

## COURSE OUTLINE – MYP YEAR 5 WEB DEVELOPMENT



### Course Overview:

Applied Design, Skills and Technologies includes several project-based disciplines of study, of which Web Development (WD) 10 is one option. While each ADST 10 option uses a different medium of study, all apply the Design Cycle as the core method to develop effective design solutions. Specific attention is paid to analyzing the essential qualities of a successful design solution, developing a plan that will incorporate those essential criteria, creating the solution based upon that plan and the evaluating the effectiveness of the solution based upon those criteria.

In ADST (WD) 10, students create increasingly more elaborate web pages and sites from the ground up keeping the needs of the intended user at the forefront of their designs, using Hypertext Markup Language (html) and Cascading Style Sheets (CSS) to produce and manipulate accessible, functioning layouts for defined audiences. In doing so, this course will build upon many of the concepts that were explored in the Digital Literacy component of Designs 8 class and in ICT 9.

Throughout the course, we will address variety of issues related to good and safe digital citizenship, including ethical considerations relating to intellectual property and personal identity on the internet and methods to curate, access and share files in a networked environment. Additionally, a focus of this course will be the influences digital media can have on social discourse.

### Learning:

**Through engaging with this course, students should UNDERSTAND...**

User needs and interests drive the design process.



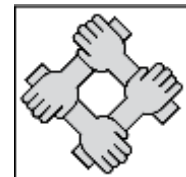
Social, ethical, and sustainability considerations influence design.



Complex tasks require different technologies and tools at different stages.



Multi-stage design projects benefit from collaborative work environments.



**Through engaging with this course, students will KNOW...**

Statement of Inquiry	Concepts	Unit Title/Topic
Effective expression involves attention to both what is articulated and how it is articulated.	Key and Related Concepts: Communication and Evaluation Global Contexts: Personal and Cultural Expression (Critical Literacy)	The 'What' and 'How' of Saying: presenting content with a website.
The best design solutions anticipate the needs and expectations of the end user.	Key and Related Concepts: Communities and Adaptation Global Contexts: Identities and Relationships (Health and Wellbeing)	The "C.R.A.P." of a well-designed website: using contrast, repetition, alignment and proximity.
Complex, multi-stage designs require collaboration and organization.	Key and Related Concepts: Systems and Function Global Contexts: Scientific and Technical Innovation (Systems)	No "I" in Team: integrating different facets of a website to create a good UX (user experience).

## Through engaging with this course, students will DO...

CURRICULAR COMPETENCIES CATEGORIES	EXAMPLES (Selected from Curricular Competencies)
Understanding Context	<ul style="list-style-type: none"> <li>Engage in research and empathetic observation in order to understand design opportunities.</li> <li>Concisely explain a Design Problem.</li> </ul>
Defining	<ul style="list-style-type: none"> <li>Identify potential users, societal impacts, and other relevant contextual factors for a chosen design opportunity.</li> <li>Identify criteria for success, intended impact, and any constraints or possible unintended impacts.</li> <li>Develop a Design Brief and Evaluation Criteria.</li> </ul>
Ideating	<ul style="list-style-type: none"> <li>Take creative risks in generating ideas and add to others' ideas in ways that enhance them.</li> <li>Screen ideas against criteria and constraints.</li> <li>Collaborate on idea generation and maintain an open mind about potentially viable ideas.</li> </ul>
Prototyping	<ul style="list-style-type: none"> <li>Identify and use sources of inspiration and information.</li> <li>Choose a form for prototyping and develop a plan that includes key stages and resources.</li> <li>Prototype, making changes to design, strategies and procedures as needed.</li> <li>Record iterations of prototyping.</li> </ul>
Testing	<ul style="list-style-type: none"> <li>Develop an appropriate test for the prototype.</li> <li>Test the prototype, collect and compile data, evaluate data, and decide on changes.</li> <li>Make changes to the design solution and test again.</li> </ul>
Making	<ul style="list-style-type: none"> <li>Identify and use appropriate tools, technologies; source appropriate digital materials for the design solution.</li> <li>Make a step-by-step plan for production and carry it out, making changes as needed.</li> <li>Put into practice the development plan, incorporating the chosen design, strategies and procedures.</li> </ul>
Sharing	<ul style="list-style-type: none"> <li>Demonstrate the product to potential users, providing a rationale for selected solution, modifications, and procedures, using appropriate terminology.</li> <li>Critically reflect on design thinking and processes, and identify new design goals.</li> <li>Assess ability to work effectively both as individuals and collaboratively in a group, including ability to share and maintain an efficient cooperative work space.</li> </ul>
Applied Skills	<ul style="list-style-type: none"> <li>Demonstrate an awareness of precautionary and emergency safety procedures in a digital environments.</li> <li>Identify the skills needed in relation to specific projects, and develop and refine them.</li> </ul>
Applied Technologies	<ul style="list-style-type: none"> <li>Choose, adapt, and if necessary learn more about appropriate tools and technologies to use for tasks.</li> <li>Evaluate impacts, including unintended negative consequences, of choices made about technology use.</li> </ul>

## Through this course, students will develop the following Approaches to Learning skills...

Below are some examples of how we develop ATL skills in Design:

ATL Skill Category	Examples of Skills
Research skills	Gather information from design problem-specific inquiry and make relevant, detailed observations.
Thinking skills	Analyze observations and information gained from design problem-specific inquiry. Develop criteria to test potential design plans.
Social skills	Practice giving feedback on the design solutions with reference to established design-specific criteria; demonstrate academic integrity.
Communication skills	Use of appropriate tools and strategies to convey an intended message to a defined audience in anticipation of that audience's needs.
Self-management skills	Collaborate effectively; use appropriate resources and available timeframe and supports to complete a design solution.

## Assessment:

Throughout this course, students will demonstrate their learning...

The MYP Design course will focus on developing skills related to 4 criteria based objectives.	Formative assessment is assessment <i>as</i> learning, or assessment <i>for</i> learning. <b>Formative assessments could include;</b>	Summative assessment is assessment <i>of</i> learning. <b>Summative assessments could include;</b>
<b>A: Inquiring and Analyzing</b>	Guided and informal inquiry exercises pursued individually, in pairs, small groups and as a full class.	Formal design inquiry and analysis
<b>B: Developing Ideas</b>	Guided and informal criteria development and ideation exercises pursued individually, in pairs, small groups and as a full class.	Formal written description of qualitative criteria for summative projects. Presentation and justification of chosen design ideas and planning through a 'product pitch'.
<b>C: Creating the Solution</b>	Multiple small 'practice projects' allowing students to practice the use of specific tools, techniques and strategies explained and demonstrated through direct instruction.	<p><u>"Bucket List Website" project:</u> Creating a multi-page, integrated website using html to manage the content.</p> <p><u>"Exercise and Fitness Website" project:</u> Creating a multi-page, integrated instructional website using html, CSS and purpose-build graphics and animations/video clips.</p> <p><u>"Build Your Adventure website" project:</u> Use html, CSS, purpose build graphics and cooperative planning to create a sense of interaction for the user.</p>
<b>D: Evaluating</b>	Guided and informal critiques of sample designs provided by the teacher and classmates.	Formal written critique of a student-design team's solution.

## Academic Honesty and Personal Integrity

The faculty at Carson Graham expects our students to complete academic and nonacademic work that is authentic and respectful of intellectual property. All students are expected to adhere to the school's Policy for Academic Integrity. Ignorance of the standards related to academic honesty and student integrity is not an excuse for dishonesty, plagiarism and malpractice. You are expected to familiarize yourself with the policy.

<https://www.sd44.ca/school/carson/About/schoolpolicies/Documents/Carson%20Graham%20Academic%20Honesty%20Policy%20reviewed%20December%202018.pdf>

## Grade Descriptors:

### Grade 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.

### Grade 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.

### Grade 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 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.

### Grade 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.

### Grade 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.

### Grade 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.

## Assessment Rubrics:

# Grade 10

## Criterion A: Inquiring and analysing

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student: <ul style="list-style-type: none"> <li>• <b>states</b> the need for a solution to a problem for a specified client/target audience</li> <li>• <b>develops</b> a basic design brief, which <b>states</b> the <b>findings</b> of relevant research.</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• <b>outlines</b> the need for a solution to a problem for a specified client/target audience</li> <li>• <b>outlines</b> a research plan, which <b>identifies</b> primary and secondary research needed to <b>develop</b> a solution to the problem, <b>with some guidance</b></li> <li>• <b>analyses one</b> existing product that inspires a solution to the problem</li> <li>• <b>develops</b> a design brief, which <b>outlines</b> the analysis of relevant research.</li> </ul>
5-6	<ul style="list-style-type: none"> <li>• <b>explains</b> the need for a solution to a problem for a specified client/target audience</li> <li>• <b>constructs</b> a research plan, which <b>identifies</b> and <b>prioritizes</b> primary and secondary research needed to <b>develop</b> a solution to the problem, <b>with some guidance</b></li> <li>• <b>analyses a range of</b> existing products that inspire a solution to the problem</li> <li>• <b>develops</b> a design brief, which <b>explains</b> the analysis of relevant research.</li> </ul>
7-8	<ul style="list-style-type: none"> <li>• <b>explains</b> and <b>justifies</b> the need for a solution to a problem for a client/ target audience</li> <li>• <b>constructs</b> a <b>detailed</b> research plan, which <b>identifies</b> and <b>prioritizes</b> the primary and secondary research needed to <b>develop</b> a solution to the problem independently</li> <li>• <b>analyses a range of</b> existing products that inspire a solution to the problem in detail</li> <li>• <b>develops</b> a <b>detailed</b> design brief, which <b>summarizes</b> the analysis of relevant research.</li> </ul>

## Criterion B: Developing ideas

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student: <ul style="list-style-type: none"> <li>• <b>lists some basic</b> design specifications for the design of a solution</li> <li>• <b>presents one</b> design, which can be interpreted by others</li> <li>• <b>creates</b> incomplete planning drawings/diagrams.</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• <b>lists some</b> design specifications, which relate to the success criteria for the design of a solution</li> <li>• <b>presents a few</b> feasible designs, using an appropriate medium(s) <b>or</b> annotation, which can be interpreted by others</li> <li>• <b>justifies</b> the selection of the chosen design with reference to the design specification</li> <li>• <b>creates</b> planning drawings/diagrams <b>or lists</b> requirements for the creation of the chosen solution.</li> </ul>
5-6	<ul style="list-style-type: none"> <li>• <b>develops</b> design specifications, which <b>outline</b> the success criteria for the design of a solution</li> <li>• <b>develops a range of</b> feasible design ideas, using an appropriate medium(s) <b>and</b> annotation, which can be interpreted by others</li> <li>• <b>presents</b> the chosen design and <b>justifies</b> its selection with reference to the design specification</li> <li>• <b>develops accurate</b> planning drawings/diagrams <b>and lists</b> requirements for the creation of the chosen solution.</li> </ul>
7-8	<ul style="list-style-type: none"> <li>• <b>develops detailed</b> design specifications, which <b>explain</b> the success criteria for the design of a solution based on the analysis of the research</li> <li>• <b>develops a range of</b> feasible design ideas, using an appropriate medium(s) <b>and detailed</b> annotation, which can be <b>correctly</b> interpreted by others</li> <li>• <b>presents</b> the chosen design and <b>justifies fully and critically</b> its selection with <b>detailed</b> reference to the design specification</li> <li>• <b>develops accurate and detailed</b> planning drawings/diagrams <b>and outlines</b> requirements for the creation of the chosen solution.</li> </ul>

## Criterion C: Creating 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: <ul style="list-style-type: none"> <li>• <b>demonstrates minimal</b> technical skills when making the solution</li> <li>• <b>Creates</b> the solution, which functions <b>poorly</b> and is presented <b>in an incomplete form</b>.</li> </ul>
3-4	The student: <ul style="list-style-type: none"> <li>• <b>constructs a plan</b> that contains some production details, resulting in peers having difficulty following the plan</li> <li>• <b>demonstrates satisfactory</b> technical skills when making the solution</li> <li>• <b>creates</b> the solution, which <b>partially</b> functions and is <b>adequately</b> presented</li> <li>• <b>outlines</b> changes made to the chosen design and plan when making the solution.</li> </ul>
5-6	The student: <ul style="list-style-type: none"> <li>• <b>constructs a logical plan</b>, which considers time and resources, sufficient for peers to be able to follow to create the solution</li> <li>• <b>demonstrates competent</b> technical skills when making the solution</li> <li>• <b>creates</b> the solution, which functions <b>as intended</b> and is presented <b>appropriately</b></li> <li>• <b>describes</b> changes made to the chosen design and plan when making the solution.</li> </ul>
7-8	The student: <ul style="list-style-type: none"> <li>• <b>constructs a detailed and logical plan</b>, which <b>describes</b> the efficient use of time and resources, sufficient for peers to be able to follow to create the solution</li> <li>• <b>demonstrates excellent</b> technical skills when making the solution.</li> <li>• follows the plan to <b>create</b> the solution, which functions <b>as intended</b> and is presented <b>appropriately</b></li> <li>• fully <b>justifies</b> changes made to the chosen design and plan when making the solution.</li> </ul>

## Criterion D: Evaluating

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student: <ul style="list-style-type: none"> <li>• <b>designs a testing method</b>, which is used to measure the success of the solution</li> <li>• <b>states</b> the success of the solution.</li> </ul>
3-4	The student: <ul style="list-style-type: none"> <li>• <b>designs a relevant testing method</b>, which generates data, to measure the success of the solution</li> <li>• <b>outlines</b> the success of the solution against the design specification based on <b>relevant</b> product testing</li> <li>• <b>outlines</b> how the solution could be improved</li> <li>• <b>outlines</b> the impact of the solution on the client/target audience.</li> </ul>
5-6	The student: <ul style="list-style-type: none"> <li>• <b>designs relevant testing methods</b>, which generate data, to measure the success of the solution</li> <li>• <b>explains</b> the success of the solution against the design specification based on <b>relevant</b> product testing</li> <li>• <b>describes</b> how the solution could be improved</li> <li>• <b>explains</b> the impact of the solution on the client/target audience, <b>with guidance</b>.</li> </ul>
7-8	The student: <ul style="list-style-type: none"> <li>• <b>designs detailed and relevant testing methods</b>, which generate data, to measure the success of the solution</li> <li>• critically <b>evaluates</b> the success of the solution against the design specification based on <b>authentic</b> product testing</li> <li>• <b>explains</b> how the solution could be improved</li> <li>• <b>explains</b> the impact of the product on the client/target audience.</li> </ul>