Design assessment criteria: Year 1

Criterion A: Inquiring and analysing

Maximum: 8

At the end of year 1, students should be able to:

i. explain and justify the need for a solution to a problem

ii. state and prioritize the main points of research needed to develop a solution to the problem

iii. describe the main features of one existing product that inspires a solution to the problem

iv. present the main findings of relevant research.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **states** the need for a solution to a problem ii. **states** the findings of research.
3–4	The student: i. **outlines** the need for a solution to a problem ii. **states some** points of research needed to **develop** a solution, **with some guidance** iii. **states** the main features of an existing product that inspires a solution to the problem iv. **outlines some of** the main findings of research.
5–6	The student: i. **explains** the need for a solution to a problem ii. **states** and **prioritizes** the main points of research needed to **develop** a solution to the problem, **with some guidance** iii. **outlines** the main features of an existing product that inspires a solution to the problem iv. **outlines** the main findings of relevant research.
7–8	The student: i. **explains** and **justifies** the need for a solution to a problem ii. **states** and **prioritizes** the main points of research needed to **develop** a solution to the problem, **with minimal guidance** iii. **describes** the main features of an existing product that inspires a solution to the problem iv. **presents** the main findings of relevant research.

Criterion B: Developing ideas

Maximum: 8

At the end of year 1, students should be able to:

i. develop a list of success criteria for the solution

ii. present feasible design ideas, which can be correctly interpreted by others

iii. present the chosen design

iv. create a planning drawing/diagram which outlines the main details for making the chosen solution.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **states one** basic success criterion for a solution ii. **presents one** design idea, which can be interpreted by others iii. **creates** an incomplete planning drawing/diagram.
3–4	The student: i. **states a few** success criteria for the solution ii. **presents more than one** design idea, using an appropriate medium(s) or labels key features, which can be interpreted by others iii. **states** the key features of the chosen design iv. **creates** a planning drawing/diagram or **lists** requirements for the creation of the chosen solution.
5–6	The student: i. **develops a few** success criteria for the solution ii. **presents a few** feasible design ideas, using an appropriate medium(s) and labels key features, which can be interpreted by others iii. **presents** the chosen design **stating** the key features iv. **creates** a planning drawing/diagram and **lists** the main details for the creation of the chosen solution.
7–8	The student: i. **develops a list of** success criteria for the solution ii. **presents** feasible design ideas, using an appropriate medium(s) and outlines the key features, which can be correctly interpreted by others iii. **presents** the chosen design **describing** the key features iv. **creates** a planning drawing/diagram, which **outlines** the main details for making the chosen solution.

Criterion C: Creating the solution

Maximum: 8

At the end of year 1, students should be able to:

i. outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution

ii. demonstrate excellent technical skills when making the solution

iii. follow the plan to create the solution, which functions as intended

iv. list the changes made to the chosen design and plan when making the solution.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **demonstrates minimal** technical skills when making the solution ii. **creates** the solution, which functions **poorly** and is presented **in an incomplete form**.
3–4	The student: i. **lists** the main steps in a plan that contains some details, resulting in peers having difficulty following the plan to create the solution ii. **demonstrates satisfactory** technical skills when making the solution iii. **creates** the solution, which **partially** functions and is **adequately** presented iv. **states one change** made to the chosen design **or** plan when making the solution.
5–6	The student: i. **lists** the steps in a plan, which **considers** time and resources, resulting in peers being able to follow the plan to create the solution ii. **demonstrates competent** technical skills when making the solution iii. **creates** the solution, which functions **as intended** and is presented **appropriately** iv. **states one change** made to the chosen design **and** plan when making the solution.
7–8	The student: i. **outlines** a plan, which **considers** the use of resources and time, sufficient for peers to be able to follow to create the solution ii. **demonstrates excellent** technical skills when making the solution iii. follows the plan to **create** the solution, which functions as **intended** and is presented **appropriately** iv. **lists the changes** made to the chosen design and plan when making the solution.

Criterion D: Evaluating

Maximum: 8

At the end of year 1, students should be able to:

i. outline simple, relevant testing methods, which generate data, to measure the success of the solution

ii. outline the success of the solution against the design specification

iii. outline how the solution could be improved

iv. outline the impact of the solution on the client/target audience.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **defines** a testing method, which is used to measure the success of the solution ii. **states** the success of the solution.
3–4	The student: i. **defines** a **relevant** testing **method**, which generates data, to measure the success of the solution ii. **states** the success of the solution against the design specification based on the results of **one relevant** test iii. **states one way** in which the solution could be improved iv. **states one way** in which the solution can impact the client/target audience.
5–6	The student: i. **defines relevant** testing **methods**, which generate data, to measure the success of the solution ii. **states** the success of the solution against the design specification based on **relevant** product testing iii. **outlines one way** in which the solution could be improved iv. **outlines** the impact of the solution on the client/target audience, **with guidance**.
7–8	The student: i. **outlines simple, relevant** testing methods, which generate data, to measure the success of the solution ii. **outlines** the success of the solution against the design specification based on **authentic** product testing iii. **outlines** how the solution could be improved iv. **outlines** the impact of the solution on the client/target audience.

Design assessment criteria: Year 3

Criterion A: Inquiring and analysing

Maximum: 8

At the end of year 3, students should be able to:

i. explain and justify the need for a solution to a problem

ii. construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem

iii. analyse a group of similar products that inspire a solution to the problem

iv. develop a design brief, which presents the analysis of relevant research.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **states** the need for a solution to a problem ii. **states some of** the main findings of relevant research.
3–4	The student: i. **outlines** the need for a solution to a problem ii. **states** the research needed to **develop** a solution to the problem, **with some guidance** iii. **outlines one existing** product that inspires a solution to the problem iv. **develops** a **basic** design brief, which **outlines some of the findings** of relevant research.
5–6	The student: i. **explains** the need for a solution to a problem ii. **constructs** a research plan, which **states** and **prioritizes** the primary and secondary research needed to **develop** a solution to the problem, **with some guidance** iii. **describes** a group of similar products that inspire a solution to the problem iv. **develops** a design brief, which **outlines** the **findings** of relevant research.
7–8	The student: i. **explains** and **justifies** the need for a solution to a problem ii. **constructs** a research plan, which **states** and **prioritizes** the primary and secondary research needed to **develop** a solution to the problem **independently** iii. **analyses** a group of similar products that inspire a solution to the problem iv. **develops** a design brief, which **presents** the **analysis** of relevant research.

Criterion B: Developing ideas

Maximum: 8

At the end of year 3, students should be able to:

i. develop a design specification which outlines the success criteria for the design of a solution based on the data collected

ii. present a range of feasible design ideas, which can be correctly interpreted by others

iii. present the chosen design and outline the reasons for its selection

iv. develop accurate planning drawings/diagrams and outline requirements for the creation of the chosen solution.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **lists** a few basic success criteria for the design of a solution ii. **presents** one design idea, which can be interpreted by others iii. **creates** incomplete planning drawings/diagrams.
3–4	The student: i. **constructs** a list of the success criteria for the design of a solution ii. **presents a few** feasible design ideas, using an appropriate medium(s) **or explains** key features, which can be interpreted by others iii. **outlines** the **main** reasons for choosing the design with reference to the design specification iv. **creates** planning drawings/diagrams or **lists** requirements for the chosen solution.
5–6	The student: i. **develops** design specifications, which **identify** the success criteria for the design of a solution ii. **presents a range of** feasible design ideas, using an appropriate medium(s) **and explains** key features, which can be interpreted by others iii. **presents** the chosen design and **outlines** the **main** reasons for its selection with reference to the design specification iv. **develops** accurate planning drawings/diagrams and **lists** requirements for the creation of the chosen solution.
7–8	The student: i. **develops** a design specification which **outlines** the success criteria for the design of a solution based on the data collected ii. **presents** a range of feasible design ideas, using an appropriate medium(s) **and annotation**, which can be correctly interpreted by others iii. **presents** the chosen design and **outlines** the reasons for its selection with reference to the design specification iv. **develops** accurate planning drawings/diagrams and **outlines** requirements for the creation of the chosen solution.

Criterion C: Creating the solution

Maximum: 8

At the end of year 3, students should be able to:

i. construct a logical plan, which outlines the efficient use of time and resources, sufficient for peers to be able to follow to create the solution

ii. demonstrate excellent technical skills when making the solution

iii. follow the plan to create the solution, which functions as intended

iv. explain changes made to the chosen design and the plan when making the solution.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **demonstrates minimal** technical skills when making the solution ii. **creates** the solution, which functions **poorly** and is presented **in an incomplete form**.
3–4	The student: i. **outlines** each step in a plan that contains some details, resulting in peers having difficulty following the plan to create the solution ii. **demonstrates satisfactory** technical skills when making the solution iii. **creates** the solution, which **partially** functions and is **adequately** presented iv. **outlines** changes made to the chosen design **or** plan when making the solution.
5–6	The student: i. **constructs** a plan, which **considers** time and resources, sufficient for peers to be able to follow to create the solution ii. **demonstrates competent** technical skills when making the solution iii. **creates** the solution, which functions **as intended** and is presented **appropriately** iv. **outlines** changes made to the chosen design **and** plan when making the solution.
7–8	The student: i. **constructs** a **logical** plan, which **outlines** the efficient use of time and resources, sufficient for peers to be able to follow to create the solution ii. **demonstrates excellent** technical skills when making the solution iii. follows the plan to **create** the solution, which functions **as intended** and is presented **appropriately** iv. **explains** changes made to the chosen design and plan when making the solution.

Criterion D: Evaluating

Maximum: 8

At the end of year 3, students should be able to:

i. describe detailed and relevant testing methods, which generate accurate data, to measure the success of the solution

ii. explain the success of the solution against the design specification

iii. describe how the solution could be improved

iv. describe the impact of the solution on the client/target audience.

Achievement level	Level descriptor
0	The student **does not** reach a standard described by any of the descriptors below.
1–2	The student: i. **describes a** testing **method**, which is used to measure the success of the solution ii. **states** the success of the solution.
3–4	The student: i. **describes a relevant** testing **method**, which generates data, to measure the success of the solution ii. **outlines** the success of the solution against the design specification based on relevant product testing iii. **lists** the ways in which the solution could be improved iv. **outlines** the impact of the solution on the client/target audience.
5–6	The student: i. **describes relevant** testing **methods**, which generate data, to measure the success of the solution ii. **describes** the success of the solution against the design specification based on **relevant** product testing iii. **outlines** how the solution could be improved iv. **describes** the impact of the solution on the client/target audience, **with guidance**.
7–8	The student: i. **describes detailed and relevant** testing **methods**, which generate **accurate** data, to measure the success of the solution ii. **explains** the success of the solution against the design specification based on **authentic** product testing iii. **describes** how the solution could be improved iv. **describes** the impact of the solution on the client/target audience.

Submission of the ePortfolio

Submission limits (examiners will not read beyond these limits)	
Written work	40 A4 pages
Appendix (unassessed)*	10 A4 pages

*An appendix can be used to demonstrate supporting research or raw data that would otherwise impact upon the overall maximum page count. It will not be formally assessed, but may be referred to in order to confirm specific parts of the report. This may be uploaded as a separate document to the main written work.

Design subject-specific grade descriptors

Subject-specific grade descriptors serve as an important reference in the assessment process. Through careful analysis of subject-group criteria and the general grade descriptors, they have been written to capture and describe in a single descriptor the performance of students at each grade for each MYP subject group.

Subject-specific grade descriptors are also the main reference used to select grade boundaries for each discipline in each assessment session. During this process, the grade award team compares student performance against descriptors of achievement at grades 2 and 3; 3 and 4; and 6 and 7 (other boundaries are set at equal intervals between these key transitions). The grade award process is able to compensate for variations in challenge between ePortfolio tasks and in standards applied to marking (both between subjects and for a particular subject across sessions) by setting boundaries for each discipline and examination session, with reference to real student work.

Subject-specific grade descriptors tie eAssessment to criterion-related assessment and to MYP assessment criteria and level descriptors, which put the programme's criterion-related assessment philosophy into practice.

Grade	Descriptor
7	Produces high-quality, frequently innovative design solutions through the application of the design cycle. Communicates comprehensive, nuanced understanding of design concepts and contexts through independent and detailed work. Consistently demonstrates sophisticated critical and creative thinking to inform research methods and to refine selected solutions. Frequently transfers knowledge and applies skills, with independence and expertise, to complex real-world issues.
6	Produces high-quality, occasionally innovative design solutions through the application of the design cycle. Communicates extensive understanding of design concepts and contexts through independent and detailed work. Demonstrates critical and creative thinking to inform research methods and to refine selected solutions, frequently with sophistication. Transfers knowledge and applies skills, often with independence, to real-world issues.
5	Produces generally high-quality design solutions through the application of the design cycle. Communicates good understanding of design concepts and contexts. Demonstrates critical and creative thinking to inform research methods and to refine selected solutions, sometimes with sophistication. Usually transfers knowledge and applies skills, with some independence, to real-world issues.

Grade	Descriptor
4	Produces good-quality design solutions through the application of the design cycle. Communicates basic understanding of design concepts and contexts, with few misunderstandings and minor gaps. Often demonstrates critical and creative thinking to inform research methods and to refine selected solutions. Transfers some knowledge and applies some skills in familiar situations, but requires support in unfamiliar situations.
3	Produces design solutions of an acceptable quality that generally follow the design cycle. Communicates basic understanding of design concepts and contexts in the work with occasional significant misunderstandings or gaps. Begins to demonstrate some critical and creative thinking to inform research methods and to refine selected solutions. Begins to transfer knowledge and apply skills, requiring support even in familiar situations.
2	Produces work of limited quality. Communicates limited understanding of some design concepts and contexts. Demonstrates limited evidence of critical or creative thinking. Limited evidence of transfer of knowledge or application of skills.
1	Produces work of a very limited quality. Conveys many significant misunderstandings or lacks understanding of most design concepts and contexts. Very rarely demonstrates critical or creative thinking. Very inflexible, rarely shows evidence of knowledge or skills.