

## COURSE OUTLINE – MYP YEAR 4 DESIGN – FOODS & NUTRITION



### Course Overview:

Foods and Nutrition 9 is a hands-on course that involves students working in unit groups to complete cooking labs, clean-up and reflections. Students will be introduced to concepts of food safety, food preparation techniques, food systems and factors that influence availability and choice. Students will complete a nutrient project that goes through the IB Design Cycle.

### Learning:

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

Social, ethical, and sustainability considerations impact design.



Complex tasks require the sequencing of skills.



Complex tasks require different technologies and tools at different stages.



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

Statement of Inquiry	Concepts	Unit Title/Topic
People in our communities have varying needs, which emphasizes the importance of planning with the available resources in mind.	Communities Connections	Nutrients in Our Diets

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

CURRICULAR COMPETENCIES	EXAMPLES
Understanding context	<ul style="list-style-type: none"> <li>Engage in a period of research to understand design opportunities</li> </ul>
Defining	<ul style="list-style-type: none"> <li>Choose a design opportunity</li> <li>Identify criteria for success, intended impact, and any constraints</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>Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures</li> <li>Choose an idea to pursue, keeping other potentially viable ideas open</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>Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability</li> <li>Prototype, making changes to tools, materials, and procedures as needed</li> </ul>
Testing	<ul style="list-style-type: none"> <li>Identify sources of feedback</li> <li>Develop an appropriate test of the prototype</li> <li>Conduct the test, collect and compile data, evaluate data, and decide on changes</li> </ul>
Making	<ul style="list-style-type: none"> <li>Identify and use appropriate tools, technologies, materials, and processes for production</li> <li>Make a step-by-step plan for production and carry it out, making changes as needed</li> <li>Use materials in ways that minimize waste</li> </ul>
Sharing	<ul style="list-style-type: none"> <li>Decide on how and with whom to share their product and processes</li> <li>Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment</li> <li>Critically reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group</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
Thinking skills	Interpret data gained from scientific investigations
Social skills	Practice giving feedback on the design of experimental methods
Communication skills	Use appropriate visual representations of data based on purpose and audience skills
Self-management skills	Structure information appropriately in laboratory investigation reports
Research skills	Make connections between scientific research and related moral, ethical, social, economic, political, cultural or environmental factors

## 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>	Using food safety principles during labs	Herbs and spices project
<b>B: Developing Ideas</b>	Adjusting ingredients to suit preferences during labs, experimenting with different equipment for cooking	Herbs and spices project
<b>C: Creating the Solution</b>	Creating products during cooking labs	Herbs and spices project
<b>D: Evaluating</b>	Recipe tracker reflections, verbal group reflections after labs	Herbs and spices project

## 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 9

## 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</li> <li>• <b>states</b> the findings of research.</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• <b>outlines</b> the need for a solution to a problem</li> <li>• <b>states some</b> points of research needed to <b>develop</b> a solution, <b>with some guidance</b></li> <li>• <b>states</b> the main features of an existing product that inspires a solution to the problem</li> <li>• <b>outlines some of</b> the main findings of research.</li> </ul>
5-6	<ul style="list-style-type: none"> <li>• <b>explains</b> the need for a solution to a problem</li> <li>• <b>states and prioritizes</b> the main points of research needed to <b>develop</b> a solution to the problem, <b>with some guidance</b></li> <li>• <b>outlines</b> the main features of an existing product that inspires a solution to the problem</li> <li>• <b>outlines</b> the main findings of relevant research.</li> </ul>
7-8	<ul style="list-style-type: none"> <li>• <b>explains and justifies</b> the need for a solution to a problem</li> <li>• <b>states and prioritizes</b> the main points of research needed to <b>develop</b> a solution to the problem, <b>with minimal guidance</b></li> <li>• <b>describes</b> the main features of an existing product that inspires a solution to the problem</li> <li>• <b>presents</b> the main findings 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>states one</b> basic success criterion for a solution</li> <li>• <b>presents one</b> design idea, which can be interpreted by others</li> <li>• <b>creates</b> an incomplete planning drawing/diagram.</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• <b>states a few</b> success criteria for the solution</li> <li>• <b>presents more than one</b> design idea, using an appropriate medium(s) or labels key features, which can be interpreted by others</li> <li>• <b>states</b> the key features of the chosen design</li> <li>• <b>creates</b> a planning drawing/diagram or <b>lists</b> requirements for the creation of the chosen solution.</li> </ul>
5-6	<ul style="list-style-type: none"> <li>• <b>develops a few</b> success criteria for the solution</li> <li>• <b>presents a few</b> feasible design ideas, using an appropriate medium(s) and labels key features, which can be interpreted by others</li> <li>• <b>presents</b> the chosen design <b>stating</b> the key features</li> <li>• <b>creates</b> a planning drawing/diagram and <b>lists</b> the main details for the creation of the chosen solution.</li> </ul>
7-8	<ul style="list-style-type: none"> <li>• <b>develops a list of</b> success criteria for the solution</li> <li>• <b>presents</b> feasible design ideas, using an appropriate medium(s) and outlines the key features, which can be correctly interpreted by others</li> <li>• <b>presents</b> the chosen design <b>describing</b> the key features</li> <li>• <b>creates</b> a planning drawing/diagram, which <b>outlines</b> the main details for making 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 approaching</b> technical skills when making the solution</li> <li>• <b>presented in an incomplete form.</b></li> </ul>
3-4	The student: <ul style="list-style-type: none"> <li>• <b>lists</b> the main steps in a plan that contains the details to follow the plan to create the solution</li> <li>• <b>demonstrates good</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>states more than one change</b> made to the chosen design <b>or</b> plan when making the solution.</li> </ul>
5-6	The student: <ul style="list-style-type: none"> <li>• <b>lists</b> the steps in a plan, which <b>considers</b> time and resources, resulting in peers being able to follow the plan 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>states one change</b> made to the chosen design <b>and</b> plan when making the solution.</li> </ul>
7-8	The student: <ul style="list-style-type: none"> <li>• <b>outlines</b> a plan, which <b>considers</b> the use of resources and time, 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 as <b>intended</b> and is presented <b>appropriately</b></li> <li>• <b>explains changes</b> 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>describes</b> a testing method, 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>defines</b> a <b>relevant</b> testing <b>method</b>, which generates data, to measure the success of the solution</li> <li>• <b>states</b> the success of the solution against the design specification based on the results of <b>one relevant</b> test</li> <li>• <b>states one way</b> in which the solution could be improved</li> <li>• <b>states one way</b> in which the solution can impact the client/target audience.</li> </ul>
5-6	The student: <ul style="list-style-type: none"> <li>• <b>defines relevant</b> testing <b>methods</b>, which generate data, to measure the success of the solution</li> <li>• <b>states</b> the success of the solution against the design specification based on <b>relevant</b> product testing</li> <li>• <b>outlines one way</b> in which the solution could be improved</li> <li>• <b>outlines</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>outlines</b> testing methods used, which demonstrate the success of the solution</li> <li>• <b>outlines</b> the success of the solution against the design specification based on <b>authentic</b> product testing</li> <li>• <b>describes</b> how the solution could be improved</li> <li>• <b>outlines</b> the impact of the solution on the client/target audience.</li> </ul>