TASK ANALYSIS

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
List things that come to mind on the theme including silly answers.

UNDERSTANDING
Expand on the detail for some of the thoughts - what else do you think of?

APPLYING
Use diagrams, photos, cuttings to illustrate the meaning of some of your thoughts.

ANALYSING
Compare your ideas - which relate well to the context? Investigate your best ideas further.

EVALUATING
Evaluate your ideas - which are the best & why? Have you considered a range of users, their needs, design problems, materials & product outcomes? How do your ideas inspire you?

CREATING
Create quick sketchy ideas based on your best ideas. Plan your next steps & priorities, including predicting potential problems.

USERS & THEIR NEEDS, DESIGN BRIEF & SPEC

 #ThinkDo

MOODBOARD

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
Collect a range of images & other materials (don't forget to name sources).

UNDERSTANDING
Annotate with keywords that explain your thinking.

APPLYING
Include images that compare similar things, as well as those that contrast with each other & are different.

ANALYSING
Compare your ideas - which relate well to the context? Investigate your best ideas further.

EVALUATING
Evaluate your ideas - which are the best & why? Have you considered a range of users, their needs, design problems, materials & product outcomes? How do your ideas inspire you?

CREATING
Create quick sketchy ideas based on your best ideas. Plan your next steps & priorities, including predicting potential problems.

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USER CASE STUDY

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

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REMEMBERING
List the basics: who they are, interests, likes & dislikes

UNDERSTANDING
Explain their needs & the problems & challenges they face.

APPLYING
Use diagrams & photos to illustrate the user's needs & design problems in more detail, as well as showing current solutions to the problems.

ANALYSING
Identify other stakeholders & examine their needs. Investigate potential solutions that might be suitable for you to develop further.

EVALUATING
Recommend solutions to the problems. Evaluate your ideas - which are the best & why?

CREATING
Create quick sketchy ideas based on your best ideas. Plan your next steps & priorities, including predicting potential problems.

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PRODUCT ANALYSIS

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
List the basics: what is it, who is it for, when is it used, where is it used.

UNDERSTANDING
Outline other points that might be included in a product specification.

APPLYING
Use diagrams, photos, & exploded views to show the details of the product e.g. materials, sizes, key features

ANALYSING
Identify how it's made, including scales of production, types of equipment, costs & any relevant laws & regulations. Compare the product to similar ones.

EVALUATING
Evaluate the product. Is it well made? Is it value for money? Is it it fit for purpose? Is it sustainable?

CREATING
How might you develop the product further? What materials, techniques & features would you change or substitute? Create quick sketchy ideas based on your best ideas. Plan your next steps & priorities, including predicting potential problems.

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ANALYSING RESEARCH

WHO, WHAT, WHERE, WHEN, WHY, HOW

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REMEMBERING
List the basics: What did you do? What did you find out?

UNDERSTANDING
Expand on the detail: Did you find out things that were unexpected?

APPLYING
Show your thinking: What inspired you & why? What decisions did you make & why?

ANALYSING
How does your research connect to the original context, user needs, problem & design brief?

EVALUATING
Evaluate your ideas - which are the best & why? Have you considered the bigger picture e.g. other stakeholders, materials, sustainability & the wider impact of your ideas along with & barriers to success?

CREATING
Pull together ideas to create solutions to the problem. Plan your next steps & priorities, including predicting potential problems.

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SPECIFICATION

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
List the basics: Name of the product, product function & purpose.

UNDERSTANDING
Outline more specific details e.g. description of what it will look like.

APPLYING
Apply the results of your research by including points relevant to your findings particularly in relation to the context, user needs, & design brief. Calculate costs & sizes. Select appropriate materials & techniques.

ANALYSING
Identify any laws & regulations that need to be considered.

EVALUATING
Summarise any other key points the product needs to consider e.g. ergonomics, anthropometrics, scales of production, safety, sustainability & other wider issues.

CREATING
Consider potential substitutes for materials & components that may not be available.

USERS & THEIR NEEDS, DESIGN BRIEF & SPEC

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DESIGN BRIEF

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
List the basics: What is the problem? Who is the user?

UNDERSTANDING
Explain any specific requirements the user wants including.

APPLYING
Apply the results of your research by including points relevant to your findings particularly in relation to the context, user needs & other stakeholders.

ANALYSING
Identify a clear problem & solution. Check your brief for design fixation making sure you are focused on solving the problem not just on naming a product.

EVALUATING
Make sure you are able to justify the points in your design brief with evidence from your research.

CREATING
Create a brief that summarises the design problem clearly, whilst allowing you to continue to research & develop your idea to find the best solution. Predict any problems & key points to keep in mind.

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PROTOTYPES

WHO, WHAT, WHERE, WHEN, WHY, HOW

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

REMEMBERING
e.g. samples, large & small scale models, modelling key sections, computer modelling.

UNDERSTANDING
Record & describe the prototype process to explain the decisions you make.

APPLYING
Use different materials to practise & experiment with ideas e.g. materials, sizes, key features, production methods, aesthetics, product performance.

ANALYSING
Get users & stakeholders to test the prototypes & compare ideas to identify which solution best solves the original problem. Use a continual process of test, evaluate & refine to develop ideas that meets the brief.

EVALUATING
Use the test results to make recommendations & decisons for the next iteration of the design.

CREATING
Use an iterative process to create an optimum design & to plan next steps, & to predict & avoid problems.

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GENERATE & DEVELOP IDEAS

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

WHO, WHAT, WHERE, WHEN, WHY, HOW

REMEMBERING
Basic drawings of ideas e.g. by hand, using a computer.

UNDERSTANDING
Annotate drawings to describe & explain your ideas.

APPLYING
Use models & prototypes to experiment with ideas & to help make decisions e.g. calculating sizes.

ANALYSING
How do ideas connect back to the original context, user, & brief? Compare ideas & test them against these original points.

EVALUATING
Evaluate your ideas - which are the best & why? Have you considered a range of users, their needs, design problems, materials & product outcomes, as well as other issues e.g. sustainability, ergonomics?

CREATING
How might ideas be combined? What substitutions could you make? Plan your next steps & priorities, including predicting potential problems.

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PLANNING MANUFACTURE

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

WHO, WHAT, WHERE, WHEN, WHY, HOW

REMEMBERING
List the basics: Materials needed, how to make the product, parts list.

UNDERSTANDING
Calculate materials needed & produce a cutting list.

APPLYING
Use orthographic drawings, exploded views, & other technical drawings to show another person the basics they need to know to make the product.

ANALYSING
Create a production plan that shows the order of making e.g. using a Gantt chart. Produce a quality assurance plan that includes quality control test points.

EVALUATING
Recommend review points as part of a critical path analysis process & change priorities as work progresses.

CREATING
Predict problems & have solutions in place, including being able to change the plan if necessary e.g. substituting materials.

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EVALUATION

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

WHO, WHAT, WHERE, WHEN, WHY, HOW

REMEMBERING
List what you did.

UNDERSTANDING
Explain your thought processes as you work.

APPLYING
Show what inspired you & how decisions were made & how they link to the context, user, research & brief.

ANALYSING
Compare ideas & decisions. Test ideas, & get others to test ideas, to make sure they connect to the original context, users, problem & brief & to ensure the focus remains on solving the problem rather than just making a product.

EVALUATING
Evaluate ideas continually as the work progresses & make changes based on the results.

CREATING
Be prepared to change & develop ideas based on feedback as well as using feedback to predict & avoid problems. Think around a problem & approach it from different 'what if' perspectives.

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HOW AM I DOING?

RESEARCH, DRAW, PROTOTYPE, TEST, EVALUATE, ADAPT

QUALITY, CHALLENGE, DECISIONS, PROBLEMS, INDUSTRY

WHO, WHAT, WHERE, WHEN, WHY, HOW

REMEMBERING
Have I covered the basics for each section?

UNDERSTANDING
Do I give more detail & explain & describe ideas?

APPLYING
Do I show what I know through my drawings, writing & prototypes? Do I experiment in order to develop creative ideas & to avoid design fixation?

ANALYSING
Do I test my ideas to see if they'll work e.g. prototypes, asking the user, testing against the brief/spec? Do I show my thinking & decision making, linking everything back to the context, user, problem, research & brief?

EVALUATING
Do I justify decisions summarising how I made them? Do I constantly review my progress & check I'm on track both for time & staying focused on the problem?

CREATING
Am I prepared to change & develop my ideas based on feedback? Do I focus on the problem not just the outcome? Do I plan & use time well?

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