ROCKRIDGE SECONDARY SCHOOL

Subject Group Overview: Design

FILM: APPLIED DESIGN, SKILLS & TECHNOLOGIES (ROTATION) — YEAR 3

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Commercial Design	Communication	Perspective Adaptation	Identities and Relationships	Complex tasks may require multiple tools and technologies.	"Picture is Worth a Thousand Words": Stills Movie	C: i, ii, iii	Self-management: Organization, Reflection Thinking: Creative-Thinking, Critical-Thinking, Transfer
					"Picture is Worth a Thousand Words": Storyboard	B: i, ii, iii, iv	
					Presentation: How to Analyze an Advertisement	A: i, ii, iii, iv	Research: Media Literacy, Information Literacy Self-management: Organization, Reflection, Affective Thinking: Creative-Thinking, Critical-Thinking, Transfer
					Creating a Commercial	C: i, ii, iii, iv	
					Evaluating a Commercial	D: ii, iii, iv	

FOOD STUDIES: APPLIED DESIGN, SKILLS & TECHNOLOGIES — YEAR 4

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Meals and Meal Planning:	Systems	Perspective Sustainability	Globalization and Sustainability	Social, ethical, and sustainability considerations impact design.	Breakfast Identifying Problem, Research, Recommendations	A: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer

Breakfast					Breakfast Selecting & Designing Meal Plan	B: i, ii, iii, iv	Research: Media Literacy, Information Literacy Self-management: Organization, Reflection, Affective
					Breakfast Make the Steps, Follow the Steps, Assess Product, Adjust Recipe	C: i, ii, iii, iv	
					Breakfast Critical Evaluation	D: i, ii, iii, iv	
Meals and Meal Planning: Lunches/Dinners	Systems	Invention	Personal and Cultural Expression	Complex tasks require the sequencing of skills.	Lunches/Dinners Identifying Problem, Research, Recommendations	A: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy, Information Literacy Self-management: Organization, Reflection, Affective
					Lunches/Dinners Selecting & Designing Meal Plan	B: i, ii, iii, iv	
					Lunches/Dinners Make the Steps, Follow the Steps, Assess Product, Adjust Recipe	C: i, ii, iii, iv	
					Lunches/Dinners Critical Evaluation	D: i, ii, iii, iv	
Meals and Meal Planning: Vegetarianism	Development	Adaptation Function	Identities and Relationships	Complex tasks require different technologies and tools at different stages.	Vegetarianism Identifying Problem, Research, Recommendations	A: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy, Information Literacy Self-management: Organization, Reflection, Affective
					Vegetarianism Selecting & Designing Meal Plan	B: i, ii, iii, iv	
					Vegetarianism Make the Steps, Follow the Steps, Assess Product, Adjust Recipe	C: i, ii, iii, iv	
					Vegetarianism Critical Evaluation	D: i, ii, iii, iv	

ICT: APPLIED DESIGN, SKILLS & TECHNOLOGIES (ROTATION) — YEAR 3

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Making Algorithmic Designs	Communication	Form Function	Personal and Cultural Expression	Complex tasks require the acquisition of additional skills.	Multiple Shape Functions	A: iii, iv B: ii, iii C: ii D: iii	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy

INFORMATION & COMMUNICATIONS TECHNOLOGY: ADST — YEAR 4

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Computational Thinking using Algorithmic Frameworks	Perspective	Innovation	Scientific and Technical Innovation	Complex tasks require the sequencing of skills.	Bad Choices: Flowchart Design and Pseudocode	A: i, ii, iii, iv C: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy Self-management: Organization, Reflection
p5JS Programming	Systems	Invention	Identities and Relationships	Complex tasks require the sequencing of skills.	Draw Functions	A: i, iii B: i, ii, iii C: i, ii, iii D: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy, Information Literacy Self-management: Organization, Reflection
Design Process using HTML CSS JS	Communication	Adaptation Form	Scientific and Technical Innovation	Complex tasks require different technologies and tools at different stages.	Community Based Website	A: i, iv B: i, iv C: ii, iii D: ii, iii	Thinking: Creative-Thinking, Critical-Thinking Research: Media Literacy, Information Literacy Self-management: Organization, Reflection
Digital Media Development JS Functions	Systems	Collaboration Evaluation	Identities and Relationships	Social, ethical, and sustainability considerations impact design.	Typography Function Music Video	A: i, iv B: i, iv C: ii, iii D: ii, iii	Thinking: Creative-Thinking, Critical-Thinking Research: Media Literacy, Information Literacy Self-management: Organization, Reflection

DESIGN & INNOVATION: APPLIED DESIGN, SKILLS & TECHNOLOGIES — YEAR 3

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Vancouver Marvels	Development	Innovation Adaptation	Scientific and Technical Innovation	Design can be responsive to identified needs. Complex tasks may require multiple tools and technologies.	TinkerCAD Design 200x Smaller	B: iv	Thinking: Critical-Thinking Self-management: Reflection Thinking:
					Vancouver House	C: iv	

					A 3rd Crossing	A: i D: iii	Critical-Thinking, Creative-Thinking

DESIGN & INNOVATION: ADST — YEAR 4

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Bridge Building	Development	Form Ergonomics Adaptation	Scientific and Technical Innovation	Social, ethical, and sustainability considerations impact design.	Building a 3D-printed robotic device to help others with additional needs	A: ii B: iv C: iii D: iii	Thinking: Creative-Thinking Research: Media Literacy Self-management: Organization
Electronics	Systems	Function Invention	Scientific and Technical Innovation	Complex tasks require the sequencing of skills.	Building a helmet that communicates navigational information	A: iii B: i C: ii D: ii	Thinking: Transfer Research: Media Literacy Self-management: Organization, Affective
CO_2 Cars	Development	Invention Innovation	Scientific and Technical Innovation	Complex tasks require different technologies and tools at different stages.	Creating a CO_2-powered rocket car	A: iv B: ii C: iv D: i	Thinking: Creative-Thinking, Critical-Thinking Research: Information Literacy Self-management: Reflection
Open Inquiry Design	Systems	Innovation Resources	Scientific and Technical Innovation	Complex tasks require different technologies and tools at different stages.	Students must use 2 or more skills that they have developed throughout the year.	A: i B: iii C: i D: iv	Thinking: Critical-Thinking Self-management: Organization

TECHNOLOGY EXPLORATIONS — YEAR 5

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Cardboard Automata	Development	Invention Function	Scientific and Technical Innovation	User needs and interests drive the design process.	Creating a cardboard automata that transforms rotational motion into other forms of motion	B: i, ii, iii, iv C: i, ii, iii, iv	Self-management: Organization, Reflection Thinking: Creative-Thinking, Critical-Thinking, Transfer
Adaptive Technology	Development	Form Function	Scientific and Technical Innovation	Social, ethical, and sustainability considerations impact design.	Identify an adaptive technology that can aid someone with a specific task, then design and	A: i, ii, iii, iv	Thinking: Critical-Thinking Research: Media Literacy

					print it		
Mousetrap Car	Systems	Form Invention	Scientific and Technical Innovation	Complex tasks require different technologies and tools at different stages.	Transfer the energy stored in a mousetrap spring into linear motion as efficiently as possible	B: i, ii, iii, iv D: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking Research: Information Literacy Self-management: Organization, Affective
Hydraulic Arms	Development	Ergonomics Function	Scientific and Technical Innovation	Complex tasks require different technologies and tools at different stages.	Create an articulated arm that can perform several distinct motion via hydraulic actuators	A: i, ii, iii, iv C: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy Self-management: Organization, Reflection
Arduino Design	Development	Function Invention	Scientific and Technical Innovation	User needs and interests drive the design process.	Design and build an electronic device that performs a task to meet a specific need	D: i, ii, iii, iv	Research: Information Literacy Self-management: Affective Thinking: Creative-Thinking, Critical-Thinking

DRAFTING — YEAR 5

UNIT	KEY CONCEPT	RELATED CONCEPT(S)	GLOBAL CONTEXT	STATEMENT OF INQUIRY (BC BIG IDEA)	SUMMATIVE(S)	OBJECTIVES	ATLs
Zipline	Development	Collaboration Resources	Scientific and Technical Innovation	When conducting research students become knowledge resources when connecting and collaborating with others.	Students design a zipline vehicle	A: i, ii, iii, iv B: i, ii, iii, iv C: i, ii, iii, iv D: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy, Information Literacy Self-management: Organization, Reflection, Affective
CAD/3D Printing	Development	Form Function	Scientific and Technical Innovation	Developing functional shape and form allows student to solve problems.	Design a 2D and 3D printed object for use	B: i, ii, iii, iv C: i, ii, iii, iv	Self-management: Organization, Reflection Thinking: Creative-Thinking, Critical-Thinking, Transfer
Energy & Power	Development	Function Invention	Scientific and Technical Innovation	Inventing a transmission system to propel a vehicle requires creativity.	Redesign a wooden car.	A: i, ii, iii, iv C: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking, Transfer Research: Media Literacy Self-management: Organization, Reflection

500 g Car	Systems	Form Invention	Scientific and Technical Innovation	Redesigning a robot requires an understanding of form to effectively repurpose it to perform a secondary function	Redesigning a robot	A: i, ii, iii, iv B: i, ii, iii, iv	Thinking: Creative-Thinking, Critical-Thinking Research: Media Literacy Self-management: Organization