| 281/3 |
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| Original: 1997 |
| Revised: Sep 1998<br>for 1999 |

Curriculum Council

# SYSTEMS TECHNOLOGY

(Year 12 E281)

## *Common Assessment Tasks*

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# Index of Common Assessment Tasks Booklet

## *Systems Technology (Year 12) - E281*

# Guidelines for the Common Assessment Tasks

## *Systems Technology (Year 12) - E281*

This package contains the requirements for the four Common Assessment Tasks in Year 12 Systems Technology. The specific content of each task is to be determined by the school provider dependent upon the mode of delivery by the teacher.

Each task description is presented with the following headings:

### *1. Outcomes*

The teacher has the flexibility to select from the Systems Technology outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

### *2. Task*

The task to be completed.

### *3. Task Description*

The Task Description outlines what requirements are necessary for the students to complete the task. In most cases, it provides guidelines for the teacher to ensure that the major focus of the task has been understood.

### *4. Task Parameters*

The Task Parameters determine the context and conditions in which the task is to be carried out.

### *5. Authentication*

This section relates to the requirements of the student and the teacher in ensuring the task has been completed by the student. It is important that the teacher is able to authenticate all work completed for assessment by the student.

### *6. Performance Criteria*

Each outcome is assessed against the Performance Criteria to determine the level of student achievement.

# Record of Performance

## *Systems Technology (Year 12) - E281*

| OUTCOME | Task 1 | Task 2 | Task 3 | Task 4 | FINAL |
|---|---|---|---|---|---|
| **Outcome 1**<br>Analyses the social and environmental impacts of technological products and processes. | | | | | |
| **Outcome 2**<br>Applies research, graphical communication and information processing skills to the technology process. | | | | | |
| **Outcome 3**<br>Plans and works effectively with others. | | | | | |
| **Outcome 4**<br>Constructs or develops solutions to problems in the context of the technology process. | | | | | |
| **Outcome 5**<br>Develops and communicates specifications for a system. | | | | | |
| **Outcome 6**<br>Selects and uses appropriate tools, equipment and machines. | | | | | |
| **Outcome 7**<br>Makes appropriate decisions based on the diagnoses, testing and or analysis of systems. | | | | | |
| **Outcome 8**<br>Analyses systems, component parts or materials relevant to the technology process. | | | | | |
| **Outcome 9**<br>Analyses present and future work roles, training opportunities and career pathways within industry. | | | | | |
| | | | | **FINAL GRADE** | |

# TASK 1: DESIGN

**Curriculum Council requirements for this task are outlined below. Evidence must be provided to demonstrate student achievement of each of the selected outcomes.**

## *Outcomes*

The teacher has the flexibility to select from the Systems Technology outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

## *Task*

Presentation of a systems implementation activity.

## *Task Description*

The student will set up a presentation of a systems implementation activity. The presentation should include:

- use of different media formats within the students presentation
- use of sketches, CAD package and block diagrams
- graphical communication and information processing skills
- demonstrate the ability to plan and organise individually and with others to meet deadlines and achieve goals.

Show evidence of the student's ability to consider the greater community

- by discussing issues of reducing waste in the production for example the selection of paint application to reduce airborne pollutants
- discussion of materials used in the productions-cost, effects, properties and benefits of
- identify areas of saving or waste of non-renewable resources.

## *Task Parameters*

Presentation of students work in different formats should be encouraged for example, a video recording of the design, proto-types or production phases or a multimedia presentation selling the good features of a design.

## *Authentication*

The following authentication procedures will apply:

- the teacher is to implement and monitor the development of the task
- the student's work will be assessed only if the teacher can attest that the work is the student's own work
- in group work each member of the group must provide specific details of their individual work efforts

## *Performance Criteria*

Each outcome is assessed against the Performance Criteria to determine the level of student achievement.

# TASK 2: SYSTEMS IMPLEMENTATION

**Curriculum Council requirements for this task are outlined below. Evidence must be provided to demonstrate student achievement of each of the selected outcomes.**

### *Outcomes*

The teacher has the flexibility to select from the Systems Technology outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

### *Task*

Systems Implementation is the doing, making and practical application of systems. Where Implementation can be referred to as the repair or restoration, assembly or modification, proto-type and testing or the manufacture of a technological systems.

### *Task Description*

- students will complete two or more implementation activities in the year
- the student will have completed sufficient investigations to substantiate the reasons behind the chosen design before implementation can begin.
- student will state resources and costs associated with Systems Implementation
- students will demonstrate ability to think through problems by submitting alternatives for systems implementation
- the student must be able to demonstrate health, safety and welfare practices relevant to the activities undertaken.
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### *Task Parameters*

The teacher is to provide sufficient information to students to ensure students have been given the opportunity to acquire a good knowledge of any applicable Occupational Health and Safety regulations relevant to the activities undertaken by the student.

### *Authentication*

The following authentication procedures will apply:

- the teacher is to implement and monitor the development of the task
- the student's work will be assessed only if the teacher can attest that the work is the student's own work.
- in the case of group work each member of the group must provide specific details of their individual work efforts

### *Performance Criteria*

Each outcome is assessed against the Performance Criteria to determine the level of student achievement.

# TASK 3: INVESTIGATION

**Curriculum Council requirements for this task are outlined below. Evidence must be provided to demonstrate student achievement of each of the selected outcomes.**

### *Outcomes*

The teacher has the flexibility to select from the Systems Technology outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

### *Task*

Investigation - Examine the development of a technological system.

### *Task Description*

Investigation content:

- identify benefits of the system
- describe changes brought about from the system
- identify areas of waste attributed to the system
- identify savings or recycling achieved by the system
- discuss the material types and properties used
- describe methods used to sell the good features of the system.

### *Task Parameters*

- format is not specified, for example it may be supported by video, tape recording, multi-media.

### *Authentication*

The following authentication procedures will apply:

- the teacher is to implement and monitor the development of the task
- the student's work will be assessed only if the teacher can attest that the work is the student's own work.

### *Performance Criteria*

Each outcome is assessed against the Performance Criteria to determine the level of student achievement.

# TASK 4: ANALYSIS

**Curriculum Council requirements for this task are outlined below. Evidence must be provided to demonstrate student achievement of each of the selected outcomes.**

### *Outcomes*

The teacher has the flexibility to select from the Systems Technology outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

### *Task*

The display of a students knowledge, theory and understanding of systems.

### *Task Description*

The task requires that the student demonstrates knowledge of the following with reference to a system studied in the subject.

- identify benefits of the system
- describe accuracy and error levels in equipment
- able to list fault finding techniques
- diagnose simple problems or faults from text and symptoms given
- interpretation of technical information and wiring diagrams
- follow a trouble shooting flow chart
- break down systems in terms of Input, Process, Output, Feedback
- describe Sub-systems and interrelationships of systems
- component part names, functions and symbols
- mathematical and scientific principles taught.

### *Task Parameters*

- students will gain knowledge through their research and assignments
- the teacher will provide any additional class notes and practice sheets required to ensure students are given the opportunity to acquire the knowledge required in the task description above
- the teacher will develop assessment instruments for assessing student knowledge in line with the schools current practice or policy.

### *Authentication*

The following authentication procedures will apply:

- the teacher is to implement and monitor the development of the task
- the student's work will be assessed only if the teacher can attest that the work is the student's own work.

### *Performance Criteria*

Each outcome is assessed against the Performance Criteria to determine the level of student achievement.

# GRADING COMBINATIONS

## *Visual Communication - Photography (Year 11) - D283*

| V | H | S | ND | GRADE |
|---|---|---|---|---|
| 9 | 0 | 0 | 0 | A |
| 8 | 1 | 0 | 0 | A |
| 8 | 0 | 1 | 0 | A |
| 7 | 2 | 0 | 0 | A |
| 7 | 1 | 1 | 0 | A |
| 7 | 0 | 2 | 0 | A |
| 6 | 3 | 0 | 0 | A |
| 6 | 2 | 1 | 0 | A |
| 6 | 1 | 2 | 0 | A |
| 5 | 4 | 0 | 0 | A |
| 5 | 3 | 1 | 0 | A |
| 5 | 2 | 2 | 0 | A |

| | | | | |
|---|---|---|---|---|
| 6 | 0 | 3 | 0 | B |
| 5 | 1 | 3 | 0 | B |
| 5 | 0 | 4 | 0 | B |
| 4 | 5 | 0 | 0 | B |
| 4 | 4 | 1 | 0 | B |
| 4 | 3 | 2 | 0 | B |
| 4 | 2 | 3 | 0 | B |
| 4 | 1 | 4 | 0 | B |
| 3 | 6 | 0 | 0 | B |
| 3 | 5 | 1 | 0 | B |
| 3 | 4 | 2 | 0 | B |
| 3 | 3 | 3 | 0 | B |
| 3 | 2 | 4 | 0 | B |
| 2 | 7 | 0 | 0 | B |

| V | H | S | ND | GRADE |
|---|---|---|---|---|
| 2 | 6 | 1 | 0 | B |
| 2 | 5 | 2 | 0 | B |
| 2 | 4 | 3 | 0 | B |
| 2 | 3 | 4 | 0 | B |
| 1 | 8 | 0 | 0 | B |
| 1 | 7 | 1 | 0 | B |
| 1 | 6 | 2 | 0 | B |
| 1 | 5 | 3 | 0 | B |
| 1 | 4 | 4 | 0 | B |
| 0 | 9 | 0 | 0 | B |
| 0 | 8 | 1 | 0 | B |
| 0 | 7 | 2 | 0 | B |
| 0 | 6 | 3 | 0 | B |
| 0 | 5 | 4 | 0 | B |

| | | | | |
|---|---|---|---|---|
| 4 | 0 | 5 | 0 | C |
| 3 | 1 | 5 | 0 | C |
| 3 | 0 | 6 | 0 | C |
| 2 | 2 | 5 | 0 | C |
| 2 | 1 | 6 | 0 | C |
| 2 | 0 | 7 | 0 | C |
| 1 | 3 | 5 | 0 | C |
| 1 | 2 | 6 | 0 | C |
| 1 | 1 | 7 | 0 | C |
| 1 | 0 | 8 | 0 | C |
| 0 | 0 | 9 | 0 | C |

NOTE: A FINAL RATING OF "ND" FOR ANY OUTCOME WILL RESULT IN A GRADE OF "D" BEING AWARDED. WHERE THERE ARE MORE THAN 50% OF OUTCOMES WITH A FINAL RATING OF "ND" AN "E" GRADE IS AWARDED.