ECM241 Teaching the Curriculum: Junior Secondary Digital Technology

Assignment 2	
Title	Design a rich, investigative project
Value	50%
Week Due	End of Week 12
Length	As appropriate
Link to Unit Outcomes/AITSL	Unit Outcomes 1,2,3

Task Description

Students are to design a rich investigative project out of Design and Technology topics for Junior Secondary School Technology students. The project focusses on system development life cycle. The project is to address a specified content, involving understanding the nature of a problem, situation or need; creating, designing and producing a solution to the project task and documenting the process.

The task must be appropriate to secondary level technology students.

The task must involve:

- A Design Brief

- Planning

- Producing

- Evaluation

Also design a rubric on how would the project would be assessed.

Project work has a benefit, purpose and use; a user or audience who can provide feedback on the success of the solution. There are limitations and a real-world technologies context that are influenced by social, ethical and environmental issues. Through the designed project students should be able to explain how people working in technologies occupations consider factors that impact on decisions.

Education

MARKING CRITERIA ASSIGNMENT 2

	Unsatisfactory	Satisfactory	Accomplished
Overall Idea Focused, in-depth, extended inquiry Authentic Work	The project is like an activity or applied learning task. The "project" is unfocused, more like a unit with several tasks than one project. The topic do not reflect authentic issues or challenges that concern students, their communities, and or Society Tasks & products do not resemble the kind of work done in the world outside of the classroom. Does little to involves Planning and evaluation	Inquiry is superficial, e.g., information gathering is the main task. Inquiry focuses on only one too-narrow topic, OR it tries to include too many issues, side topics, or tasks. The topic & Design brief do not completely reflect authentic issues or challenges that concern students, their communities, and/or Society Tasks & products resemble (rather than replicate) the kind of work done in the world outside of the classroom. Does some Planning and evaluation	Inquiry is academically rigorous: students pose questions, gather & interpret data, ask further questions, and develop & evaluate solutions or build evidence for answers. The topic & Design Brief reflect authentic issues or challenges that concern students, their communities, and/or society Tasks & products showcase the kind of work done in the world outside of the classroom, or are actually used for a real purpose beyond the classroom. Require a good level of planning and success/failure evaluation
Student Voice & Choice, Independence	Students are not given opportunities, if appropriate, to express "voice & choice" (i.e., to make decisions affecting the content or conduct of the project). Students are expected to work too	Students are given limited opportunities to express "voice & choice," generally with less important matters, e.g., deciding how to divide tasks within a team or which website to use for research. Students are expected to work independently	Students have opportunities to express "voice & choice" on important matters, e.g., the topics to study, questions asked, texts & resources used, products created, use of time, and organization of tasks. Students have opportunities to take significant

	much on their own, without adequate guidance from the teacher and/or before they are capable.	from the teacher to some extent, although they have the skills and desire to do even more on their own.	responsibility and work independently from the teacher.
Driving Question	There is no Design Brief The Design Brief is seriously flawed, e.g.: It has a single or simple answer. It is not engaging to students, e.g., it sounds too "academic," like it came from a textbook or appeals only to a teacher.	The Design Brief relates to the project but does not capture its main focus; it may be more like a theme. The Design Brief meets some criteria for an effective problem but has some issues, e.g., it may lead students toward one particular answer, or it may be hard to answer thoroughly with the resources & time available and/or by students in this class.	The Design Brief captures the main focus of the project. The Design Brief is open-ended; it will allow students to develop more than one reasonable, complex answer. The Design Brief is understandable & inspiring to students. To answer the Design Brief students will need to gain the intended knowledge, skills, & understanding.
Content Outcomes	Content outcomes are not specified. Content outcomes are not aligned with national, state, or district standards.	There are too few OR too many content outcomes The project emphasizes additional standards that students do not need to know to complete project tasks.	Specific content outcomes are aligned with key national, state, or district standards, and represent essential skills and understandings needed to successfully complete the project.
21st Century Skills Collaboration Presentation Critical	The development of 21st Century Skills is not included.	Too few or relatively unimportant 21st Century Skills are targeted, OR too many to be	A limited number of important 21st century skills are targeted to be taught & assessed.

| Thinking | It is assumed that some 21st Century Skills will be gained by students, but the project does not explicitly scaffold the development of these skills.

Students do all project tasks as individuals.

Students do not present or defend their culminating product(s).

Students are not asked to think critically or solve problems. | adequately taught & assessed.

The project scaffolds the development of 21st Century Skills to some extent, but there may not be adequate opportunities to build skills or rigorously assess them.

Students work in teams, but it may be more cooperative than collaborative, e.g. the work of individuals is pieced together.

Students present their culminating products, but their defence is limited to a short, superficial question/answer session.

Students are asked to analyse & solve problems and think critically, but not in depth or in a sustained way. | There are adequate opportunities to build 21st Century Skills and they are rigorously assessed, e.g., with a rubric.

Students work in collaborative teams that employ the skills of all group members when completing project tasks. Students may collaborate with people beyond the classroom.

Students present culminating products and defend them in detail & in depth, e.g. by explaining reasoning behind choices they made, their inquiry process, etc. Students are asked to analyse & solve problems and think critically, in depth and in a sustained way |
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| Major/Culminating Product(s) And Presentation | No major/culminating products are included, only a series of smaller assignments.

The major products are not aligned with the Driving Question, i.e., they do not answer it or solve the stated problem. | Major/culminating products address the Driving Question, but do not align closely enough with standards & other outcomes (i.e., will not provide adequate evidence of learning).

Students are asked to create products that are mainly replications of others' work, e.g., a report of information or an artefact based on a model. | Major/culminating products provide an answer to the Driving Question and align with standards & other outcomes. Major/culminating products require innovation; students create something new, e.g., a written product, piece of media or art, or their own presentation after analysis of information or synthesis of ideas. |

Duration	Time frame defined is too short to accomplish project tasks.	Time frame may be overly optimistic about how quickly some tasks can be done.	The project is long enough to adequately answer the Design Brief and complete high-quality work, including time for revision, presentation, and reflection.
	The project is too long to justify what is gained.	The project is too stretched-out; students likely become disengaged or unfocused.	