



2010 Lifestyle and Consumer Technology

Intermediate 2

Technological Project

Finalised Marking Instructions

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STEP 1 Total mark allocation – 14 marks**1 : 1 Identification of the key points with explanation**

The candidate should identify the ‘core’ key points – these are all the main key words of the Technological Project brief.

The number of ‘core’ key points which can be identified will depend on the wording of the Technological Project brief.

Candidates should number each key point identified.

Identify the key points – 2 marks

Candidates who record all the ‘core’ key points.	2 marks
Candidates who record ½ or more, but not all the ‘core’ key points.	1 mark
Candidates who record less than ½ the ‘core’ key points.	0 marks

Basic and accurate explanation of key points – 2 marks

Marks are determined by the number of key points which have a basic and accurate explanation.

If all key points have a basic and accurate explanation.	2 marks
If ½ or more but not all of the key points have a basic and accurate explanation.	1 mark
If less than ½ the key points have a basic and accurate explanation.	0 marks

Detailed and accurate explanation – 1 mark

Candidates who provide further accurate detail within the explanations will be awarded an additional mark. Extra detail means one additional point of explanation is provided for any one of the key points.

Brief 1

Develop a food or textile item to be sold in a Scottish gift shop.

Brief 2

Develop a food or textile item to encourage health in school.

Brief 1**Key points**

1. develop
2. (a) food (or) textile
3. item
4. (to be) sold
5. (in a) Scottish
6. gift shop

Brief 2**Key points**

1. develop
2. (a) food (or) textile
3. item
4. (to) encourage
5. health
6. (in) school

Example of basic accurate explanation of key points

Develop • create or devise ideas for a new product

Example of further accurate detail in explanation of key points

Develop • create or devise ideas for a new product
 • make a product which is original or different to what is available at present

Total – 5 marks

1 : 2 Draw up appropriate criteria for a specification

Allows for range of solutions

1 mark

Specification allows for a range of possible solutions which are relevant to the brief	1 mark
If a range of solutions is not possible	0 marks

Contains more detail than the brief

1 mark

Specification points must be derived from the brief. When drawing up the criteria for the specification candidates should not just rewrite the key points – greater explanation is required.

Where specification points do not consistently contain more detail than the brief, candidates will be awarded marks accordingly.

Be written in measurable terms

2 marks

Candidates must indicate how each specification point should be able to be measured by a valid method.

All specification points are measurable.	2 marks
½ or more, but not all specification points are measurable.	1 mark
Less than ½ the specification points are measurable.	0 marks

Note: Candidates are expected to produce a **minimum of four** specification points.

Total 4 marks

Brief 1 – Scottish gift shop		
Item must:		Measured by:
1	<ul style="list-style-type: none"> be edible/be a fabric item 	Interview with food/textile technologist Component checklist/recipe analysis
2	<ul style="list-style-type: none"> be suitable as a gift 	Questionnaire/interview retailer/tourist Interview with food/textile technologist/ retailer/tourist/appropriate teacher
3	<ul style="list-style-type: none"> contain components/ingredients sourced in Scotland/represent Scotland 	Interview with food/textile technologist/ retailer/appropriate teacher
4	<ul style="list-style-type: none"> be suitable for sale in a (Scottish) gift shop 	Questionnaire/interview to retailer/tourist Interview with food/textile technologist/retailer/ appropriate teacher/tourist
5	<ul style="list-style-type: none"> be different to other products/be original 	Survey of retail outlets/Scottish gift shops Literary/Internet search Interview with food/textile technologist/ appropriate teacher/tourist
6	<ul style="list-style-type: none"> be a single item/product 	Questionnaire/interview to retailer/tourist Interview with food/textile technologist/retailer/ appropriate teacher/tourist
7	<ul style="list-style-type: none"> be comparable in cost to other similar items 	Costing exercise & price check/comparison Interview with food/textile technologist/retailer/ tourists
8	<ul style="list-style-type: none"> be cost effective to produce/be good value for money 	Costing exercise & interview with food/textile technologist/retailer/tourists Costing exercise & interview/questionnaire target group/tourists
9	<ul style="list-style-type: none"> be within the budget of the target group/ tourists 	Costing exercise & questionnaire to target group/ tourists Costing exercise & interview with food/textile technologist/retailer/tourists
10	<ul style="list-style-type: none"> be of an acceptable/satisfactory standard for sale 	Interview with food/textile technologist/EHO/ TSO Sensory testing with food/textile technologist/ target group/tourists/retailer Quality checklist & interview with food/textile technologist/retailer
11	<ul style="list-style-type: none"> be aesthetically pleasing to target group/ tourists 	Questionnaire/survey to target group/potential tourists in Scotland Interview with food/textile technologist/ appropriate teacher Sensory testing with food/textile technologist/ appropriate teacher/tourists
12	<ul style="list-style-type: none"> take account of likes/dislikes of target group/tourists 	Questionnaire to target group/potential tourists in Scotland Interview with food/textile technologist/ appropriate teacher/retailer/target group/tourists Sensory testing with food/textile technologist/ potential tourists
13	<ul style="list-style-type: none"> take account of current trends/current dietary advice/fashion 	Interview with retailer/target group/food/textile technologist Questionnaire to target group/tourists

Brief 1 – Scottish gift shop		
Item must:		Measured by:
14	<ul style="list-style-type: none"> be suitable for the season/time of the year 	Interview with retailer/food/textile technologist/tourists Questionnaire to target group/tourists Literary/Internet search
15	<ul style="list-style-type: none"> be made using the facilities/resources/skills available in the food outlet 	Interview with food technologist/tourist Checklist of facilities/component checklist
16	<ul style="list-style-type: none"> be made using the facilities/resources available to the candidate 	Interview with food/textile technologist/tourist Checklist of facilities/component checklist
17	<ul style="list-style-type: none"> be within the capabilities of the candidate 	Trial of prototype Time plan/checklist Interview with food/textile technologist Skills analysis
18	<ul style="list-style-type: none"> be made in the time available to the candidate 	Timed trial of prototype & interview with food/textile technologist Interview with food/textile technologist
19	<ul style="list-style-type: none"> be prepared under hygienic/safe conditions/be safe to eat 	Interview with food/textile technologist Quality checklist & interview with food/textile technologist/EHO/retailer/chef
20	<ul style="list-style-type: none"> take account of allergies 	Interview with food/textile technologist/dietician/tourist
21	<ul style="list-style-type: none"> be easy to prepare/cook/reheat 	Interview with food technologist/retailer/chef Skills analysis & check with food technologist/restaurant manager/chef
22	<ul style="list-style-type: none"> be suitable to be made in advance 	Interview with food technologist/retailer/chef
23	<ul style="list-style-type: none"> have an appropriate shelf-life 	Interview with food technologist/retailer/chef/EHO
24	<ul style="list-style-type: none"> be suitable for mass production 	Interview with food/textile technologist/retailer/chef
25	<ul style="list-style-type: none"> be able to be laundered/easy to care for 	Interview with textile technologist/retailer User/wearer trial of prototype

Note:

- The candidate **must** specify the term ‘expert’ if used
- A food/textile technologist could include a person working in food/textile product development or a Home Economics teacher

- NB**
- Specification Points**
 - It must be checked that the specification points are different.
 - A candidate may use different wording to state the same point.
 - Measured by**
 - The candidate must specify the term ‘expert’ if used.
 - Method of measuring must be able to check/assess whether the specification point has been met.

Step 1.2

Brief 2 – Health in school		
Item must:		Measured by:
1	<ul style="list-style-type: none"> be edible/be a fabric item 	Interview with food/textile technologist Component checklist/recipe analysis
2	<ul style="list-style-type: none"> promote health 	Interview with food/textile technologist/ Health & Well Being (HWB) or sports co-ordinator/health professional
3	<ul style="list-style-type: none"> be suitable for a school 	Interview with food/textile technologist/ appropriate teacher/HWB or sports co-ordinator/ health professional/EHO/Trading Standards Officer
4	<ul style="list-style-type: none"> be nutritionally suitable for target group/ school pupils 	Nutritional analysis & check with food technologist/dietician/health professional Interview with food technologist/dietician/ health professional
5	<ul style="list-style-type: none"> be healthy/take account of current dietary targets/Hungry for Success/Schools (Health Promotion and Nutrition) Scotland Act 2007/Nutritional Requirements for Food & Drink in Schools (Scotland) 2008 	Interview with food technologist/dietician/health professional/HWB or sports co-ordinator/ appropriate teacher
6	<ul style="list-style-type: none"> be different to other products/be original 	Interview with food/textile technologist/ appropriate teacher/HWB or sports co-ordinator/ health professional Check against current products used for promotion
7	<ul style="list-style-type: none"> be a single item/product 	Questionnaire/interview to retailer/tourist Interview with food/textile technologist/retailer/ appropriate teacher
8	<ul style="list-style-type: none"> be within the budget of target group/ school pupils/staff/school 	Costing exercise & questionnaire to target group/ school pupils/staff Costing exercise & interview with food/textile technologist/school pupils
9	<ul style="list-style-type: none"> be cost effective to produce/good value for money 	Costing exercise & interview/questionnaire with food/textile technologist/school pupils/staff
10	<ul style="list-style-type: none"> be of an acceptable/satisfactory standard 	Interview with food/textile technologist/ appropriate teacher/EHO/Trading Standards Officer Sensory testing with target group/food/textile technologist/target group/retailer Quality checklist & interview with food/textile technologist/retailer
11	<ul style="list-style-type: none"> be aesthetically pleasing to target group/ school pupils/staff 	Questionnaire to target group Interview with food/textile technologist/ appropriate teacher Sensory testing with target group/food/textile technologist/appropriate teacher
12	<ul style="list-style-type: none"> take account of likes/dislikes of target group/school pupils/staff 	Questionnaire to target group Interview with food/textile technologist/HWB or sports co-ordinator/target group Sensory testing with target group

Brief 2 – Health in school		
Item must:		Measured by:
13	<ul style="list-style-type: none"> be suitable for target group 	Questionnaire/interview with target group Interview with food/textile technologist/HWB or sports co-ordinator
14	<ul style="list-style-type: none"> take account of current trends/fashion 	Interview/questionnaire to target group/food/textile technologist/HWB or sports co-ordinator
15	<ul style="list-style-type: none"> be suitable for the season/time of year 	Interview with retailer/food/textile technologist/tourist Questionnaire to target group Literary/Internet search
16	<ul style="list-style-type: none"> be made using the facilities/resources available to the candidate 	Interview with food/textile technologist Checklist of facilities/component checklist
17	<ul style="list-style-type: none"> be within the capabilities of the candidate 	Trial of prototype Time plan/checklist Interview with food/textile technologist Skills analysis
18	<ul style="list-style-type: none"> be made in the time available to the candidate 	Timed trial of prototype & interview food/textile technologist Interview with food/textile technologist
19	<ul style="list-style-type: none"> be prepared under hygienic conditions/safe conditions/safe to eat 	Interview with food/textile technologist/EHO Quality checklist & interview with food technologist/EHO
20	<ul style="list-style-type: none"> be easy to prepare/cook/reheat 	Interview with food/textile technologist Skills analysis & check with food/textile technologist/chef
21	<ul style="list-style-type: none"> be suitable to be made in advance 	Interview with food technologist/chef
22	<ul style="list-style-type: none"> have an appropriate shelf life 	Interview with food/textile technologist/EHO/retailer/chef
23	<ul style="list-style-type: none"> be suitable for mass production 	Interview with food/textile technologist/retailer/chef
24	<ul style="list-style-type: none"> be able to be laundered/be easy to care for 	Interview with textile technologist/retailer User/wearer trials of prototype
25	<ul style="list-style-type: none"> be appropriate size 	Interview with food technologist/canteen supervisor/dietician/H & W teacher/health professional

Note:

- The candidate **must** specify the term ‘expert’ if used
- A food/textile technologist could include a person working in food/textile product development or a Home Economics teacher

- NB**
- Specification Points**
 - It must be checked that the specification points are different.
 - A candidate may use different wording to state the same point.
 - Measured by**
 - The candidate must specify the term ‘expert’ if used.
 - Method of measuring must be able to check/assess whether the specification point has been met.

1 : 3 Devise an overall plan for investigations

List a range of relevant investigations – 2 marks

Candidates who provide a list of possible investigations which focus clearly on: <ul style="list-style-type: none">• the key points of the project brief• the specification points• and have a clear aim/purpose	2 marks
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Candidates who provide a list of investigations <ul style="list-style-type: none">• which do not focus clearly on the key points and the specification will be awarded	1 mark
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Obvious omissions from the list of investigations will result in marks not being awarded.

Identify techniques to be used – 2 marks

All techniques are correctly identified	2 marks
½ or more, but not all techniques are correctly identified	1 mark
Less than ½ of the techniques are correctly identified	0 marks

Techniques must be appropriate for the investigations and so allow the candidate the possibility of collecting relevant data/information.

Total – 4 marks

From the proposed list of investigations drawn up in 1 : 3 above, candidates should form a prioritised list of those investigations which they propose to undertake.

No marks are awarded at this stage but candidates are expected to focus on those investigations most relevant to the needs of the project brief. A number of investigations may be combined by using one technique. **No more than 3** depending on their nature, could be realistically carried out in the time available.

Candidates who intend to use a questionnaire as an investigation must issue 20 in order to gain valid results.

Candidates should complete this work on page 6 of the pro forma.

Step 1.3

Required Investigations:

1. Scottish
2. Gift Shop

Brief 1 – Scottish gift shop		
Investigation		Technique
1	<ul style="list-style-type: none"> Range of Scottish ingredients/components/textiles/icons 	Interview with food/textile technologist/chef/retailer in Scottish gift shop Literary/Internet search Survey of food/retail outlets
2	<ul style="list-style-type: none"> Potential gifts using Scottish ingredients/components/textiles 	Literary/Internet/recipe search Interview with food/textile technologist/chef/retailer in a Scottish gift shop/target group/potential tourists
3	<ul style="list-style-type: none"> Types of gift shops 	Interview with food/textile technologist/target group/tourist/retailer Literary/Internet search
4	<ul style="list-style-type: none"> Current range of potential food/textile gift items 	Survey of retail outlets Interview with food/textile technologist/retailers/target group/potential tourists Questionnaire to target group/tourists
5	<ul style="list-style-type: none"> Suitability for target group/tourists 	Interview with food/textile technologist/target group/potential tourists
6	<ul style="list-style-type: none"> Ideas for potential solutions 	Survey of gift shops Literary/Internet/recipe/pattern search Interview with food/textile technologist/retailer in a Scottish gift shop/target group/potential tourists Trial of prototype(s) Sensory testing with target group/potential tourists
7	<ul style="list-style-type: none"> Aesthetic appeal of potential solutions 	Sensory testing with children Interview with food/textile technologist/retailer in Scottish gift shop/target group/potential tourists
8	<ul style="list-style-type: none"> Likes/dislikes of target group/tourists 	Interview/questionnaire with target group/potential tourists
9	<ul style="list-style-type: none"> Current trends/fashion 	Interview/questionnaire with food/textile technologist/retailer in a Scottish gift shop Survey of retail outlets Literary/Internet search
10	<ul style="list-style-type: none"> Price range of similar food/textile products in a gift shop/on the market 	Interview with food/textile technologist/retailer/target group/retailer in a Scottish gift shop Survey of current product range
11	<ul style="list-style-type: none"> Cost of potential ingredients/solutions 	Costing exercise
12	<ul style="list-style-type: none"> Budget/amount prepared to pay by target group/tourists 	Interview/questionnaire with food/textile technologist/target group/potential tourists/retailer in Scottish gift shop/chef
13	<ul style="list-style-type: none"> Care requirements of materials/resources used 	Interview with food/textile technologist Trial of prototype
14	<ul style="list-style-type: none"> Safety in use 	Interview with food/textile technologist/EHO/Trading Standards Officer/retailer in Scottish gift shop/chef Literary/Internet search

Brief 1 – Scottish gift shop		
Investigation		Technique
15	<ul style="list-style-type: none"> Facilities/resources available to the candidate 	Interview with food/textile technologist Resource/equipment checklist
16	<ul style="list-style-type: none"> Skills necessary for manufacturing the potential solution by the candidate/manufacturer/retailer 	Interview with food/textile technologist/chef/retailer/manufacturer Skills audit & check with food/textile technologist/chef Recipe search/search of fabric construction books
17	<ul style="list-style-type: none"> Time available for manufacturing of the potential solution by the candidate 	Interview with food technologist/restaurant manager/chef Timed trial of prototype & check with food technologist/restaurant manager/chef
18	<ul style="list-style-type: none"> Hygiene/safety requirements for production 	Interview with food/textile technologist/EHO/restaurant manager/chef
19	<ul style="list-style-type: none"> Quality requirements of potential solutions 	Interview with food/textile technologist/restaurant or café manager/chef Manufacture of prototype(s) & trial Sensory testing/questionnaire/interview with food/textile technologist/target group/chef/retailer in a Scottish gift shop
20	<ul style="list-style-type: none"> Shelf life of potential solutions 	Interview with food technologist/retailer/chef/retailer in a Scottish gift shop
21	<ul style="list-style-type: none"> Appropriate portion/product size 	Interview with food technologist/dietician/restaurant customers/restaurant manager/chef/retailer/tourists Literary/Internet/recipe search
22	<ul style="list-style-type: none"> Suitability for mass production 	Interview with food/textile technologist/chef
23	<ul style="list-style-type: none"> Influencing factors on final product 	Interview with food/textile technologist/chef/retailer in a Scottish gift shop

Note:

- The candidate **must** specify the term ‘expert’ if used
- A food/textile technologist could include a person working in food/textile product development or a Home Economics teacher

Required Investigations:

1. Health
2. School

Brief 2 – Health in school		
Investigation		Technique
1	<ul style="list-style-type: none"> Current health issues in school 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Literary/Internet search Questionnaire to target group/school pupils
2	<ul style="list-style-type: none"> Types of health initiatives relevant to target group/school pupils 	Literary/Internet/recipe search Interview with food technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils
3	<ul style="list-style-type: none"> Current range of food/textile items promoting health/methods of promoting health messages 	Interview with food/textile technologist/target group/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils Literary/Internet search
4	<ul style="list-style-type: none"> Suitability for target group/school pupils 	Interview with food/textile technologist/target group/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils
5	<ul style="list-style-type: none"> Ideas for potential solutions/potential solutions on the market 	Survey of school dining facilities Literary/Internet/recipe search Interview with food/textile technologist/target group/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Trial of prototype Sensory testing with target group/school pupils
6	<ul style="list-style-type: none"> Aesthetic appeal of potential solutions 	Sensory testing with target group/school pupils Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils
7	<ul style="list-style-type: none"> Likes/dislikes of the target group/school pupils/staff 	Interview/questionnaire with children/parents/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils
8	<ul style="list-style-type: none"> Current issues/trends in health promotion 	Interview/questionnaire to target group/school pupils/parents/food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Survey of retail outlets Literary/Internet search
9	<ul style="list-style-type: none"> Current trends/fashion 	Interview/questionnaire to food/textile technologist/target group/school pupils Survey of retail outlets used by target group/school pupils Literary/Internet search
10	<ul style="list-style-type: none"> Price range of similar food/textile/health promotion items 	Interview with target group/school pupils/food technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Survey of current product range
11	<ul style="list-style-type: none"> Cost of potential ingredients/components/solutions 	Costing exercise

Brief 1 – Health in school		
Investigation		Technique
12	<ul style="list-style-type: none"> Budget of the target group/amount target group is prepared to pay 	Interview/questionnaire to target group/school pupils
13	<ul style="list-style-type: none"> Care requirements of materials/resources used 	Interview with food/textile technologist Trial of prototype(s)
14	<ul style="list-style-type: none"> Safety in use 	Interview with food/textile technologist/ EHO/Trading Standards Officer/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Literary/Internet search
15	<ul style="list-style-type: none"> Facilities/resources available to the candidate 	Interview with food/textile technologist/target group/ HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Resources/equipment checklist
16	<ul style="list-style-type: none"> Skills necessary for manufacturing of the potential solution by the candidate 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Skills audit & check with food/textile technologist/ restaurant manager/chef
17	<ul style="list-style-type: none"> Time available for manufacturing of the potential solution by the candidate 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Timed trial of prototype & check with food/textile technologist/HWB or sports co-ordinator/PE/PSD/ Guidance teacher in school
18	<ul style="list-style-type: none"> Hygiene/safety requirements for food/textile production 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school
19	<ul style="list-style-type: none"> Quality requirements of potential solutions 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school Manufacture prototype(s) & trial Sensory testing/questionnaire/interview with target group/school pupils/restaurant customers/restaurant manager/chef
20	<ul style="list-style-type: none"> Shelf life/durability of potential solutions 	Interview with food technologist/EHO/chef
21	<ul style="list-style-type: none"> Appropriate portion size 	Interview with food technologist/HWB or sports co-ordinator/target group/school pupils Literary/Internet/recipe search
22	<ul style="list-style-type: none"> Suitability for mass production 	Interview with food/textile technologist/chef/school canteen supervisor
23	<ul style="list-style-type: none"> Influencing factors on final product 	Interview with food/textile technologist/HWB or sports co-ordinator/PE/PSD/Guidance teacher in school/target group/school pupils

Note:

- The candidate **must** specify the term ‘expert’ if used.
- A food/textile technologist could include a person working in food/textile product development or a Home Economics teacher

STEP 2 Total mark allocation – 15 marks

2 : 1 Implement the overall plan for investigations – 12 marks

The mark allocation for this area will be awarded holistically and will be based on candidates' performance in a series of investigations.

Candidates will be assessed on the results and conclusions from each investigation – see the marking criteria breakdown listed below.

Teachers/lecturers must ensure candidates present the results and conclusions of each investigation on pages 7, 8 and 9 only

Candidates using computer software to produce results eg bar charts or graphs must ensure that these are presented only on the pages allocated for this work ie pages 7, 8 and 9.

Candidates who present the results and conclusions of each investigation on more than one A4 sheet of paper will be penalised.

Candidates' findings should

- be brief, concise and easy to interpret
- show a link to the aim and purpose of the investigation

Results must be derived from the investigations and be based on facts and evidence.
Conclusions must be based on **results obtained**.

Marking Criteria

- Holistic approach – marks must be briefly justified
- Results must be brief, concise and easy to interpret
- Results must show a link to the aim/purpose of the investigation
- Results must be derived from the investigations and based on facts and evidence
- Conclusions must be based on the results obtained.

For **each** of **three** investigations:

The candidate has done as they intended	1 mark
The investigation contains brief, concise and easy to interpret results	1 mark
Results are based on fact and relevant to brief	1 mark
Conclusion is based on results/shows progression	1 mark

Total – 12 Marks

2 : 2 Derive a solution from the investigations – 3 marks

Generate one solution – 2 marks

Candidates derive **one solution** which must be

• relevant to the needs of the project brief	1 mark
• based on the results and conclusions reached in the investigations	1 mark

Brief description of the solution – 1 mark

The solution should be described so it is able to be **visualised**.

Various methods may be used – written details, sketches, diagrams, labelled diagrams, storyboards – to ensure clarity.

Total – 3 marks

Brief 1: Scottish gift shop
Possible solutions

Any food or textile item suitable for sale in a Scottish gift shop

Brief 2: Health in school
Possible solutions

Any food or textile item to encourage health in school

STEP 3 Total mark allocation**16 marks****3 : 1 Manufacture the chosen solution**

Candidates must complete the plan **before** starting to manufacture the solution.

Candidates will be penalised if the plan is written **retrospectively**.

Identify and requisition resources**3 marks**

Candidates who identify and requisition all the main resources	3 marks
Candidates who requisition most of the main resources	2 marks
Candidates who only requisition some main resources	1 mark

Resources will depend on the chosen solution and may relate to textiles, equipment.

Identify and requisition equipment**3 marks**

Candidates who identify and requisition all the main equipment	3 marks
Candidates who identify and requisition most of the main equipment	2 marks
Candidates who identify and requisition some the main equipment	1 mark

Equipment will depend on the chosen solution and may relate to equipment used in food or fabric activities.

Draw up a sequence of work**3 marks**

Candidates should show logical thinking when drawing up the sequence of work to manufacture the solution, eg

- activities should be in the correct order to complete the solution
- longer activities started nearer the beginning of the sequence
- dovetailing of activities as appropriate.

Sequence of work is highly effective – all activities planned in correct order	3 marks
Sequence of work is effective – most activities planned in the correct order	2 marks
Sequence of work is satisfactory – some activities planned in the correct order, sufficient to allow the solution to be manufactured	1 mark

Deployment of time (time plan)**3 marks**

Candidates should make good use of time.

- Activities should be appropriately timed.
- Resources and equipment are used to make more effective use of time.

Highly effective time plan	3 marks
Effective time plan	2 marks
Satisfactory time plan	1 mark

Total – 12 marks

After completing the plan for manufacture, candidates should start to manufacture the solution.

Candidates should be encouraged to make notes on page 14 as they are carrying out the manufacturing process. Notes may be made on how manufacture is proceeding, any problems encountered and any changes/modifications made to the plan.

This work is not marked but may prove useful to candidates when completing Step 4 : 1 – Evaluation of the overall plan.

Photographic evidence

Photographic evidence of the candidates' work must be attached to the proforma. If this evidence is not attached, marking must stop, and a note of explanation added to the marking sheet. This project must then be marked for the attention of the PA.

Although no marks are awarded for this area, **evidence must be provided** of the candidates' solution.

When a centre has no photographic evidence attached, but has a note of explanation, continue marking the project but again refer this project to the PA.

Two photographs are required:

- one should provide evidence of the solution **during manufacture**.
- the other should provide evidence of the **completed** solution.

Although the quality of the photographs is not important, they **must** give an indication of the type of work being carried out and completed by the candidate.

3 : 2 Devise a test for the manufactured solution

Present one test with appropriate technique.

Candidates should present **one** appropriate test with **one** appropriate technique.

Candidates who do not identify an appropriate test cannot be awarded any marks.

Technique must be appropriate to the test, allowing candidates to collect relevant data/information.

Total – 1 mark

Briefs 1 & 2

Test	Technique
1. Examination by a specified expert eg food/textile technologist/health professional/retailer/tourist/pupil	Interview/questionnaire with specified expert Sensory evaluation with specified expert
2. Examination by target group	Interview/questionnaire Sensory evaluation Observational checklist Wearer/user trial by target group
3. Costing exercise	Costing exercise confirmed by interview with expert, eg food/textile technologist/appropriate teacher/retailer/health professional/pupil/tourist
4. Nutritional analysis	Literary/Internet/CD search & interview with food/textile technologist/dietician
5. Timed trial of product	Timed trial of product and interview with specified expert

When the candidate uses the term ‘expert’, it must be specified, eg a food technologist. This could be included in either the test or the technique.

3 : 3 Implement the test for the manufactured solution

<p>Brief, concise and easy to interpret results</p> <p>Results should be derived from the test and be based on facts and evidence.</p> <p>Test results should be presented in a format which is</p> <ul style="list-style-type: none">• brief• concise• easy to interpret.	<p>1 mark</p>
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<p>Factual and relevant results</p> <p>Results should be</p> <ul style="list-style-type: none">• derived from the investigation• based on facts and evidence.	<p>1 mark</p>
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<p>Brief conclusion based on results</p> <p>Candidates will be marked on their ability to draw meaningful and accurate conclusions from the results of the test.</p> <p>Conclusions must be</p> <ul style="list-style-type: none">• factually correct• based on the evidence provided by the results.	<p>1 mark</p>
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Candidates must not offer personal opinions.

Total – 3 marks

STEP 4 Total mark allocation – 6 marks

4 : 1 Evaluate the chosen solution

Evaluation against the specification points – 3 marks

Candidates must rewrite the specification points briefly in the appropriate column.

Candidates must evaluate the solution against **each** specification point. The results of the testing can be used here.

Candidates will be penalised for lack of accuracy and detail within the explanation.

Page 17 of the pro forma should be used for the evaluation against the specification.

• All specification points are evaluated	3 marks
• ½ or more, but not all specification points are evaluated	2 marks
• Less than ½ the specification points are evaluated	1 mark
• No evaluation is provided	0 marks

Evaluation of the overall plan – 3 marks

Candidate will evaluate the overall plan (Steps 1 – 3 of the Technological Project).

The following criteria should be used in the evaluation.

- time
- resources
- skills and abilities.

No marks will be awarded to candidates who do not use these criteria in their review.

The evaluation, which may include adaptations/modifications, **must be based on evidence** which can be found within the candidate's Technological Project pro forma.

Candidates should be encouraged to give reasons for any statements they make in the evaluation.

Candidates may find it helpful to use some of the headings for Steps 1 – 3 in the pro forma for the evaluation.

Page 18 of the pro forma should be used for the evaluation of the overall plan.

Total – 6 marks

Technological Project Intermediate 2 Summary Mark Allocation

Step	Mark Breakdown	Allocation
1 . 1	Identification of the key points with explanation Identify the key points Key points plus basic and accurate explanation Key points plus detailed and accurate explanation	2 marks 2 marks 1 mark Total mark allocation 5
1 . 2	Draw up appropriate criteria for a specification Allow for a range of solutions Contain more detail than the brief Be written in measurable terms	1 mark 1 mark 2 marks Total mark allocation 4
1 . 3	Devise an overall plan for investigations List a range of relevant investigations Identify techniques to be used	2 marks 2 marks Total mark allocation 4
Total mark allocation for Step 1 – 13 marks		
2 . 1	Implement the overall plan for investigations Holistic approach	Total mark allocation 12
2 . 2	Derive a solution From the investigation generate one solution Brief description of the solution	2 marks 1 mark Total mark allocation 3
Total mark allocation for Step 2 – 15 marks		

Step	Mark Breakdown	Allocation
3 . 1	Manufacture the chosen solution	
	Requisitions all main resources	3 marks
	Requisitions most main resources	2 marks
	Requisitions some main resources	1 mark
		Total mark allocation 3
	Requisitions all main equipment	3 marks
	Requisitions most main equipment	2 marks
	Requisitions some main equipment	1 mark
		Total mark allocation 3
	Highly effective sequence of work	3 marks
	Effective sequence of work	2 marks
	Satisfactory sequence of work	1 mark
		Total mark allocation 3
	Highly effective deployment of time (time plan)	3 marks
	Effective deployment of time (time plan)	2 marks
	Satisfactory deployment of time (time plan)	1 mark
		Total mark allocation 3
3 . 2	Devise a test for the manufactured solution	
	One test presented with appropriate technique identified	1 mark
		Total mark allocation 1
3 . 3	Implement the test for the manufactured solution	
	Brief, concise and easy to interpret results	1 mark
	Results based on fact and relevant	1 mark
	Brief conclusion based on results	1 mark
		Total mark allocation 3
Total mark allocation for Step 3 – 16 marks		
4 . 1	Evaluate the chosen solution	
	Evaluation of specification points	3 marks
		Total mark allocation 3
	Evaluation of overall plan against set criteria: time/resources/skills and abilities	3 marks
		Total mark allocation 3
Total mark allocation for Step 4 – 6 marks		

Total 50 marks available

Appendix 1

Intermediate 2 Technological Project

Guidance on carrying out Investigations/Tests

Three investigations and one test must be carried out.

The aim, which should be linked to the candidate' specification, should be rewritten or cut and pasted from page 8 of the pro forma onto the top of the investigation page.

Questionnaire

- Minimum of 20 respondents.
- Minimum 5/8 relevant/valid questions linked to aim/specification to allow relevant data to be collected.
- Questions and all possible answers must be displayed.
- All responses must be displayed including nil responses.
- Given constraints of space, it is not necessary to display results as pie charts/graphs.
- Table format for displaying results of questionnaires can be space saving.

Survey

- Must identify the source(s) of information.
- Source of information must be relevant to investigation.
- The following sources could be used including the Internet, literary, shop, restaurant/café as a source of information.
- The source of information should be identified.
- The place selected should be related to the quality and quantity of the data available rather than the number of sources however more than one source should be used.
- Information should be displayed using appropriate headings, sub-divisions etc.

Interviews

- Carefully consider the suitability of the person interviewed. Must clearly identify their position in establishment/job title.
- Minimum 5/8 relevant/valid questions linked to aim/specification to allow relevant data to be collected.
- Open-ended questions should be used to allow more data to be collected from the interviewee.
- Questions should be carefully formatted to extract useful facts and avoid one word responses such as Yes/No.
- All questions and responses must be displayed.

Internet/Literary Search

- All sources must be clearly identified.
- Should be related to the quality/quantity/relevance of the data available rather than the number of sources.
- Graphics may be included where relevant.
- Data collected should be organised using appropriate headings/sub-divisions etc.
- Information should not be lifted 'en bloc' from websites. It is appropriate to summarise key points which are relevant to the aim/specification.

Costing

- Breakdown cost of all ingredients/components must be included.
- Details of quantities and unit costs must be included.
- Sources should be included where appropriate.
- Comparative costing should measure 'like for like'

NB Costing only proves cost of items/components. On its own it does not provide low/high cost, value for money, acceptability or price to target group.

Nutritional Analysis

- Sources must be shown.
- All nutrients relevant to the aim should be shown.
- Nutritional analysis of all ingredients must be included. (A 'total' for a dish is not acceptable).
- Sufficient data must be accessed in order to draw relevant conclusions.
- When used as a test the suitability of the results should be assessed by a suitable expert eg community dietician, food technologist etc.

Fabric Analysis

- There is no need to repeat fabric tests where information is already easily available in textbooks/websites.
- Fabrics used for testing must be clearly identified ie construction/fibre composition.
- Only fabrics being considered for potential solution should be tested/sampled/investigated towards final solution.
- Details of method of testing must be given.

Sensory Testing

- All potential solutions must be clearly described.
- Breakdown of results must be shown. Summary of results is not acceptable.
- Key must be provided.
- It is appropriate to ask questions to elicit potential improvements/modifications.
- It is suggested for sensory testing that a minimum of five people are used to assess the products.

[END OF MARKING INSTRUCTIONS]