

2012 Lifestyle and Consumer Technology Intermediate 2 Technological Project Finalised Marking Instructions

© Scottish Qualifications Authority 2012

The information in this publication may be reproduced to support SQA qualifications only on a non-commercial basis. If it is to be used for any other purposes written permission must be obtained from SQA's NQ Delivery: Exam Operations.

Where the publication includes materials from sources other than SQA (secondary copyright), this material should only be reproduced for the purposes of examination or assessment. If it needs to be reproduced for any other purpose it is the centre's responsibility to obtain the necessary copyright clearance. SQA's NQ Delivery: Exam Operations may be able to direct you to the secondary sources.

These Marking Instructions have been prepared by Examination Teams for use by SQA Appointed Markers when marking External Course Assessments. This publication must not be reproduced for commercial or trade purposes.

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.						
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	Brief 2
---------	---------

Develop a food or textile item to support a local charity

Develop a food or textile item to be sold at a health event

Brief 1 Key points

- 1. Develop
- 2. (a) food (or) textile
- 3. item
- 4. (to) support
- 5. (a) local
- 6. charity

Brief 2 Key points

- 1. Develop
- 2. (a) food (or) textile
- 3. item
- 4. (to be) sold
- 5. (at a) health
- 6. event

Example of basic accurate explanation of key points

Develop • create or devise ideas for a new item

Example of further accurate detail in explanation of key points

Develop • create or devise ideas for a new item

• make an item which is original or different to what is available at present

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.						
½ or more, but not all specification points are measurable.						
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

Step 1.2 SPECIFICATION

Brief 1 – Local charity								
	Specification point	Measured by:	Identified expert					

Brief specific

1	•	be different to other products already available/be original	•	Interview Survey of retail outlets/ Internet search	•	Food/textile technologist/ appropriate teacher/retailer/ charity staff
2	•	be edible/a fabric item	•	Interview Component checklist/recipe analysis	•	Food/textile technologist
3	•	be a single item	•	Interview Component checklist/recipe analysis	•	Food/textile technologist/ retailer/charity staff
4	•	be suitable to be sold locally	•	Interview/questionnaire	•	Food/textile technologist/ appropriate teacher/retailer/ charity staff
5	•	be suitable for the charity/aid organisation	•	Interview/questionnaire	•	Food/textile technologist/ appropriate teacher/retailer/ charity staff
6	•	be suitable for the target group	•	Interview	•	Food/textile technologist/ appropriate teacher/retailer/ charity staff
7	•	take account of current trends/be fashionable	•	Interview	•	Food/textile technologist/ retailer/target group/charity staff

Target group

8	•	take account of the likes/dislikes of target group	•	Interview/questionnaire/survey/ sensory evaluation	•	Food/textile technologist/ retailer/target group/charity staff
9	•	be aesthetically pleasing to target group	•	Interview/questionnaire/survey/ sensory evaluation	•	Food/textile technologist/ retailer/target group/charity staff
10	•	take account of allergies	•	Interview	•	Food/textile technologist/ retailer/health professional
11	•	be healthy/take account of current dietary targets	•	Interview	•	Food technologist/dietician/ health professional
12	•	take account of nutritional needs of target group	•	Interview Nutritional analysis & interview	•	Food technologist/dietician/ health professional
13	•	take account of religious/moral/ cultural beliefs of the target group	•	Interview	•	Food/textile technologist/ appropriate teacher/retailer/ target group

Cost/quality

14	•	be comparable in cost to other products in the range	•	Costing exercise & price check/comparison Costing exercise & interview	•	Food/textile technologist/ retailer/target group/charity staff
15	•	be cost effective/ good value for money	•	Costing exercise & interview/ survey	•	Food/textile technologist/ retailer/target group/charity staff
16	•	be within the budget of the target group/ charity	•	Costing exercise & interview/ survey	•	Food/textile technologist/ retailer/target group/charity staff
17	•	be of an acceptable/ satisfactory standard for sale/be safe	•	Interview/sensory testing Quality checklist & interview	•	Food/textile technologist/ retailer/target group/charity staff/Trading Standards Officer/ Environmental Health Officer

Manufacture

18	•	be made using the facilities/resources available to the candidate	•	Interview	•	Food/textile technologist
19	•	be made in the time available to the candidate	•	Timed trial of prototype & interview	•	Food/textile technologist
20	•	be within the capabilities of the candidate	•	Trial of prototype & interview Skills analysis & interview Interview	•	Food/textile technologist
21	•	be made using the facilities/resources available to the charity	•	Interview	•	Food/textile technologist/ retailer/charity staff
22	•	be made in the time available to the charity	•	Timed trial of prototype & interview	•	Food/textile technologist/ retailer/charity staff
23	•	be within the capabilities of the charity	•	Trial of prototype & interview Skills analysis & interview Interview	•	Food/textile technologist/ retailer/charity staff
24	•	be prepared under safe/hygienic conditions/safe to eat	•	Interview Quality checklist & interview	•	Food/textile technologist/ retailer/Environmental Health Officer

Production

25	•	be easy to prepare/cook/ reheat/transport	•	Interview Skills analysis & check	•	Food/textile technologist/ retailer/charity staff
26	•	be easy to launder/ care for	•	Interview Skills analysis & check	•	Food/textile technologist/ retailer/charity staff
27	•	be suitable to be made in advance	•	Interview	•	Food/textile technologist/ retailer/charity staff
28	•	have an appropriate shelf life	•	Interview	•	Food/textile technologist/ retailer/charity staff/ Environmental Health Officer
29	•	be suitable for mass production	•	Interview	•	Food/textile technologist/ charity staff
30	•	be suitable for the season of the year	•	Interview Literary/Internet search	•	Food/textile technologist/ retailer/charity staff

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 SPECIFICATION

Brie	f 2 – Health event		
	Specification point	Measured by:	Identified expert

Brief specific

1	be different to other products already available/be original	InterviewSurvey of retail outlets/ Internet search	Food/textile technologist/event organiser/retailer/target group
2	be edible/a fabric item	InterviewComponent checklist/recipe analysis	Food/textile technologist/ retailer
3	be a single item	InterviewComponent checklist/recipe analysis	Food/textile technologist/ retailer
4	 promote health/be healthy/take account of current dietary targets 	Interview	Food/textile technologist/ dietician/retailer/health professional
5	be suitable for target group	 Interview/questionnaire/ survey Ingredients/nutritional analysis & check 	 Food/textile technologist/ retailer/health professional Food/textile technologist/ dietician/retailer/health professional
6	be suitable for a health event	Interview	Food/textile technologist/event organiser/retailer
7	be compatible/fit into the current range	Interview	Food/textile technologist/ event organiser/retailer
8	take account of current trends/be fashionable	Interview	Food/textile technologist/ event organiser/retailer/target group

Target Group

9	•	take account of the likes/dislikes of target group	•	Interview/questionnaire/survey/ sensory evaluation	•	Food/textile technologist/ event organiser/retailer/target group
10	•	be aesthetically pleasing to target group	•	Interview/questionnaire/survey/ sensory evaluation	•	Food/textile technologist/ retailer/event organiser/ retailer/target group
11	•	take account of allergies	•	Interview	•	Food/textile technologist/ retailer/health professional
12	•	take account of current dietary targets/nutritional needs of target group	•	Interview	•	Food/textile technologist/ dietician/health professional/ retailer
13	•	take account of religious/moral/ cultural beliefs of the target group	•	Interview	•	Food/textile technologist/ event organiser/retailer/target group

Cost/quality

14	•	be comparable in cost to other products at the event	•	Costing exercise & price check/ comparison Costing exercise & interview	•	Food/textile technologist/ event organiser/retailer/target group
15	•	be cost effective/ good value for money	•	Costing exercise & interview/ survey	•	Food/textile technologist/ event organiser/retailer/target group
16	•	be within the budget of the target group	•	Costing exercise & interview/ survey	•	Food/textile technologist/ event organiser/retailer/target group
17	•	be of an acceptable/ satisfactory Standard for sale/be safe	•	Interview/sensory testing Quality checklist & interview	•	Food/textile technologist/ event organiser/retailer/target group/Trading Standards Officer/Environmental Health Officer

Manufacture

18	be made using the facilities/resources available to the candidate	Interview	Food/textile technologist
19	be made in the time available to the candidate	Timed trial of prototype & interview	Food/textile technologist
20	be within the capabilities of the candidate	Trial of prototype & interviewSkills analysis & interviewInterview	Food/textile technologist
21	be made using the facilities/resources available to the retailer	Interview	Food/textile technologist/ retailer
22	 be made in the time available to the retailer 	Timed trial of prototype & interview	Food/textile technologist/ retailer
23	be within the capabilities of the retail staff	Trial of prototype & interviewSkills analysis & interviewInterview	Food/textile technologist/ retailer
24	be prepared under safe/hygienic conditions/safe to ea	Interview Quality checklist & interview	Food/textile technologist/ retailer/Environmental Health Officer

Production

25	•	be easy to prepare/	•	Interview	•	Food/textile technologist/
		cook/reheat/transport	•	Skills analysis & check		event organiser/retailer
26	•	be easy to launder/	•	Interview	•	Food/textile technologist/
		care for	•	Skills analysis & check		retailer
27	•	be suitable to be	•	Interview	•	Food/textile technologist/
		made in advance				event organiser/retailer
28	•	have an appropriate	•	Interview	•	Food/textile technologist/
		shelf life				retailer/Environmental Health
						Officer
29	•	be suitable for mass	•	Interview	•	Food/textile technologist/
		production				retailer
30	•	be suitable for the	•	Interview	•	Food/textile technologist/
		season of the year	•	Literary/Internet search		event organiser/retailer

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:				
 the key points of the project brief the specification points 				
and have a clear aim/purpose	2 marks			

Candidates who provide a list of investigations	
which do not focus clearly on the key points and the specification will	
be awarded	1 mark

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 INVESTIGATIONS

Required investigations

local charity

Br	Brief 1 – Local charity						
	Investigation	Technique	Identified expert				
Brie	Brief specific						
1	Range of potential ingredients/textiles/ components	InterviewLiterary/Internet searchSurvey of retail outlets	Food/textile technologist/ retailer				
2	Potential (local) charities	Interview/survey/questionnaireLiterary/Internet searchSurvey of retail/charity outlets	Food/textile technologist/ appropriate teacher/ retailer/ charity staff				
3	Potential methods of support of (local) charity	Interview/survey/questionnaireLiterary/Internet search	Food/textile technologist/ appropriate teacher/retailer/ target group/charity staff				
4	Types of items to support the charity	InterviewLiterary/Internet search	Food/textile technologist/ appropriate teacher/retailer/ target group/charity staff				
5	Current range of charity support items	InterviewSurvey of retail outlets/ charitiesLiterary/Internet search	Food/textile technologist/ retailer/target group				
6	Current trends/fashion	 Interview/survey/questionnaire Survey of retail outlets/ charities Literary/Internet search 	Food/textile technologist/ retailer/target group/charity staff				
7	Suitability for target group	Interview	Food/textile technologist/ retailer/target group/charity staff				
8	Ideas for potential solutions	 Survey of retail outlets Literary/Internet/recipe/pattern search Trial of prototype(s) Interview/survey/questionnaire/sensory testing 	Food/textile technologist/ retailer/target group/charity staff				

Target Group

9	Likes/dislikes of target	Interview/questionnaire/	Food/textile technologist/
	group	survey/sensory evaluation	retailer/target group/charity staff
10	Aesthetic appeal to target group	Interview/questionnaire/ survey/sensory evaluation	 Food/textile technologist/ retailer/target group/charity staff
11	Potential allergens	Interview	Food/textile technologist/ retailer/health professional/ charity staff
12	Religious/cultural beliefs of target group	Interview Literary/Internet search	Food/textile technologist/ appropriate teacher/retailer/ target group/charity staff
13	Appropriate portion size/product size	Interview/questionnaire/ survey/sensory evaluation	 Food/textile technologist/ retailer/target group/charity staff

Cost/quality

14	Cost of potential ingredients/components/ solutions	Costing exercise	
15	Price range of similar dishes/items	InterviewSurvey of current product range/Internet search	Food/textile technologist/ retailer/target group/charity staff
16	Budget of the target group/amount target group is prepared to pay	Interview/questionnaireCosting exercise & interview/ survey/questionnaire	Food/textile technologist/ retailer/target group/charity staff
17	Quality requirements of potential solutions	Interview/survey/sensory testing/questionnaire	Food/textile technologist/ retailer/target group/charity staff

Manufacture

18	Facilities/resources available to the candidate	Interview	Food/textile technologist
19	Time available to the candidate	Timed trial of prototype & interview	Food/textile technologist
20	Capabilities of the candidate	Trial of prototypeTime plan/checklistSkills analysisInterview	Food/textile technologist
21	Facilities/resources available to the charity	Interview	Food/textile technologist/ retailer/charity staff
22	Time available to the retailer/charity	Timed trial of prototype & interview	Food/textile technologist/ retailer/charity staff
23	Capabilities of the charity	Trial of prototypeSkills analysisInterview	Food/textile technologist/ retailer/charity staff
24	Hygiene/safety requirements for food production	Interview	Food/textile technologist/ retailer/Environmental Health Officer

Production

25	Preparation/cooking/ reheating/transport requirements	Interview Skills analysis & check	Food/textile technologist/ retailer/chef/charity staff
26	Safety in use/safe to eat	Interview	Food/textile technologist/ chef/Environmental Health Officer/Trading Standards Officer/charity staff
27	Care requirements of materials/resources used	Interview Literary/Internet search	 Food/textile technologist/ retailer/charity staff Trial of prototype
28	Suitability for making in advance	Interview	Food/textile technologist/ retailer/charity staff
29	Appropriate shelf life	InterviewLiterary/Internet search	Food/textile technologist/ retailer/charity staff/ Environmental Health Officer
30	Suitability for mass production	Interview	Food/textile technologist/ retailer/charity staff
31	Implications of seasonality	Literary/Internet searchInterview	Food/textile technologist/ retailer/charity staff
32	Influencing factors on final product	Interview	Food/textile technologist/ retailer/charity staff

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 1.3 INVESTIGATIONS

Required investigations

- health
- event

Brief 2 – Health event			
	Investigation	Technique	Identified expert

Brief specific

_	T =	T		
1a	Current health advice	Interview	•	Food/textile technologist/
		Literary/Internet search		dietician/appropriate teacher
1b	Range of potential	Interview	•	Food/textile technologist/
	ingredients/textiles/	 Literary/Internet search 		retailer
	components	 Survey of retail outlets 		
2	Potential range of	Interview/survey/	•	Food/textile technologist/
	food/textile items (to	questionnaire		dietician/event organiser/
	promote health)	Literary/Internet search		retailer/target group
	,	Survey of retail outlets		3 3 1
3	Types of health events	Interview	•	Food/textile technologist/
		 Survey of retail outlets/ 		retailer/event organiser
		Internet search		3
4	Current range of food/	Interview	•	Food/textile technologist/
	textile items to promote	Survey of retail outlets/		retailer/event organiser/target
	health	Internet search		group
5	Current range of	Interview	•	Food/textile technologist/
	food/textile items for sale	 Survey of retail outlets/ 		retailer/event organiser
	at health events	Internet search		9
6	Current trends	Interview/survey/	•	Food/textile technologist/event
		questionnaire		organiser/retailer/target group
		Survey of retail outlets		
		Literary/Internet search		
7	Suitability for sale at a	Interview	•	Food/textile technologist/
	health event			retailer/event organiser
8	Ideas for potential	Survey of retail outlets	•	Food/textile technologist/
	solutions	Literary/Internet/recipe/		retailer/event organiser/target
		pattern search		group
		Trial of prototype(s)		-
		Interview/survey/		
		questionnaire/sensory		
		testing		
	L.			

Target group

9	Likes/dislikes of target group	•	Interview/questionnaire/ survey/sensory evaluation	•	Food/textile technologist/event organiser/retailer/target group
10	Aesthetic appeal to target group	•	Interview/questionnaire/ survey/sensory evaluation	•	Food/textile technologist/event organiser/retailer/target group
11	Potential allergens	•	Interview	•	Food/textile technologist/ retailer/health professional
12	Religious/cultural beliefs of target group	•	Interview Literary/Internet search	•	Food/textile technologist/event organiser/retailer/ target group
13	Appropriate portion size/product size	•	Interview/questionnaire/ survey/sensory evaluation	•	Food/textile technologist/event organiser retailer/target group

Cost/quality

14	Cost of potential ingredients/components/ solutions	•	Costing exercise		
15	Price range of similar dishes/items	•	Interview Survey of current product range/Internet search	•	Food/textile technologist/event organiser/retailer/target group
16	Budget of the target group/amount target group is prepared to pay	•	Interview/questionnaire Costing exercise & interview/survey/ questionnaire	•	Food/textile technologist/event organiser/retailer/target group
17	Quality requirements of potential solutions	•	Interview/survey/sensory testing/questionnaire	•	Food/textile technologist/event organiser/retailer/target group

Manufacture

18	Facilities/resources available to the candidate	Interview	•	Food/textile technologist
19	Time available to the candidate	Timed trial of prototype & interview	•	Food/textile technologist
20	Capabilities of the candidate	Trial of prototypeSkills analysisInterview	•	Food/textile technologist
21	Facilities/resources available to the retailer	Interview	•	Food/textile technologist/event organiser/retailer
22	Time available to the retailer	Timed trial of prototype & interview	•	Food/textile technologist/event organiser/retailer
23	Capabilities of the retail staff	Trial Of prototypeSkills analysisInterview	•	Food/textile technologist/event organiser/retailer
24	Hygiene/safety requirements for food production	Interview	•	Food/textile technologist/event organiser/retailer/ Environmental Health Officer

Production

25	Preparation/cooking/ reheating/transport requirements	InterviewSkills analys	sis & check	Food/textile technologist/event organiser/retailer/target group
26	Safety in use/safe to eat	Interview	•	Food/textile technologist/ Environmental Health Officer/Trading Standards Officer
27	Care requirements of materials/resources used	InterviewLiterary/Interview	rnet search	retailer
28	Suitability for making in advance	Interview	•	Food/textile technologist/event organiser/retailer
29	Appropriate shelf life	InterviewLiterary/Interview	rnet search	Food/textile technologist/ retailer/Environmental Health Officer
30	Suitability for mass production	 Interview 	•	Food/textile technologist/ retailer
31	Implications of seasonality	Literary/InteInterview	rnet search •	Food/textile technologist/event organiser/retailer
32	Influencing factors on final product	Interview	•	Food/textile technologist/event organiser/ retailer

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' 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: Local charity **Possible solutions**

Any food or textile item suitable to support a local charity

Brief 2: Health event **Possible solutions**

Any food or textile item suitable to be sold at a health event

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			
Candidates who requisition most of the main resources	2 marks		
Candidates who only requisition some of the 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			
Candidates who identify and requisition most of the main equipment	2 marks		
Candidates who identify and requisition some of 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

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

Tes	st	Technique	
1.	Examination by a specified expert eg food/textile technologist/retailer/target group	 Interview/questionnaire with specified expert Sensory testing 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 specified expert, eg food/textile technologist/retailer	
4.	Nutritional analysis	Literary/Internet/CD search & interview with food/textile technologist/dietician	

When the candidate uses the term 'expert', it must be qualified eg a food/textile technologist.

This could be included in either the test or the technique.

3:3 Implement the test for the manufactured solution

Brief, concise and easy to interpret results

Results should be derived from the test and be based on facts and evidence.

Test results should be presented in a format which is

- brief
- concise

1 mark

easy to interpret.

Factual and relevant results

Results should be

derived from the investigation

1 mark

based on facts and evidence.

Brief conclusion based on results

Candidates will be marked on their ability to draw meaningful and accurate conclusions from the results of the test.

Conclusions must be

factually correct

1 mark

based on the evidence provided by the results.

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	2 marks
	Key points plus basic and accurate explanation	2 marks
	Key points plus detailed and accurate explanation	1 mark
		Total mark allocation 5
1.2	Draw up appropriate criteria for a specification	
	Allow for a range of solutions	1 mark
	Contain more detail than the brief	1 mark
	Be written in measurable terms	2 marks
		Total mark allocation 4
1.3	Devise an overall plan for investigations	
	List a range of relevant investigations	2 marks
	Identify techniques to be used	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	2 marks
	Brief description of the solution	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
	Canada a construction and a construction of the construction of th	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
1	Results based on fact and relevant	1 mark
	Brief conclusions 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
	skills and abilities	3 marks Total mark allocation 3

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 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.

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]