



2014 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 at a craft fair

Brief 1

Key points

1. Develop
2. (a) food (or) textile
3. item
4. (to be) sold
5. (at a) craft
6. fair

Brief 2

Develop a food or textile item to encourage health in teenagers

Brief 2

Key points

1. Develop
2. (a) food (or) textile
3. item
4. (which) encourages
5. health
6. (in) teenagers

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.	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

Step 1.2 SPECIFICATION

Brief 2 – Craft fair			
	Specification point	Measured by:	Identified expert

Brief specific

1	<ul style="list-style-type: none"> be different to other products already available/be original 	<ul style="list-style-type: none"> Interview Survey of retail outlets/ Internet search 	<ul style="list-style-type: none"> Food/textile technologist /retailer/ craft fair organiser/target group
2	<ul style="list-style-type: none"> be edible/a fabric item 	<ul style="list-style-type: none"> Interview Component checklist/recipe analysis 	<ul style="list-style-type: none"> Food/textile technologist/retailer /craft fair organiser
3	<ul style="list-style-type: none"> be a single item 	<ul style="list-style-type: none"> Interview Component checklist/recipe analysis 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/ target group/craft fair organiser
4	<ul style="list-style-type: none"> be suitable for a craft fair 	<ul style="list-style-type: none"> Interview/questionnaire 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/ target group/craft fair organiser
6	<ul style="list-style-type: none"> be suitable for the target group 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/ target group/craft fair organiser
7	<ul style="list-style-type: none"> take account of current trends/be fashionable 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group/craft fair organiser
8	<ul style="list-style-type: none"> be suitable for sale 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/craft fair organiser

Target group

9	<ul style="list-style-type: none"> take account of the likes/dislikes of target group 	<ul style="list-style-type: none"> Interview/questionnaire/survey/ sensory evaluation 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group/craft fair organiser
10	<ul style="list-style-type: none"> be aesthetically pleasing to target group 	<ul style="list-style-type: none"> Interview/questionnaire/survey/ sensory evaluation 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group/craft fair organiser
11	<ul style="list-style-type: none"> take account of allergies 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group/craft fair organiser
12	<ul style="list-style-type: none"> be healthy/take account of current dietary advice 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food technologist/dietician/ health professional
13	<ul style="list-style-type: none"> take account of nutritional needs of target group 	<ul style="list-style-type: none"> Interview Nutritional analysis & interview 	<ul style="list-style-type: none"> Food technologist/dietician/ health professional
14	<ul style="list-style-type: none"> take account of religious/moral/ cultural beliefs of the target group 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/ target group/craft fair organiser

Cost/quality

15	<ul style="list-style-type: none"> be comparable in cost to other products in the range 	<ul style="list-style-type: none"> Costing exercise & price check/comparison Costing exercise & interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
16	<ul style="list-style-type: none"> be cost effective/good value for money 	<ul style="list-style-type: none"> Costing exercise & interview/survey 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
17	<ul style="list-style-type: none"> be within the budget of the target group/retailer 	<ul style="list-style-type: none"> Costing exercise & interview/survey 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
18	<ul style="list-style-type: none"> be of an acceptable/satisfactory standard for sale/be safe 	<ul style="list-style-type: none"> Interview/sensory testing Quality checklist & interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser/Trading Standards Officer/Environmental Health Officer

Manufacture

19	<ul style="list-style-type: none"> be made using the facilities/resources available to the candidate 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist
20	<ul style="list-style-type: none"> be made in the time available to the candidate 	<ul style="list-style-type: none"> Timed trial of prototype & interview 	<ul style="list-style-type: none"> Food/textile technologist
21	<ul style="list-style-type: none"> be within the capabilities of the candidate 	<ul style="list-style-type: none"> Trial of prototype & interview Skills analysis & interview Interview 	<ul style="list-style-type: none"> Food/textile technologist
22	<ul style="list-style-type: none"> be made using the facilities/resources available to the retailer/craft fair organiser 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/craft fair organiser
23	<ul style="list-style-type: none"> be made in the time available to the retailer/craft fair organiser 	<ul style="list-style-type: none"> Timed trial of prototype & interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/craft fair organiser
24	<ul style="list-style-type: none"> be within the capabilities of the retailer/craft fair organiser 	<ul style="list-style-type: none"> Trial of prototype & interview Skills analysis & interview Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/craft fair organiser
25	<ul style="list-style-type: none"> be prepared under safe/hygienic conditions/safe to eat 	<ul style="list-style-type: none"> Interview Quality checklist & interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/craft fair organiser/Environmental Health Officer

Production

26	<ul style="list-style-type: none"> be easy to prepare/cook/reheat/transport 	<ul style="list-style-type: none"> Interview Skills analysis & check 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
27	<ul style="list-style-type: none"> be easy to launder/care for 	<ul style="list-style-type: none"> Interview Skills analysis & check 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
28	<ul style="list-style-type: none"> be suitable to be made in advance 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser
29	<ul style="list-style-type: none"> have an appropriate shelf life 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser/Environmental Health Officer
30	<ul style="list-style-type: none"> be suitable for mass production 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/craft fair organiser
31	<ul style="list-style-type: none"> be suitable for the season of the year 	<ul style="list-style-type: none"> Interview Literary/Internet search 	<ul style="list-style-type: none"> Food/textile technologist/retailer/target group/craft fair organiser

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

Brief 2 – Health in teenagers			
	Specification point	Measured by:	Identified expert

Brief specific

1	<ul style="list-style-type: none"> be different to other products already available/be original 	<ul style="list-style-type: none"> Interview Survey of retail outlets/ Internet search 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group
2	<ul style="list-style-type: none"> be edible/a fabric item 	<ul style="list-style-type: none"> Interview Component checklist/recipe analysis 	<ul style="list-style-type: none"> Food/textile technologist/ retailer
3	<ul style="list-style-type: none"> be a single item 	<ul style="list-style-type: none"> Interview Component checklist/recipe analysis 	<ul style="list-style-type: none"> Food/textile technologist/ retailer
4	<ul style="list-style-type: none"> encourage health 	<ul style="list-style-type: none"> Interview Survey of retail outlets/ literary/internet research 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/target group
5	<ul style="list-style-type: none"> be healthy/take account of current dietary advice 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ dietician/retailer/health professional
6	<ul style="list-style-type: none"> be suitable for target group 	<ul style="list-style-type: none"> Interview/questionnaire/ survey Ingredients/nutritional analysis & check 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group/health professional Food/textile technologist/ dietician/retailer/health professional
7	<ul style="list-style-type: none"> be compatible/fit into the current range 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist / retailer/health professional
8	<ul style="list-style-type: none"> take account of current trends/be fashionable 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group

Target Group

9	<ul style="list-style-type: none"> take account of the likes/dislikes of target group 	<ul style="list-style-type: none"> Interview/questionnaire/survey/ sensory evaluation 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group
10	<ul style="list-style-type: none"> be aesthetically pleasing to target group 	<ul style="list-style-type: none"> Interview/questionnaire/survey/ sensory evaluation 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group
11	<ul style="list-style-type: none"> take account of allergies 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional
12	<ul style="list-style-type: none"> take account of current dietary advice/ nutritional needs of target group 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ dietician/health professional/ retailer
13	<ul style="list-style-type: none"> take account of religious/moral/ cultural beliefs of the target group 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group/appropriate teacher

Cost/quality

14	<ul style="list-style-type: none"> be comparable in cost to other products 	<ul style="list-style-type: none"> Costing exercise & price check/ comparison Costing exercise & interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group
15	<ul style="list-style-type: none"> be cost effective/ good value for money 	<ul style="list-style-type: none"> Costing exercise & interview/ survey 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group
16	<ul style="list-style-type: none"> be within the budget of the target group 	<ul style="list-style-type: none"> Costing exercise & interview/ survey 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/target group
17	<ul style="list-style-type: none"> be of an acceptable/ satisfactory standard for sale/be safe 	<ul style="list-style-type: none"> Interview/sensory testing Quality checklist & interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/health professional/ target group/ Trading Standards Officer/ Environmental Health Officer

Manufacture

18	<ul style="list-style-type: none"> be made using the facilities/resources available to the candidate 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist
19	<ul style="list-style-type: none"> be made in the time available to the candidate 	<ul style="list-style-type: none"> Timed trial of prototype & interview 	<ul style="list-style-type: none"> Food/textile technologist
20	<ul style="list-style-type: none"> be within the capabilities of the candidate 	<ul style="list-style-type: none"> Trial of prototype & interview Skills analysis & interview Interview 	<ul style="list-style-type: none"> Food/textile technologist
21	<ul style="list-style-type: none"> be made using the facilities/resources available to the retailer 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer
22	<ul style="list-style-type: none"> be made in the time available to the retailer 	<ul style="list-style-type: none"> Timed trial of prototype & interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer
23	<ul style="list-style-type: none"> be within the capabilities of the retail staff 	<ul style="list-style-type: none"> Trial of prototype & interview Skills analysis & interview Interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer
24	<ul style="list-style-type: none"> be prepared under safe/hygienic conditions/safe to eat 	<ul style="list-style-type: none"> Interview Quality checklist & interview 	<ul style="list-style-type: none"> Food/textile technologist/ retailer/Environmental Health Officer

Production

25	<ul style="list-style-type: none"> be easy to prepare/cook/reheat/transport 	<ul style="list-style-type: none"> Interview Skills analysis & check 	<ul style="list-style-type: none"> Food/textile technologist/retailer
26	<ul style="list-style-type: none"> be easy to launder/care for 	<ul style="list-style-type: none"> Interview Skills analysis & check 	<ul style="list-style-type: none"> Food/textile technologist/retailer
27	<ul style="list-style-type: none"> be suitable to be made in advance 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer
28	<ul style="list-style-type: none"> have an appropriate shelf life 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer/Environmental Health Officer
29	<ul style="list-style-type: none"> be suitable for mass production 	<ul style="list-style-type: none"> Interview 	<ul style="list-style-type: none"> Food/textile technologist/retailer
30	<ul style="list-style-type: none"> be suitable for the season of the year 	<ul style="list-style-type: none"> Interview Literary/Internet search 	<ul style="list-style-type: none"> Food/textile technologist/target group/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: <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 INVESTIGATIONS

Required investigations

- craft fair

Brief 1 – Craft fair		
Investigation	Technique	Identified expert

Brief specific

1	Range of potential ingredients/textiles/components	<ul style="list-style-type: none"> • Interview • Literary/Internet search • Survey of retail outlets 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser
2	Types of craft fair	<ul style="list-style-type: none"> • Interview/survey/questionnaire • Literary/Internet search • Survey of craft fairs 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
3	Types of items suitable for a craft fair	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/ target group/craft fair organiser
4	Current range of craft fair items	<ul style="list-style-type: none"> • Interview • Survey of craft fairs/ literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
5	Current trends/fashion	<ul style="list-style-type: none"> • Interview/survey/questionnaire • Survey of retail outlets/craft fairs/ literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
6	Suitability for target group	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
7	Ideas for potential solutions	<ul style="list-style-type: none"> • Survey of retail outlets/craft fairs • Literary/Internet/recipe/pattern search • Trial of prototype(s) • Interview/survey/questionnaire/ sensory testing 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser

Target Group

8	Likes/dislikes of target group	<ul style="list-style-type: none"> • Interview/questionnaire/ survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
9	Aesthetic appeal to target group	<ul style="list-style-type: none"> • Interview/questionnaire/ survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
10	Potential allergens	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional
11	Religious/cultural beliefs of target group	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/ appropriate teacher/retailer/ target group/craft fair organiser
12	Appropriate portion size/product size	<ul style="list-style-type: none"> • Interview/questionnaire/ survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser

Cost/quality

13	Cost of potential ingredients/components/solutions	<ul style="list-style-type: none"> • Costing exercise 	
14	Price range of similar dishes/items	<ul style="list-style-type: none"> • Interview • Survey of current product range/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
15	Budget of the target group/amount target group is prepared to pay	<ul style="list-style-type: none"> • Interview/questionnaire • Costing exercise & interview/survey/questionnaire 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser
16	Quality requirements of potential solutions	<ul style="list-style-type: none"> • Interview/survey/sensory testing/questionnaire 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/target group/craft fair organiser

Manufacture

17	Facilities/resources available to the candidate	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist
18	Time available to the candidate	<ul style="list-style-type: none"> • Timed trial of prototype & interview 	<ul style="list-style-type: none"> • Food/textile technologist
19	Capabilities of the candidate	<ul style="list-style-type: none"> • Trial of prototype • Time plan/checklist • Skills analysis • Interview 	<ul style="list-style-type: none"> • Food/textile technologist
20	Facilities/resources available to the retailer/craft fair organiser	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser
21	Time available to the retailer/craft fair organiser	<ul style="list-style-type: none"> • Timed trial of prototype & interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser
22	Capabilities of the retailer	<ul style="list-style-type: none"> • Trial of prototype • Skills analysis • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer
23	Hygiene/safety requirements for food production	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/Environmental Health Officer

Production

24	Preparation/cooking/reheating/transport requirements	<ul style="list-style-type: none"> • Interview • Skills analysis & check 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/chef/craft fair organiser
25	Safety in use/safe to eat	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/chef/Environmental Health Officer/Trading Standards Officer/craft fair organiser
26	Care requirements of materials/resources used	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer • Trial of prototype
27	Suitability for making in advance	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser
28	Appropriate shelf life	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser / Environmental Health Officer
29	Suitability for mass production	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer
30	Implications of seasonality	<ul style="list-style-type: none"> • Literary/Internet search • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser
31	Influencing factors on final product	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/craft fair organiser

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
- teenager

Brief 1 – Health in teenagers			
	Investigation	Technique	Identified expert

Brief specific

1	Range of potential ingredients/textiles/ components	<ul style="list-style-type: none"> • Interview • Literary/Internet search • Survey of retail outlets 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional
2	Potential range of health resources	<ul style="list-style-type: none"> • Interview/survey/questionnaire • Literary/Internet search • Survey of retail outlets 	<ul style="list-style-type: none"> • Food/textile technologist/dietician/retailer/health professional/target group
3	Availability of health resources	<ul style="list-style-type: none"> • Interview • Survey of retail outlets/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional
4	Current range of food/textile items to encourage health	<ul style="list-style-type: none"> • Interview • Survey of retail outlets/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/target group
5	Suitable for target group	<ul style="list-style-type: none"> • Interview • Survey of retail outlets/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/target group
6	Current trends in health	<ul style="list-style-type: none"> • Interview/survey/questionnaire • Survey of retail outlets • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/target group
7	Suitability for sale	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional
8	Ideas for potential solutions	<ul style="list-style-type: none"> • Survey of retail outlets • Literary/Internet/recipe/pattern search • Trial of prototype(s) • Interview/survey/questionnaire/sensory testing 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/target group

Target group

9	Likes/dislikes of teenagers	<ul style="list-style-type: none"> • Interview/questionnaire/survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/ health professional/retailer/target group
10	Aesthetic appeal to target group	<ul style="list-style-type: none"> • Interview/questionnaire/survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/health professional/ retailer/target group
11	Potential allergens	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional
12	Religious/cultural beliefs of target group	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/ appropriate teacher/retailer/ target group
13	Appropriate portion size/product size	<ul style="list-style-type: none"> • Interview/questionnaire/survey/sensory evaluation 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/ target group

Cost/quality

14	Cost of potential ingredients/components/solutions	<ul style="list-style-type: none"> • Costing exercise 	
15	Price range of similar dishes/items	<ul style="list-style-type: none"> • Interview • Survey of current product range/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/ target group
16	Budget of the target group/amount target group is prepared to pay	<ul style="list-style-type: none"> • Interview/questionnaire • Costing exercise & interview/survey/questionnaire 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/ target group
17	Quality requirements of potential solutions	<ul style="list-style-type: none"> • Interview/survey/sensory testing/questionnaire 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/health professional/ target group

Manufacture

18	Facilities/resources available to the candidate	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist
19	Time available to the candidate	<ul style="list-style-type: none"> • Timed trial of prototype & interview 	<ul style="list-style-type: none"> • Food/textile technologist
20	Capabilities of the candidate	<ul style="list-style-type: none"> • Trial of prototype • Skills analysis • Interview 	<ul style="list-style-type: none"> • Food/textile technologist
21	Facilities/resources available to the manufacturer/retailer	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/manufacturer/retailer
22	Time available to the retailer/manufacturer	<ul style="list-style-type: none"> • Timed trial of prototype & interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer
23	Capabilities of the retailer/manufacturer	<ul style="list-style-type: none"> • Trial of prototype • Skills analysis • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer
24	Hygiene/safety requirements for food production	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer/ Environmental Health Officer

Production

25	Preparation/cooking/reheating/transport requirements	<ul style="list-style-type: none"> • Interview • Skills analysis & check 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer/ target group
26	Safety in use/safe to eat	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/ Environmental Health Officer/Trading Standards Officer
27	Care requirements of materials/resources used	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/manufacturer/retailer • Trial of prototype
28	Suitability for making in advance	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer
29	Appropriate shelf life	<ul style="list-style-type: none"> • Interview • Literary/Internet search 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer/ Environmental Health Officer
30	Suitability for mass production	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/manufacturer/retailer
31	Implications of seasonality	<ul style="list-style-type: none"> • Literary/Internet search • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer
32	Influencing factors on final product	<ul style="list-style-type: none"> • Interview 	<ul style="list-style-type: none"> • Food/textile technologist/retailer/manufacturer

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: Craft fair
Possible solutions**

Any food or textile item suitable for a craft fair

Brief 2: Health in teenagers

Possible solutions

Any food or textile item which encourages health in teenagers

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 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	3 marks
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

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/retailer/ target group/party planner	<ul style="list-style-type: none">• Interview/questionnaire with specified expert• Sensory testing with specified expert
2. Examination by target group	<ul style="list-style-type: none">• Interview/questionnaire• Sensory evaluation• Observational checklist• Wearer/user trial by target group
3. Costing exercise	<ul style="list-style-type: none">• Costing exercise confirmed by interview with specified expert, eg food/textile technologist/retailer
4. Nutritional analysis	<ul style="list-style-type: none">• 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

<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 Requisitions most main resources Requisitions some main resources Requisitions all main equipment Requisitions most main equipment Requisitions some main equipment Highly effective sequence of work Effective sequence of work Satisfactory sequence of work Highly effective deployment of time (time plan) Effective deployment of time (time plan) Satisfactory deployment of time (time plan)	3 marks 2 marks 1 mark Total mark allocation 3 3 marks 2 marks 1 mark Total mark allocation 3 3 marks 2 marks 1 mark Total mark allocation 3 3 marks 2 marks 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 Results based on fact and relevant Brief conclusions based on results	1 mark 1 mark 1 mark Total mark allocation 3
Total mark allocation for Step 3		16 marks
4 . 1	Evaluate the chosen solution Evaluation of specification points Evaluation of overall plan against set criteria: time/resources/ skills and abilities	3 marks Total mark allocation 3 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 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]