

Lesson Plan

Teacher Candidate: Kamila Bekshentayeva

Lesson Title: Classic design: form and function

Grade Level and Course: Grade 11 (DP 1) Design Technologies

Time Segment of Lesson: 50 min

Standard(s) Addressed in Lesson:

IB standards (content):

Nature of Design 1: 3.3: seek, establish and verify broad concepts and general principles that underlie design methodology

Nature of Design 2: 3.10: appreciate the influence of others within the field of design including historical and current leaders, movements and organizations.

Lifelong learners 2.3: Students understand the connections between the IB learner profile and international-mindedness. (0402-02-0300)

Covered IB learner profile attributes in this unit: Inquirer, Thinker, Communicator, Knowledgeable, Reflective

DP Design Cycle Criterion A

Common Core: English Language Arts:

CCSS.ELA-LITERACY.W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

SL.8.2: Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

SL.8.4: Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

SL.8.1.D: Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

Overarching Unit Goal(s):

- Students will learn the main characteristics of classic design.
- Students will learn about the conflict between function and form.
- Students will learn about the practical and psychological functions of design and apply this knowledge to classic design examples.
- Students will learn about the retro-styling concept in classic design.
- Students will practise applying 21st century skills while working on lesson activities.
- Students will be applying international-mindedness when studying the chapters of topic 6.

Objective(s) of the Lesson: Students will be able to ...

(Remember SMART - Specific, Measurable, Achievable, Realistic, and Time-bound)

1. Compare the products designed with a focus on form or with a focus on function using and by describing classic design examples by the end of the lesson.
2. Identify practical and psychological functions in classic design by reading case studies and collaborating in groups during the lesson.
3. Explain the impact of psychological/practical aspects (after watching a video) and identify and evaluate the cases in classic design when collaborating in groups during the lesson.

Student Diversity and Differentiation of Instruction

Identify students who will need differentiated instruction for this lesson.

Student Diversity	Differentiation of Instruction
<i>All students are ELL</i>	<p>Allowing them to use translation tools on their laptops; allowing more time upon their request (when they work in groups/pairs/independently) on formative tasks; allowing them to ask questions - if something isn't clear.</p> <p>Visual support: images and videos are provided when introducing new concepts.</p> <p>Students are expected to come after classes, if they need additional explanation</p>
<i>1 student is on medications. She prefers to work independently and doesn't feel comfortable in social situations</i>	<p>In the beginning of each week my mentor gives this student tasks to work on. She is familiar with unit goals and submission requirements.</p> <p>Visual support: images and videos are provided when introducing new concepts.</p>

	She can always approach and ask additional questions. She is coming twice a week to continue working on her tasks or to ask questions from my mentor.
<i>Low performing students</i>	Never grouped together; often grouped heterogeneously with medium/high performing students. Visual support: images and videos are provided when introducing new concepts. Students are expected to come after classes, if they need additional explanation or help.
<i>Challenging behavior students</i>	Never grouped together. Usually grouped with the students, who can role-model expected behavior in a positive environment. Students are expected to come after classes, if they need additional explanation.

Formative and Summative Assessments- include open ended questions that will lead students to think deeply about the content and will also build on prior knowledge.

Formative Assessment	Summative Assessment
<p>1. Whole class activity to review our previous topic:</p> <p>True or False (formative) (Statements from the chapter 6 "Classic Design") - I include the statements on a ppt slide, I use a cold calling method (to keep students focused). I will ask a student to read a statement and reply if the statement is "true" or "false" and why; after her/ his response, if there is anything to add to the statement, I will ask the class to participate. We will keep going until there are no more statements.</p> <p>Statements are on a powerpoint slide.</p>	<p>Unit quiz (SL and HL students): quiz of 20 questions uploaded on Moodle to test their understanding of the entire unit. The goal is to ensure the students have mastered the standards, fulfilled the objectives.</p> <p>Time limit: 35 minutes</p> <p>After the end of unit (not during this lesson)</p>

Expected time: 5 minutes	
<p>2. Group 1 activity (high-medium level):</p> <p>A team needs to come up with a classic chair design. There is 1 engineer, 1 ergonomist, and 1-2 designer(s) (who is (are) into aesthetics), and 1 marketing specialist. Please provide briefly what each specialist prioritizes. Research and present to the class the final chair design (photo from the Internet) that would balance all your needs. Why did you end up with this design</p> <p>Time limit: 20 minutes</p>	<p>Summative assessment (only HL students) (preparation for IA - mockIA criteria A only)</p> <p>"Seating task" objective: students need to create a solution of a chair/sofa for school's foyer area using the ideas from previous and current units "Innovation" and "Classic design" Criteria A1: 200 words, criteria A2: 150 words, criteria A3: 800 words. Due: end of unit 6. Portion of activities to be done independently outside of class as homework.</p> <p>After the end of unit (not during this lesson)</p>
<p>3. Group 2 activity (medium-low level):</p> <p>Based on the case study of Panton chair: explain the Practical function vs Psychological function and how they might relate to the Panton Chair.</p> <p>Each team needs to study the principles of retro-styling - and create a chair using retro-styling strategy - using the form and decoration of classic design from a particular period of time.</p> <p>Get inspired by the ideas of the past. Be able to explain if you prioritized form or function.</p> <p>Time limit: 20 minutes</p>	
<p>4. Group 3 activity (high-level):</p> <p>Your team needs to study the</p>	

<p>principles of retrostyling - and create a chair using retrostyling strategy - use the form and decoration of classic design from particular period of time.</p> <p>Get inspired by the ideas of the past. Be able to explain if you prioritized form or function.</p>	
<p>5. Exit ticket</p> <p>Exit-ticket questions as a lesson overview (last 10 minutes of a lesson), the responses will indicate students level of understanding, i.e., questions will cover the knowledge students should demonstrate as a mastery of the standard:</p> <p>Provide an example of an item where form follows function</p> <p>Provide an example of an item where function follows form</p> <p>Identify practical and psychological functions in classic design;</p>	
<p>6. After class (submitted online):</p> <p>Study guides on moodle (online platform) for Topic 6 - The study guides are formative assessments that help to review the material (by answering questions, by researching, analyzing, and following tasks) and to prepare for formal summative assessments (unit quizzes and exams). The successful completion without/minimum number of mistakes would indicate the</p>	

<p>student is completely following/understanding the class material and no/minimal adjustments are required; poor performance would indicate the opposite (approach, slides, formative assessments have to be reviewed, especially if a large amount of students has failed the study guide tasks) My goal is to gather such data, analyze, and make according decisions.</p> <p>Given as a homework assignment - after the end of the unit.</p> <p>Additionally fill out the discussion section to provide personal feedback about the study guide and how it helps to prepare for the unit test.</p> <p>A sample activity (for topic 5) can be found here:</p> <p>https://docs.google.com/document/d/16J92tebEIIM27lu7aC-sa_RsdGifDinK/edit</p>	
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Questions for formative assessment during and/or after the lesson

Examples of review questions in the beginning of the lesson “True or false?”:

1. A classic design has a timeless quality, remains recognized and fashionable. (True)
2. There are three types of emotional response: visceral, behavioral, and aesthetic. (False)
3. The mass production of a design is NOT an important contributing factor for it to be considered a classic design. (False)
4. Classic design is ubiquitous or omnipresent has become a part of our daily life, to the point where we have started to attach emotions or feelings to the product. (True)

Examples of exit ticket questions/tasks:

1. Provide an example of an item where form follows function.

2. Provide an example of an item where function follows form.
3. Identify practical and psychological functions in classic design.

Big Ideas to be Addressed in the Lesson:

- Understand how form can be dictated by other functions such as design for manufacture techniques, for example, design for disassembly.
- Explore other objects where either practical function or psychological function has been the determining factor in the design.

Discussion Questions

Write out questions that you would like students to discuss in class, before class or after class because they are interesting, support higher order thinking, and make for a lively and engaging discussion. If discussions must happen outside class, what tool will you use to facilitate the discussion (e.g. Twitter)?

1. Is aesthetic value purely a subjective matter?
2. How can form be dictated by function?
3. What are practical and psychological functions in classic design?

Additionally fill out the discussion section in moodle to provide personal feedback about the study guide (formative assessment 5) and how it helps to prepare for the unit test.

21st Century Knowledge and Skills

21st Century Knowledge and Skills	Teaching Strategies
Critical thinking	asking questions and letting them work on formative assessments using various technology tools (moodle, course websites, external websites, canva, kahoot, quizlet)
Creativity	letting them work in groups, brainstorm, research independently, provide examples,

	work on formative assessments using various technology tools (moodle, course websites, external websites, canva, kahoot, quizlet)
Collaboration	letting them work in groups, brainstorm, discuss, present in groups using various technology tools (powerpoint, canva, or other)
Communication	letting them work in groups, brainstorm, discuss, present in groups using various technology tools (powerpoint, canva, or other)
Information literacy	letting them research, read primary/secondary, online/paper resources using various technology tools (moodle, course websites, external websites, canva, kahoot, quizlet)
Design Thinking	letting them analyze against various criteria, with the user-centred design in mind, thinking outside the box (take photos in the lobby and create questionnaire for customer survey)

Literacy Skills

Describe the literacy skills (if any) covered in this lesson and how it will help improve the students' reading skills such as comprehension, oral language, phonetic or phonological awareness, fluency and vocabulary as applicable.

Oral language skills (when answering questions, presenting their findings, summarizing reading, when working in groups, brainstorming, discussing, presenting in groups)

Self-regulation and self-monitoring (while reading, speaking, writing, when working in groups,

brainstorming, discussing, presenting in groups)

Connecting background knowledge to the information in the text/video (reading, when researching, reading/watching/listening primary/secondary, online resources, preparing presentation, searching for examples online)

Reading comprehension (reading with purpose, when researching, reading primary/secondary, online/paper resources)

Writing (working on formative/summative assessments, writing essays, projects)

Teaching Strategies and Related Student Activities (Include Web 2.0 activities and innovative strategies, as appropriate):

Teaching Strategies and Activities: What are the teaching strategies and activities that you plan to use to help students meet the lesson's objectives? What are the steps that you will take to deliver this lesson (e.g., introduce the author, read the poem, ask students to...)? Make this section as detailed as possible. It should allow you to hand it off to a substitute teacher.

Sections of the lesson	explain	mods
Intro (I do, they do)		
Ask a funny question: If a classic design were a cat - which one would it be?	Provide 4 images (generated by AI) of a classic, a futuristic, a traditional, an industrial cat	Visual: sentences, images on the slides
What characteristics of classic design do you know ?	Reviewing lesson 1 of this unit	Visual: sentences, images on the slides
True and false statements	Reviewing lesson 1 of this unit	All class participation - cold calling - ask those who didn't demonstrate complete understanding during lesson 1 of this unit; then ask volunteers who raises hands to add to the question

Main part (I do, we do, they do)		
Introducing the agenda	provide the objectives of the lesson linking them to the unit goals	Visual: sentences, images on the slides
Form follows function	provide definitions, examples (Norman door, computer mouse) talk about Bauhaus design school	keep asking if everything is clear. if yes - ask them to provide examples when form follows function if no - provide more examples, show them video or talk after class (provide more resources to study at home or after class - office hours)
Function follows form	provide definitions, examples (Alessi juicer or other more practical juicer pictures) talk about conflict and compromise	keep asking if everything is clear. if yes - ask them to provide examples when function follows form if no - provide more examples, show them video or talk after class (provide more resources to study at home or after class - office hours)
Group activities time	Formative group activities are described above.	Based on the total number of students - separate into 2 to 4 groups - group heterogeneously based on SEL and

		behaviour - group homogeneously based on academics level - best friends and worst enemies are separated for more effective collaboration
Review (they do)		
answer my questions	everyone on sticky notes submits their responses to me volunteers answer orally	written and oral form

Teacher/Student Input: Write a note on what you expect the teacher and students to do as a part of this activity. Include a note on whether this is an “I do it”, “We do it” or “You do it” type of activity.

I do:

- introduce new information,
- provide examples,
- help,
- ask questions

Examples: **Intro:** asking questions, **main part:** introducing the agenda of the lesson, introducing new concepts, providing examples, moderating activities, providing constructive feedback, **review:** asking question, evaluating their responses, answering questions if any

You do:

- provide examples,
- brainstorm with a partner/group,

- research, present,
- ask questions,
- take notes at all time,
- raise hands to provide an input or to ask questions,
- follow classroom norms

We do:

- ask and answer questions,
- help each other,
- do our best to meet the objectives

More information in the table above

Review: Write down ideas on how you will review the topic, including notes on types of formative assessments that you will use during the lesson.

Exit-ticket questions as a lesson overview (last 10 minutes of a lesson), the responses will indicate students level of understanding, i.e., questions will cover the knowledge students should demonstrate as a mastery of the standard and based on the following content:

- Provide an example of an item where form follows function
- Provide an example of an item where function follows form
- Identify practical and psychological functions in classic design
- everyone submits on sticky notes (sticking on the board with their names)
- volunteers answer orally after if time permits
- I evaluate and if I see some students struggling on particular topics - provide as a review of the previous lesson during the next lesson in the beginning.

Materials and Resources for Lesson

Materials, Technology, and Websites	Required Preparation
<i>IB Design and Inquiry website</i>	read, watch videos, filter out based on time allowance, students understanding

<i>Diploma Design Technology website</i>	read, watch videos, filter out based on time allowance, students understanding
<i>External examples</i>	search for ideas, samples outside of regular IB curriculum open source resources

References

IB Design and Inquiry website

<https://sites.google.com/view/designandinquiry/dp-sl-design/topic-5-innovation-and-design/5-3-strategies-for-innovation?authuser=0>

Diploma Design Technology website

https://docs.google.com/presentation/d/17qjF2DAe20TogHc0Mp_r73unATq57e-CO1-lqFsxrDM/pub?start=false&loop=false&delayms=3000&slide=id.p37

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