below?

Section B

When teaching space and shape it is important to develop vocabulary as part of social knowledge. Give a brief definition of each of the following:

What is space?

What is shape?

What is the face of an object?

What is an edge?

What is the vertex?

What is the base?

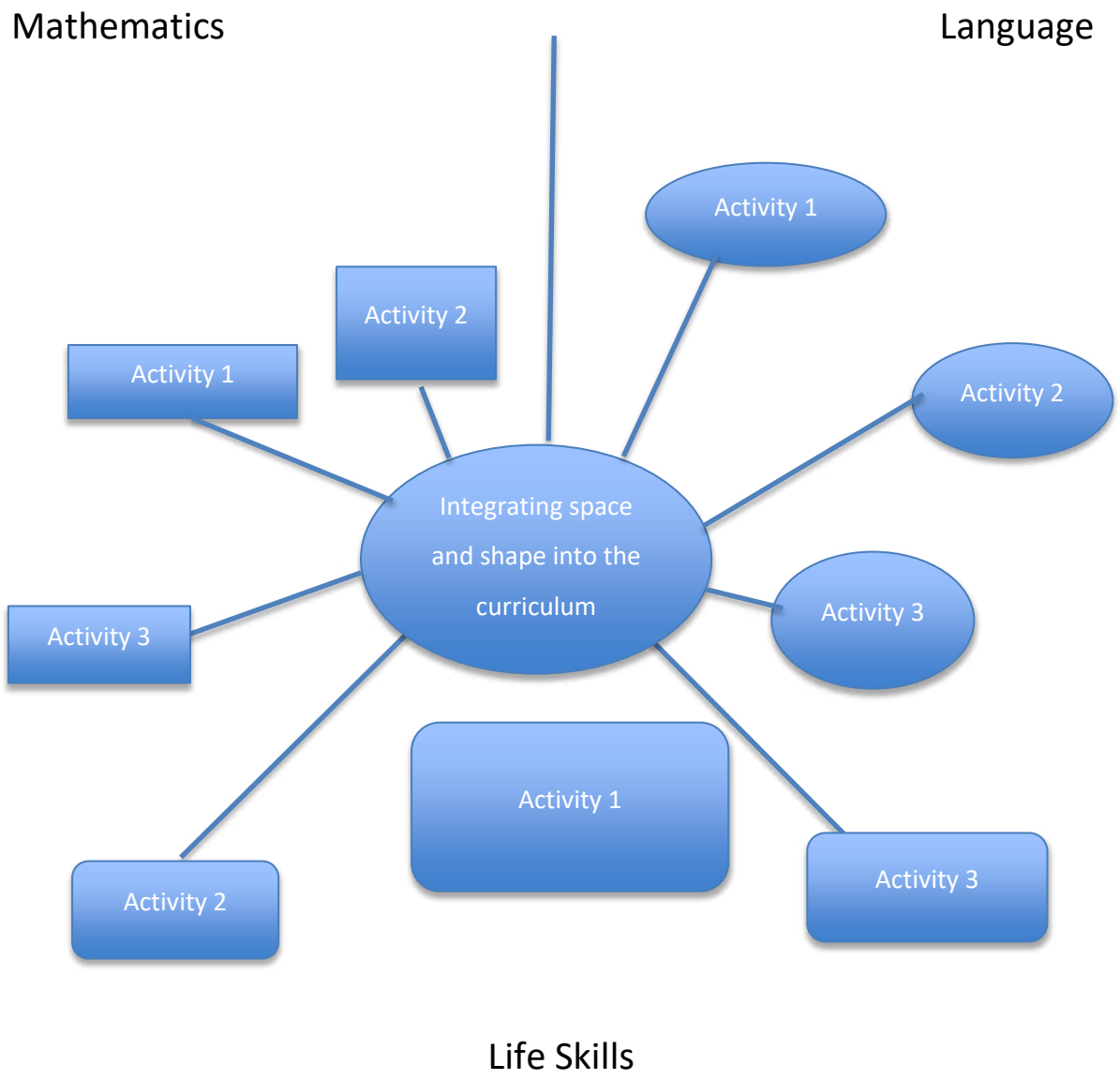
Create a 3D shape that could be used to teach a Grade 2 class in the 3rd Term using any material of your choice. Submit the picture of your 3D shape on Learn.

Your lecturer will inform you when this task must be completed.

POE ACTIVITIES

POE Activity 1 — Integrating Space and Shape into the curriculum through play. (Marks: 30)

Draw up a curriculum web in which you demonstrate how a learner can be given the opportunity to discover shapes in all areas of the curriculum. In each section of the curriculum web, describe 3 activities that will enhance the physical, social and conceptual development of the learner concerning space and shape. Consult a variety of sources for ideas. Give a brief, yet clear description of each activity. These activities must be suitable for Grade 2 Term 1 learners. You may use any format for your curriculum web. Below is an example. Remember to reference your sources.



Please see the assessment rubric 1 at the end of this PoE brief for a guideline on how you will be assessed.

POE Activity 2: Preparing a learning experience on Space and Shape (Marks: 40)

You must consult CAPS Mathematics Grade R – 3 (Grade 2 Term 3), Space and Shape.

Create **3 opportunities** for learners to develop their concept of 3D objects and their features.

Use the lesson plan template TE305a.

Complete all sections of the lesson plan.

The lesson plan must include:

- A **whole class introductory activity** - use an activity where learners physically learn about shapes.
- For the **teaching and learning phase** consult various sources for ideas to make the 3 activities exciting and physically engaging.
- The emphasis is not on differentiation but rather on **introducing the concepts** to all the children. Your activities should be structured so that the children can practically engage with the concepts.
- You as the "guide on the side" will ask questions to develop the social aspect of learning. Write down the questions you will ask. Think of the vocabulary you will develop for each activity.
- By the end of the lesson, the learners will have completed each activity.
- This lesson plan must conclude with a written exercise that all the children complete. This activity must consolidate what they have learnt.
- Briefly describe how the teacher will assess the learning.

Please see the assessment rubric 2 at the end of this PoE brief for a guideline on how you will be assessed.

POE Activity 3 —The levels of development in learning about Space and Shape (Marks: 30)

Pierre and Dina van Hiele suggested a five-level hierarchical model that explains the steps through which learners must progress, in sequence, as they develop their mathematical thinking in geometry. (Van der Walle, 2007:409)
(Compton et al., 2007:59) states that It is important to note that development from one level to the next is not related to age, but to mathematical experience.

Write a 500 – 600-word essay in which you explain the levels of understanding a Foundation Phase learner might achieve according to the van Hieles levels of geometric development. Discuss how these levels of development can be linked to Piaget's thoughts on constructivism.

Please see the assessment rubric 3 at the end of this PoE brief for a guideline on how you will be assessed.

Appendix A: Assessment Sheet (Marking Rubric)

Please note: Tear off this section and **attach** it to your work when you submit it.

MODULE NAME: TEACHING FOUNDATION PHASE MATHEMATICS 3A	**MODULE CODE: TMSS6311**
STUDENT NAME:	**STUDENT NUMBER:**

POE Activity 1 – Integrating Space and Shape into the curriculum through play. **(30 marks)**

SECTION A:						
	Does not meet the required minimum to pass 0 - 2	**Approaches the required minimum to pass 3 - 4**	**Meets the minimum requirement to pass 5 - 6**	**Exceeds the minimum required pass: Good solid performance 7 - 8**	**Greatly exceeds the minimum required to pass: Excellent performance 9 - 10**	MARKS
Curriculum web	The subject areas have not been identified. Layout of the task is poor. There is no clear integration between the subject areas when teaching Space and Shape. There is little or no evidence of knowledge of the content to be taught in Grade 2 Term 1. There is no attempt to link the different subject areas.	The concept of a curriculum web is developing. Although activities have been provided, they appear to be rather isolated not providing any integration between subjects.	The curriculum web demonstrates the integration of subject areas. There is an effort to link activities with the required outcomes for Grade 2 Term 1. There is a fair attempt to link the different subject areas.	The curriculum web demonstrates the integration of subject areas. There is an understanding of the content to be taught to Grade 2 Term 1. There is a good choice of activities and a good effort has been made to show the integration between the subject areas.	The curriculum web is designed to clearly demonstrate the integration of subject areas. Shows excellent understanding of the content to be taught to Grade 2 Term 1 Space and Shape. There is a distinct flow between the various activities in each subject introducing, developing or consolidating concepts.	/10

	Does not meet the required minimum to pass **0 - 1**	**Approaches the required minimum to pass** 2	**Meets the minimum requirement to pass** **3**	**Exceeds the minimum required pass: Good solid performance** **4**	**Greatly exceeds the minimum required to pass: Excellent performance** **5**	
Physical Activity	There is no clear description of this activity. It does not enhance the physical development of the learner concerning space and shape.	An attempt has been made to describe the activity. An attempt has been made to enhance the physical development of the learner concerning space and shape.	There is a description of this activity. It enhances the physical development of the learner concerning space and shape.	There is a clear description of this activity. It enhances the physical development of the learner concerning space and shape.	There is an exceptionally clear description of this activity. It is original and very creative whilst enhancing the physical development of the learner concerning space and shape.	/5
Social Activity	There is no clear description of this activity. It does not enhance the social development of the learner concerning space and shape.	An attempt has been made to describe the activity. An attempt has been made to enhance the social development of the learner concerning space and shape.	There is a description of this activity. It enhances the social development of the learner concerning space and shape.	There is a clear description of this activity. It enhances the social development of the learner concerning space and shape.	There is an exceptionally clear description of this activity. It is original and very creative whilst enhancing the social development of the learner concerning space and shape.	/5
Conceptual Activity	There is no clear description of this activity. It does not enhance the conceptual development of the learner concerning space and shape.	An attempt has been made to describe the activity. An attempt has been made to enhance the conceptual development of the learner concerning space and shape.	There is a description of this activity. It enhances the conceptual development of the learner concerning space and shape.	There is a clear description of this activity. It enhances the conceptual development of the learner concerning space and shape.	There is an exceptionally clear description of this activity. It is original and very creative whilst enhancing the conceptual development of the learner concerning space and shape.	/5

	Inadequate 0 - 1	Developing 2 - 3	Good 4	Excellent 5	
Academic writing	Language utilisation is often inappropriate or incorrect*, and sometimes incomprehensible. Editing is required. Referencing is altogether incorrect. Answer is either too long or too short (1).	Some colloquialisms are used, and language utilisation is often inappropriate or incorrect. Editing is required. Referencing is generally incorrect*. Answer is either too long or too short.	No colloquialisms are used, and good quality language utilisation is present. Care has been taken with spelling, but editing is required. Referencing is generally correct*. Answer is of a somewhat appropriate length, with some deviation from the point but enough space to show the students' understanding and engagement.	No colloquialisms are used, and high-quality language utilisation is present. Care has been taken with spelling. Referencing is correct*. Answer is of an appropriate length, sticking to the point but enough space to show the students' understanding and engagement.	/5

POE Activity 2 Rubric: Preparing learning experience on Space and Shape (40 marks)

Please insert TE 304 Lesson Plan feedback report. Marks to be adjusted to meet with mark allocation for this lesson plan.

SECTION A: LESSON PLANNING						
	Not yet coping **0 - 2**	**Emerging teaching competence** **3 - 4**	**Developing skilled teaching competence** **5 - 6**	**Capably skilled teaching competence** **7 - 8**	**Thoughtful, insightful teaching competence** **9 - 10**	MARKS
Sections A to G	Vaguely written or generic write up of factors to consider when planning a lesson.	Some consideration given to supporting factors for lesson design but missing certain elements to ensure a meaningful lesson plan.	Adequate reference made to elements to consider prior to lesson design but lacks the depth of understanding and somewhat generic.	A skilled entry of all factors to consider in lesson planning with good reference to CAPS and other considerations.	Artful writing up of all elements with precise reference to CAPS. Meaningful lesson objectives and a sincere understanding of the requirements of lesson planning.	/10

SECTION B: EXECUTION OF LESSON AS PER THE LESSON PLAN						
	Not yet coping **0 - 2**	**Emerging teaching competence** **3 - 4**	**Developing skilled teaching competence** **5 - 6**	**Capably skilled teaching competence** **7 - 8**	**Thoughtful, insightful teaching competence** **9 - 10**	MARKS
Introduction Phase	Introduction lacks thought and fails to engage and enthuse learners. Introduction does not include a physical activity.	Introduction is limited to asking questions to determine prior knowledge. Introduction does not include a physical activity to assist in developing geometric concepts.	There is some attempt to get learners enthusiastic about the lesson. The student has encouraged some form of physical participation to develop the geometric concept.	An interesting activity that captures the attention of learners. The learners are physically involved.	A creative and meaningful introductory 'hook' that excites and engages learners. The learners physically involved.	/10
Teaching and Learning Phase	This phase fails to meet the lesson objectives. The lesson plan does not meet the requirements. Activities are not physically engaging.	The selected strategy is limited in promoting learner engagement to meet the objectives. Obvious lack of disciplinary knowledge. Some resources used to support learning.	The lesson unfolds with some structure and provides an opportunity for active participation. The chosen strategies meet the lesson objectives although there is some impracticality in execution. The use of suitable resources supports the lesson.	The three activities have been planned with careful consideration. There is an opportunity for active participation promoting the understanding of geometric concepts. Good use of resources enhances the learning experience.	The three activities are exciting and creative. They meet the requirements of an interactive and engaging lesson. The activities are original, resourceful and map to the lesson objectives. Excellent use of resources.	/10

	Not yet coping **0-2**	**Emerging teaching competence** **3**	**Developing skilled teaching competence** **4**	**Capably skilled teaching competence** **5**	**Thoughtful, insightful teaching competence** **6**	
Closure Phase	Written exercise not suitable – does not consolidate learning. Does not meet with the objectives of the lesson. Lesson ends abruptly or just fizzles out.	Written exercise attempts to consolidate learning but does not necessarily meet the objectives of the lesson. There may be an attempt to draw the lesson to a close.	The written exercise consolidates learning. The lesson is drawn to a meaningful close.	The written exercise consolidates the learning effectively allowing the learners to collate their thoughts about the lesson and prepare for the next lesson.	A well-planned written exercise that consolidates the learning. An exciting end to the lesson that re-energizes learners.	/6
	Not yet coping **0**	**Emerging teaching competence** **1**	**Developing skilled teaching competence** **2**	**Capably skilled teaching competence** **3**	**Thoughtful, insightful teaching competence** 4	
	No assessment conducted or unsuitable assessment.	A simple assessment strategy used that bears little value to determine learning.	Assessment is conducted but may not necessarily determine if LOs are being met.	An interesting assessment task/s that meets the LO's.	Carefully crafted and engaging assessment/s that meet the LO's. Also informs the teacher on the degree of learning and further planning.	/4

POE Activity 3 Rubric – The levels of development in learning about Space and Shape (30 Marks)

	Levels of Achievement				
Van Hiele's level of development	**Does not meet the required minimum to pass 0 -2**	**Approaches the required minimum to pass 3 - 4**	**Meets the minimum requirement to pass 5 - 6**	**Exceeds the minimum required pass: Good solid performance 7 - 8**	**Greatly exceeds the minimum required to pass: Excellent performance 9 - 10**
	The written attempt shows lack of understanding of van Hiele's levels of development. There is little or no evidence of research.	An attempt has been made to describe and identify van Hiele's levels of development relevant to the Foundation Phase. There is little evidence of research.	The relevant levels of geometric development have been identified and the student has given a satisfactory explanation of van Hiele's theory. The student has consulted a variety of sources.	The student demonstrates an understanding of the van Hiele's levels of development and shows good insight of how this can be used to explain the development of geometric understanding in the Foundation Phase. The student has consulted a variety of sources.	A clear written description showing an exceptional understanding of the van Hiele's levels of development. The level of development relevant to the Foundation Phase has been identified. The student has consulted a variety of sources.
Similarities	**0 - 2**	**3 - 4**	**5 - 6**	**7 - 8**	**9 - 10**
	The student is unable to find the similarities between the two theories. There is a lack of general understanding of the theories of Piaget and van Hiele.	The student shows an understanding of the two theories by finding the similarities but is unable to make a link between them.	The student understands the theories because similarities have been identified and has tried to draw a link between them.	A good attempt has been made to identify the similarities and a good link of the theories of van Hiele and Piaget has been made.	The student has shown an excellent understanding and skill in linking the theories of van Hiele and Piaget and how they can be used in laying a good foundation for the understanding of space and shape.

Academic Writing	0 - 2	3 - 5	6 - 8	9 - 10
	The student's answer is not in the format of an answer (this includes having bullet points or no paragraphs) (0). OR The student presents an answer with introductory, body and concluding elements (or some combination thereof) Language utilisation is often inappropriate or incorrect*, and sometimes incomprehensible. Editing is required. Referencing is altogether incorrect. Answer is either too long or too short	The student presents an answer with introductory, body and concluding elements. Some colloquialisms are used, and language utilisation is often inappropriate or incorrect. Editing is required. Referencing is generally incorrect*. Answer is either too long or too short.	The student presents a logical answer with clear introductory, body and concluding elements. No colloquialisms are used, and good quality language utilisation is present. Care has been taken with spelling, but editing is required. Referencing is generally correct*. Answer is of a somewhat appropriate length, with some deviation from the point but enough space to show the students' understanding and engagement.	The student presents a logical and well-structured answer with clear introductory, body and concluding elements. No colloquialisms are used, and high-quality language utilisation is present. Care has been taken with spelling. Referencing is correct*. Answer is of an appropriate length, sticking to the point but enough space to show the students' understanding and engagement.
ACTIVITY 1 _____/30 + ACTIVITY 2 _____/40 + ACTIVITY 3 _____/30 = TOTAL MARKS: _____/100				