



INDUS INTERNATIONAL SCHOOL-HYDERABAD RCB Summative Assessment

Subject: Design	Grade 9 Sec : B8	Date: Ongoing	Time: Duration	
Name of the Student:				
Assessment Criteria: Criterion A-D				
Project Title:				

Instructions for Students:

- Maximum Achievement Level: The highest attainable level for this test is 8.
- Formatting Requirements:
 - o **Page Range:** Your response should span pages 4 to 7.
 - o **Font Size:** Use a font size of 12 throughout your test.
 - o **Font Style:** Utilize Times New Roman as the font style.
 - Word Limit: Maintain a word count between 500 to 600 words.
- Important Notes:
 - o **Footnote Requirement:** Ensure you include footnotes as necessary.
 - o **Bibliography:** Include a bibliography in your work.
 - Appendix: Exhibit evidence of your work in the appendix section.
 - Plagiarism Alert: Your work will undergo a plagiarism check. If it exceeds 10% similarity with external sources, it will not be graded.
- High Achievement Levels (7-8) Criteria:
 - o **Punctual Submission:** To achieve levels 7 or 8, your work must be submitted on time.
 - Aesthetic Quality: Strive for an aesthetically pleasing presentation.
 - o **Proper Citation:** Ensure that you use proper citation techniques.
 - **Plagiarism-Free:** Your work should be completely free from plagiarism.
 - o **Command Terms:** Make effective use of and highlight the command terms appropriately.

Please adhere to these guidelines when completing your test.

Grade 9 RCB Design Unit	
Unit title: How can designers help us achieve the UN's global goals?	
Global context and specific exploration: Fairness & Development	
Key concept: Development	
Related concept: Sustainability	
Statement of inquiry: We need to make changes to become more sustainable	
Final Product: Mobile app	





TASK SPECIFIC CLARIFICATION

Criterion A: Inquiring and analyzing

Maximum: 8

At the end of year 4, 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 Descriptors	Task Specific Clarification
0	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.
	The student: i. states the need for a solution to a problem ii. states some of the main findings of relevant research.	Your response shows that you have i. stated the need for a solution to a problem related to sustainability and development within the context of achieving the UN's global goals. ii. stated some of the main findings of relevant research needed to develop a mobile app.
	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.	Your response shows that you have i. outlined the need for a solution to a problem related to sustainability and development within the context of achieving the UN's global goals. ii. stated a research plan, needed to develop a mobile app as a solution to the problem with some guidance. iii. outlined one existing product that inspire a solution to the problem highlighting relevant strengths, weaknesses, and innovative aspects that inform the development of a design solution. iv. developed a basic design brief, which outlined some of the problem statement, key insights from research, and specific objectives for developing a solution relevant research and also ensure the solution aligns with the goals of sustainability and development outlined in the statement of inquiry.
	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	Your response shows that you have i. explained the need for a solution to a problem clearly related to sustainability and development within the context of achieving the UN's global goals.





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.

ii. constructed a research plan, which stated and prioritized the primary and secondary research needed to develop a mobile app as a solution to the problem with some guidance.

iii. **described** a group of similar products that inspire a solution to the problem highlighting relevant strengths, weaknesses, and innovative aspects that inform the development of a design solution. iv. developed a design brief, which outlined the **findings** of problem statement, key insights from research, and specific objectives for developing a solution relevant research and also ensure the solution aligns with the goals of sustainability and development outlined in the statement of inquiry.

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

inspire a solution to the problem iv. develops a design brief, which presents

the analysis of relevant research.

Your response shows that you have i. explained and justified the need for a solution to a problem clearly related to sustainability and development within the context of achieving the UN's global goals. ii. **constructed** a research plan, which stated and prioritized the primary and iii. analyses a group of similar products that secondary research needed to develop a mobile app as a solution to the problem independently

> iii. analysed a group of similar products that inspire a solution to the problem highlighting relevant strengths, weaknesses, and innovative aspects that inform the development of a design solution. iv. **developed** a design brief, which presented the analysis of problem statement, key insights from research, and specific objectives for developing a solution relevant research and also ensure the solution aligns with the goals of sustainability and development outlined in the statement of inquiry.





Criterion B: Developing Ideas

Maximum: 8

- 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 an accurate a planning drawing/diagram and outline requirements for the creation of the chosen solution.

Achievement	Level Descriptors	Task Specific Clarification
Level		
0	The student does not reach a standard described by any of the descriptors below.	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.	Your response shows that you have i. listed a few basic success criteria for the mobile app that address the issue of sustainability. ii. presented one design idea, which can be interpreted by others iii. created incomplete planning drawings/diagrams of final design
3-4	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	Your response shows that you have i. constructed list of success criteria that the mobile app must meet in order to address the issue of sustainability within the context of fairness and development. ii. Presented a few feasible design ideas using suitable mediums or explained the key features, that can be interpreted by others ensuring that each design idea addresses the issue of sustainability. iii. outlined the main reason for its selection in elation to the design specification iii. Developed accurate planning diagrams and listed the necessary annotations for the creation of the chosen solution.
5-6	The student: i. develops design specifications, which identify the success criteria for the design of a solution	Your response shows that you have i.developed design specification that identified the success criteria that the mobile app must meet in





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.

order to address the issue of sustainability within the context of fairness and development.

- ii. Presented two viable design concepts using suitable mediums and explained the key features, that can be interpreted by others ensuring that each design idea addresses the issue of sustainability.
- iii. Presented the chosen design and outlined the main reason for its selection in relation to the design specification and explain how they contribute to the overall goals of the project. iv. Developed accurate planning diagrams and **listed** the necessary annotations for the creation of

7-8 The student:

- 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) 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.

Your response shows that you have

the chosen solution.

- i. develops a design specification which i.developed a detailed design specification that **outlined** the success criteria that the mobile app must meet in order to address the issue of sustainability within the context of fairness and development.
- ii. Presented three viable design concepts using and annotation, which can be correctly suitable mediums and annotations, ensuring that each design idea addresses the issue of sustainability within the context of fairness and development clarity that can be interpreted by others.
 - iii. Presented the chosen design and outlined its choice in relation to the design specification and explained how they contribute to the overall goals of the project.
 - iv. **Developed** accurate planning diagrams and outlined the necessary annotations or descriptions alongside each design idea to clarify its features, functionality, and potential impact for the creation of the chosen solution.





Criterion C: Creating a solution

Maximum: 8

At the end of year 2, 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 Descriptors	Task Specific Clarification
0	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.
	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.	Your response shows that you have i. Demonstrated minimal technical skills through the documentation of your work in progress. ii. created the solution, which lacks clear and comprehensive documentation and is presented in an incomplete form .
	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.	Your response shows that you have i.You have listed a plan that partially includes the necessary resources, materials, and time frames for each step, resulting in peers having difficulty
	The student: i. lists the steps in a plan, which considers time and resources, resulting in peers being	Your response shows that you have i. Listed a plan that includes the necessary resources, materials, and





able to follow th	e plan to create the
solution	

- ii. **demonstrates competent** technical skills create the solution when making the solution ii. **demonstrated co**
- 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.
- time frames for each step, resulting in peers being able to follow the plan to create the solution
- ii. demonstrated competent technical skills through the documentation of your work in progress.
- iii. Created the solution, which functions as intended and presented appropriate visual evidence such as photos or videos captured at each stage of development.
- iv. **Stated one** modification made from the initial design **and** plan during the solution creation process while also offering well-founded justifications for these changes.

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.
- Your response shows that you have i. **Outlined** a plan that **includes a detailed** breakdown of the necessary resources, materials, and time frames for each step, providing clear and comprehensive instructions for peers to follow in order to create the final solution.
- ii. demonstrated your excellent technical skills through the documentation of your work in progress, including photographs showcasing equipment usage that underscore your technical expertise. iii. demonstrated your capacity to adhere to the provided plan and successfully produce a solution that operates as intended and presented

appropriate visual evidence such as photos captured at each stage of

development.

iv. Listed all significant alterations made from the initial design and plan during the solution creation process while also offering well-founded justifications for these changes.





Criterion D: Evaluation

Maximum: 8

At the end of year 4, 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.

Achievemen	Level Descriptors	Task Specific Clarification
t Level		
0 1-2	The student does not reach a standard described by any of the descriptors below. The student:	The student does not reach a standard described by any of the descriptors below. Your response shows that you have
1-2	i. describes a testing method, which is used to measure the success of the solution ii. states the success of the solution.	 i. described a testing method, which is used to measure the success of creating a mobile app. ii. stated the success of creating a mobile app.
3-4	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.	Your response shows that you have i. described a relevant testing methodology that generates data for evaluating the app success. ii. provided an outline of how the app performance aligns with the design specifications, drawing from relevant product testing. iii. listed potential enhancements for the app features. iv. outlined the app influence on the client or target audience.
5-6	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.	Your response shows that you have i. described a relevant testing methodology that generates data for evaluating the app success. ii. described how the app performance aligns with the design specifications, drawing from relevant product testing. iii. outlined potential enhancements for the app features. iv. describes the app influence on the client or target audience.
7-8	The student: i. describes detailed and relevant testing methods, which generate accurate data,	Your response shows that you have i. described detailed and relevant testing methodology that generates





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.

accurate data for evaluating the app success.

ii. **explained** how the app performance aligns with the design specifications, drawing from **authentic** product testing.

iii. **described** potential enhancements for the app features.

iv. **describes** the app influence on the client or target audience.





COMMAND TERMS

Command term	Definition
Analyse	Break down in order to bring out the essential elements or
	structure. (To identify parts and relationships, and to interpret
	information to reach conclusions.)
Construct	Display information in a diagrammatic or logical form.
Create	To evolve from one's own thought or imagination, as a work or an
	invention.
Define	Give the precise meaning of a word, phrase, concept or physical
	quantity.
Demonstrate	Make clear by reasoning or evidence, illustrating with examples or
	practical application.
Describe	Give a detailed account or picture of a situation, event, pattern or
	process.
Design	Produce a plan, simulation or model.
Develop	To improve incrementally, elaborate or expand in detail. Evolve to
	a more advanced or effective state.
Evaluate	Make an appraisal by weighing up the strengths and limitations.
Explain	Give a detailed account including reasons or causes. (See also
	"Justify".)
Identify	Provide an answer from a number of possibilities. Recognize and
	state briefly a distinguishing fact or feature.
Justify	Give valid reasons or evidence to support an answer or conclusion.
	(See also "Explain".)
List	Give a sequence of brief answers with no explanation.
Outline	Give a brief account or summary.
Present	Offer for display, observation, examination or consideration.
Prioritize	Give relative importance to, or put in an order of preference.
State	Give a specific name, value or other brief answer without
	explanation or calculation.
Summarize	Abstract a general theme or major point(s).





Criterion A- Inquiring and analyzing

Strand (i) Explain and justify the need for a solution to a problem

1	Context of the problem	
2	Client/Target Audience	
3	What is the problem of the client?	
4	Where is the problem occurring?	
5	What is the cause of the problem?	
6	Why do I need to design something?	
7	Connection with KC, RC, GC & SOI	
8	Justifies the need for a solution to a problem for a client/target audience. (What are the problems that I see arise that could be helped with solution design?)	





Strand (ii) State and prioritize the main points of research needed to develop a solution to the problem

The Research Plan: The research plan is a process in which I formulated a few important questions which will help me in my investigation.

S.No	Research Question	Why is it important?	Sources (Primary/Secondary)
1			
2			





Strand (iii) Describe the main features of one existing product that inspires a solution to the problem

Name of the existing product:	
Main feature of the existing product/solution	
Distance (Image and a fith a polishing	
Picture/Images of the existing product/solution	
Analysis	Strength:
	Weakness:
	Opportunities:
	Threat:
	Content and Communication:
	Functionality, Structure and navigation:





Strand (iv) Present the main findings of relevant research.

- Formulate a detailed design brief, clearly articulating what is to be made and why?
 - o collect quantitative and qualitative data through surveys, interviews and/or discussion groups using a variety of open and closed questions.
 - o summarize the analysis of relevant data in a clear, concise way, explaining why and how the information is relevant and useful to the development of design ideas.
 - o evaluate the validity of information collected through primary and secondary sources.
 - o cite all primary and secondary sources of information correctly and fully.
 - o formulate a detailed design brief, clearly articulating what is to be made and why
- When you have fully analysed a problem you will be ready to write a meaningful Design Brief with a Mind map.

ASPECT

- 1. Always start the design brief with "I am going to design and make"
- Who, why and What
- 2. Do not be too specific. The brief should be a general description.
- 3. Hardware requirements
- 4. Software requirements
- Mention points such as; safety, general size, what it will do (its functions), general properties and other points you feel are important.
- 6 List of client requirements





<u>Criterion B - Developing Idea</u>

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

Aspect	Constraints	Requirements	Consideration
Aesthetics (Consider			
appearance, style,			
color, shape/form,			
texture, pattern,			
finish, layout)			
Cost/Tool (Is there a			
maximum cost? Is this a			
material cost/time			
cost/selling cost?)			
Customer (Who it is			
for? What is the target			
user's age, gender,			
socio-economic			
background?)			
Function (What it must			
do? What is its purpose?			
Where will the product			
be stored?			
How easily can it			
be used/maintained?)			
Content(Writing the			
content - Deciding on the			
design and images			
 Proof reading and 			
checking)			
Safety (What safety			
factors need to be			
incorporated into the			
design?)			
Accessibility(where it will			
be available-			
Online, in the form of			
poster, website etc)			
Format(suggest how			
the Database will be			
designed)			
Software (What			
resources are			
available? Are there			
limitations as to how			
this can be created?			
How much time is			
needed to create the			
design?)			

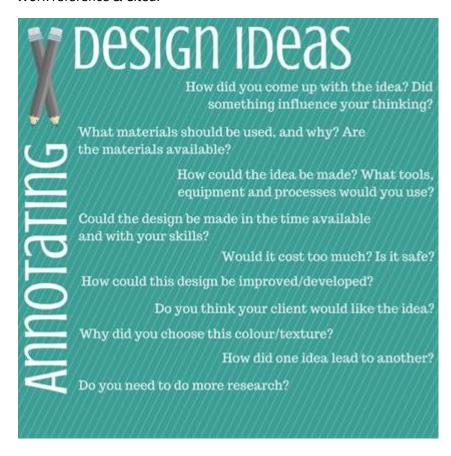




Criterion B - Developing Ideas

Strand (ii) Present a range of feasible design ideas, which can be correctly interpreted by others

- Pick two design ideas to create in more detail. For each design idea you must explain its concept in a paragraph, and annotate the design with comments about the points in the image below.
- Work reference & Cited:







<u>Criterion B – Developing Ideas</u>

Strand (iii) present the chosen design and outline the reasons for its selection





<u>Criterion B – Developing Ideas</u>

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





Criterion C - Creating a solution

Strand (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.

- Create steps with directions for how you will create your final product.
- Include resources/materials for all the steps.

Steps#	At this stage I will (do what) and I will do this (how)	Time frame (This will ideally take how long)	Tools/Materials/Resources needed
#1			
#2			
#3			
#4			
#5			
#6			
#7			

<add more rows as needed>





Criterion C - Creating a solution

Strand (ii) demonstrate excellent technical skills when making the solution

Table 1:

Pages	Important techniques	Main widgets used

<add more rows as needed>

Table 2:

Page name	Code Snippets

<add more rows as needed>





<u>Criterion C – Creating a solution</u>

Strand (iii) follow the plan to create the solution, which functions as intended

Task	Evidence	Estimated time	Exact time	Comments





<u>Criterion C – Creating a solution</u>

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

Explain all **significant improvements** and **changes** you made to your designs (task B3 & B4) when creating your final product. Illustrate your list with photographs and/or screenshots wherever helpful.

- List what changed from your design
- List what changed from your plan
- Explain why you made that change.

Changes made to the plan/design	Initial Design	Final Design	Justification for the changes

<add more rows as needed>





Criterion D - Evaluating

Strand (i) Describe detailed and relevant testing methods, which generate accurate data, to measure the success of the solution.





Criterion D - Evaluating

Strand (ii) Explain the success of the solution against the design specification

Specifications	Marks	Justification
Aesthetics		
Simplicity		
Customer (Target audience)		
Functionality		
Content		
Navigation		
Accessibility		
Format		
Data privacy		





Criterion D - Evaluating

Strand (iii) Explain how solutions can be improved.

 Conduct a thorough self-assessment, identifying areas of improvement and acknowledging any limitations.

Aspect	Limitations	Improvement Area
Aesthetics		
Simplicity		
Customer (Target audience)		
Functionality		
Content		
Navigation		
Accessibility		
Format		
Data Privacy		





<u>Criterion D – Evaluating</u>

Strand (iv) Explain the impact of the solution on the client/target audience.





Appendix of Evidence





Bibliography (Reference)