Design project - the energy drink

You have learned about the elements of design. You have learned how to arrange these elements according to effective design principles. You've completed exercises to help you become more creative. You've used space and whitespace. You have experimented with logo design and with typography. You have worked in colour and in black and white. You have designed with paper and on the computer. You have come to learn what works, and what doesn't. You are a fledgling designer.

How can you design a brand of healthy energy drink that attracts and appeals to a high school audience?

For your final project for this module, you will:

1. develop a name and/or logo for a fictional brand of drink
2. create a label and attach it to a suitable container for your drink
3. photograph your final product
4. create a 1-page colour advertisement for the drink

In addition to the above design tasks, you will be required to present your work to the class and:

5. discuss how the elements and principles of design were used in your work.
6. discuss the technical and creative aspects of your work; e.g., quality, uniqueness
7. discuss areas of concern/difficulty (if applicable)

Furthermore you will be required to participate in a critique of your classmates' compositions by

8. identifying elements and principles used in the compositions
9. commenting on the impact of design

The design cycle

The design cycle is a model and it is intended to be the *central tool* to help you create and evaluate products/solutions in response to challenges.

The design cycle consists of four major stages:

Design folder

As you progress through the different stages of the **design cycle**, you are constantly experimenting with ideas, researching topics, compiling sources, brainstorming issues, sketching possible solutions, making changes, rejecting proposals and critically evaluating your work. All of this should be recorded, and dated, in your **design folder**. The design folder must be clearly divided into: investigate, design, plan, create, evaluate. It must begin with your investigation and end with the evaluation.

"Your design folder is a compilation of *evidence* that accompanies the final product. "

In it you must formally record:

- the results of your research,
- your various plans and designs, and
- the evaluation of your finished products.

Investigate

Design brief: How do you intend to solve the problem?
Research the problem so that you can express clearly how you intend to solve it. Use a mixture of research techniques to generate a range of information to draw from. These techniques should include: searching for images and existing products, collecting comments from people (including comments on your own product in the evaluate stage), and talking to experts. Appropriately reference any sources of information you use.

How will you test your product?
Develop a method for evaluating your product.

Design specification: what conditions, requirements, and restrictions must your design comply with?
Provide a precise and accurate list of facts such as conditions, dimensions, materials, process and methods that are important for the designer and for the user. All appropriate solutions will need to comply with the design specification.

☐ **I explain the problem, discussing its relevance. I critically investigate the problem, evaluating information from a broad range of appropriate, acknowledged sources. I describe detailed methods for appropriate testing to evaluate the products against the design specification.**

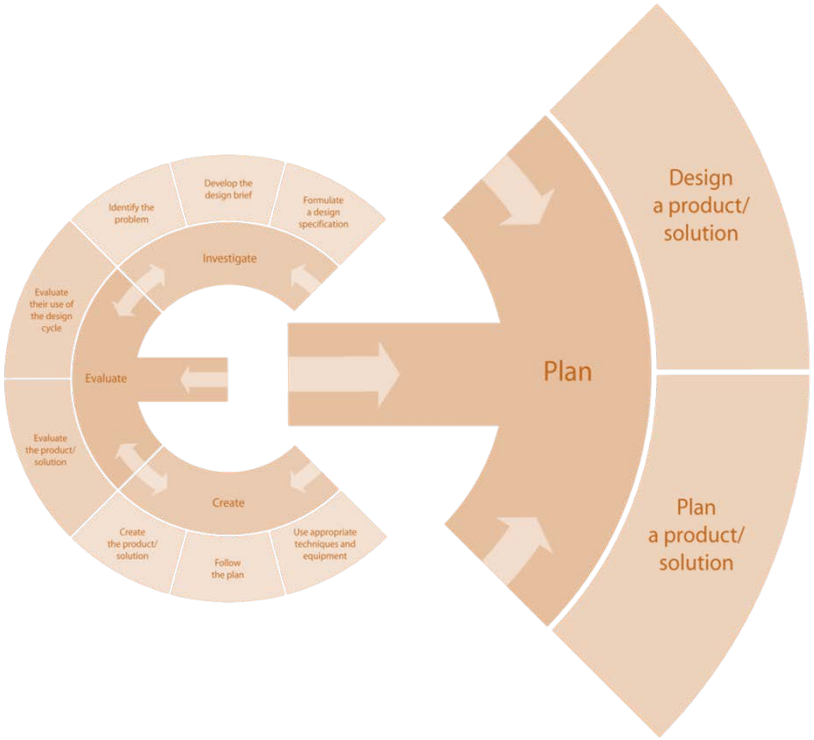
Design / Plan

What image do you want your product to convey?
Get creative. Bounce ideas around. Revisit the exercises you have already done and think about the different concepts you have learned. Think about how you can effectively utilize font, colour, contrast, and emphasis to convey this image

Generate a range of feasible designs that meet the design specifications.
Compile all of your ideas, notes, sketches, and prototypes as you design. Create thumbnail sketches and/or prototypes for each of your design ideas (logos, names, labels, packages, and advertisements.)

Which designs will you choose?
Choose the best designs and justify your choice against the design specification. (If you change your mind later, justify any changes to your designs.)

How will you proceed?
Produce a plan that contains detailed, logical steps of what exactly you will need to do. Include what resources you will need and how you will use your time.



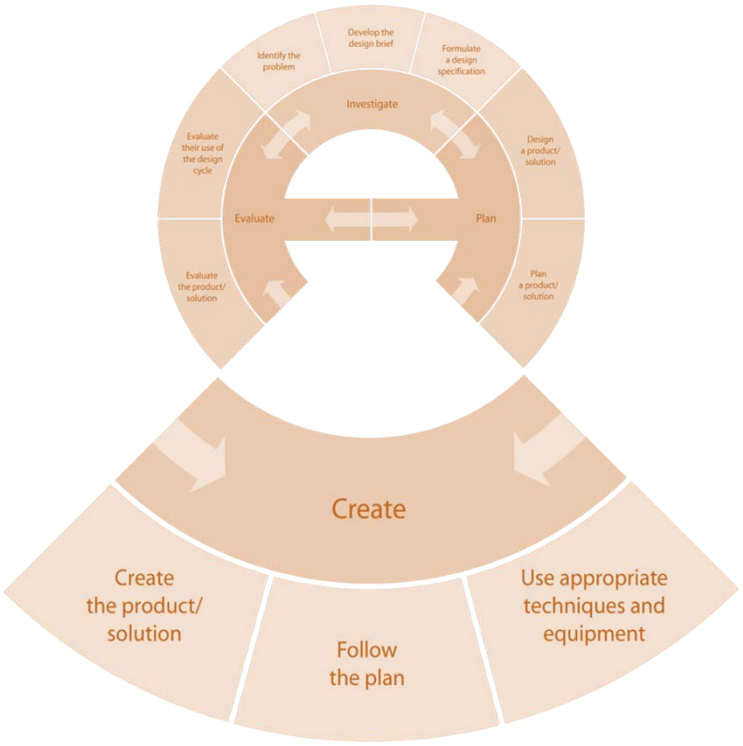
☐**I generate a range of feasible designs, each evaluated against the design specification. I justify the chosen design and evaluate it fully and critically against the design specification.**

☐**I produce a plan that contains a number of detailed, logical steps that describe the use of resources and time. I critically evaluate the plan and justify any modifications to the design.**

Create

What is the best way to bring your ideas to life?

Follow your plan. Use appropriate techniques and equipment. Produce a finished product of high quality using whatever resources are available.



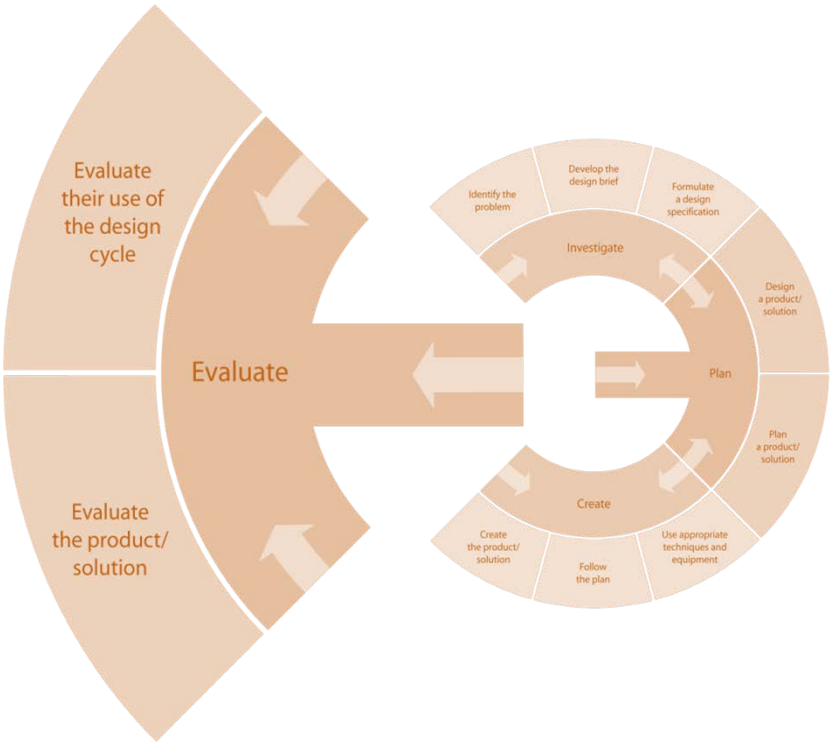
☐ **I competently use appropriate techniques and equipment. I follow my plan and justify any modifications made, resulting in a product of appropriate quality using the resources available.**

Evaluate

How did the product turn out?
Evaluate the success of your product in an objective way. Test your product and solicit the views of your intended audience.

How did *you* do?
Evaluate your own performance at each stage of the design cycle and suggest improvements. Evaluate your plan.

What impact does your product have?
Does your product have an impact on life, society and/or the environment?



☐**I evaluate the success of the product in an objective manner based on the results of testing, and the views of the intended users. I provide an evaluation of my own performance at each stage of the design cycle and suggest improvements. I provide an appropriate evaluation of the impact of the product/solution on life, society and/or the environment.**

Criterion A: Investigate

Maximum: 6

Investigation is an essential stage in the design cycle. Students are expected to identify the problem, develop a design brief and formulate a design specification. Students are expected to acknowledge the sources of information and document these appropriately.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student **states** the problem. The student investigates the problem, **collecting** information from sources. The student lists some specifications.
3–4	The student **describes** the problem, **mentioning** its relevance. The student investigates the problem, **selecting and analysing** information from **some acknowledged** sources. The student **describes** a test to **evaluate** the product/solution against the design specification.
5–6	The student **explains** the problem, **discussing** its relevance. The student critically investigates the problem, **evaluating** information from a **broad range** of **appropriate, acknowledged** sources. The student describes **detailed** methods for appropriate testing to **evaluate** the product/solution against the design specification.

Criterion B: Design

Maximum: 6

Students are expected to generate several feasible designs that meet the design specification and to evaluate these against the design specification.

Students are then expected to select one design, justify their choice and evaluate this in detail against the design specification.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student generates **one** design, and makes **some attempt to justify** this against the design specification.
3–4	The student generates **a few** designs, **justifying** the choice of **one** design and fully **evaluating** this against the design specification.
5–6	The student generates a **range** of **feasible** designs, **each evaluated** against the design specification. The student justifies the chosen design and **evaluates** it fully and critically against the design specification.

Criterion C: Plan

Maximum: 6

Students are expected to construct a plan to create their chosen product/solution that has a series of logical steps, and that makes effective use of resources and time.

Students are expected to evaluate the plan and justify any modifications to the design.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student produces a plan that contains **some details** of the steps and/or the resources required.
3–4	The student produces a plan that contains a number of **logical** steps that include resources and time. The student makes some attempt to evaluate the plan.
5–6	The student produces a plan that contains a **number** of **detailed, logical** steps that describe the use of resources and time. The student critically evaluates the plan and justifies any modifications to the design.

Criterion D: Create

Maximum: 6

Students are expected to document, with a series of photographs or a video and a dated record, the process of making their product/solution, including when and how they use tools, materials and techniques. Students are expected to follow their plan, to evaluate the plan and to justify any changes they make to the plan while they are creating the product/solution.

Students will sometimes embark upon a very ambitious project, or they may encounter unforeseen circumstances. In some circumstances a product/solution that is incomplete or does not function fully can still achieve one of the levels awarded for this criterion.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student considers the plan and creates at least **part** of a product/solution.
3–4	The student **uses** appropriate techniques and equipment. The student follows the plan and **mentions** any modifications made, resulting in a product/solution of **good** quality.
5–6	The student **competently uses** appropriate techniques and equipment. The student follows the plan and **justifies** any modifications made, resulting in a product/solution of **appropriate** quality using the resources available.

Criterion E: Evaluate

Maximum: 6

Students are expected to evaluate the product/solution against the design specification in an objective manner based on testing, and to evaluate its impact on life, society and/or the environment. They are expected to explain how the product/solution could be improved as a result of these evaluations.

Students are expected to evaluate their own performance at each stage of the design cycle and to suggest ways in which their performance could be improved.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student evaluates the product/solution **or** his or her own performance. The student makes some **attempt to test** the product/solution.
3–4	The student evaluates the product/solution **and** his or her own performance and suggests ways in which these could be improved. The student **tests** the product/solution to evaluate it against the design specification.
5–6	The student evaluates the success of the product/solution in an objective manner based on the **results of testing**, and the **views of the intended users**. The student provides an evaluation of his or her own performance **at each stage of the design cycle** and suggests improvements. The student provides an appropriate evaluation of the **impact** of the product/solution on life, society and/or the environment.

Criterion F: Attitudes in technology

Maximum: 6

This criterion refers to students' attitudes when working in technology. It focuses on an overall assessment of two aspects:

- personal engagement (motivation, independence, general positive attitude)
- attitudes towards safety, cooperation and respect for others.

By their very nature these qualities are difficult to quantify and assess, and assessment should therefore take into account the context in which the unit of work was undertaken.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors given below.
1–2	The student **occasionally** displays a satisfactory standard in **one** of the aspects listed above.
3–4	The student **frequently** displays a satisfactory standard in **both** of the aspects listed above.
5–6	The student **consistently** displays a satisfactory standard in **both** of the aspects listed above.