b s d

education

Build Something Different

Kids have
big ideas.

Teachers help
make them real.

Introduction

The Issue

Technology education is vital for children to succeed in the future. Schools recognise this, but find it difficult to deliver it effectively. There are three barriers:

1. **Confidence**: Teachers don't usually have a tech background and have not been provided training. They can see technology it as risky and unfamiliar.

2. **Content**: Technology is constantly changing. Curriculum can therefore become quickly outdated.

3. **Community**: Teachers don't have a community of practice or peers to learn from and share ideas
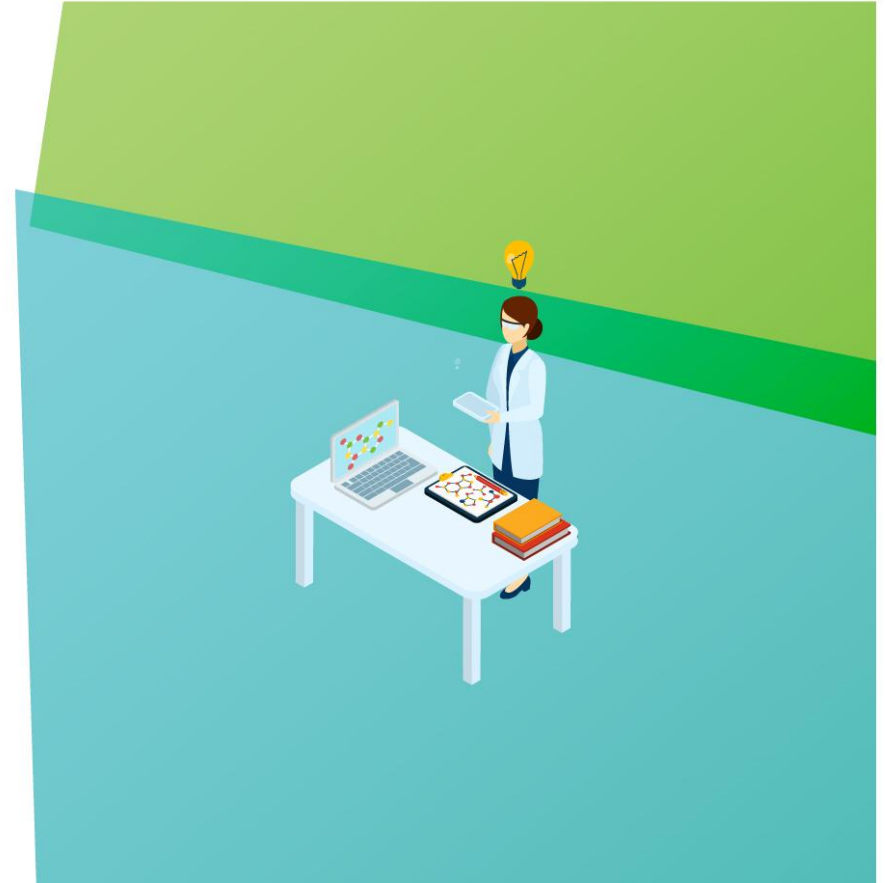
Who we are

We are an educational technology and curriculum organization that partners with schools and education businesses to make it easy for teachers to integrate technology curriculum, including coding, into their existing lessons and teaching across all subjects.

Digital skills are critical to the career and success of every young person in the future. They offer an incredible meritocratic opportunity for young people of all backgrounds to become successful.

Our Solution

We worked with thousands of students and teachers over 5 years, including 34000 hours of classroom testing, to create a solution that drives the next generation of creative thinkers and problem solvers.

To achieve this, we provide an online learning environment, project based Technology Education Curricula for 8-18 year olds, and comprehensive training and support for teachers.

Our curriculum can be implemented immediately with no prior technology teaching experience, and is mapped to US, IB and British academic standards.
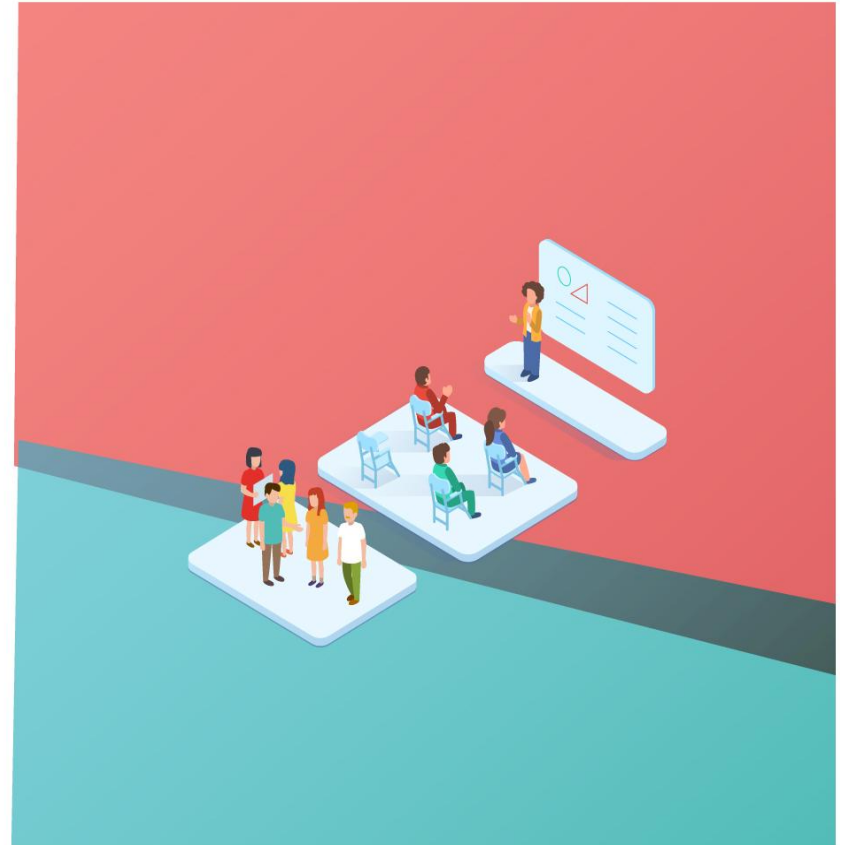
Our approach to learning

We focus on integrating technology curriculum into all subject areas so that every student, no matter their interests, can develop the technical, cognitive and soft skills required for the future.

Connecting technology projects to subject context and student interests nurtures a solution focused mindset behind their creative process.

Our curriculum is divided into engaging, easy-to-follow modules that enable students to build authentic projects relevant to the real world. *e.g. build a data collection app to gather live data from a basketball game to study in statistics or build a website about the history of ancient civilizations.*

The Mission

BSD is on a mission to make the learning and application of technology and design accessible to all students and teachers. We are empowering the kids of today with the tools for tomorrow.

Students that complete BSD projects will learn to CARE about the future.

They will be:

Curious - always seeking to learn.

Adaptable - never afraid to try something new.

Resilient - willing to start again and learn from challenges.

Empathetic - thoughtful about how their technology impacts the world.

BSD helps students develop the right mindset to use technology to solve difficult problems.

Students will have the self-esteem, empathy and skills they need to shape their futures.

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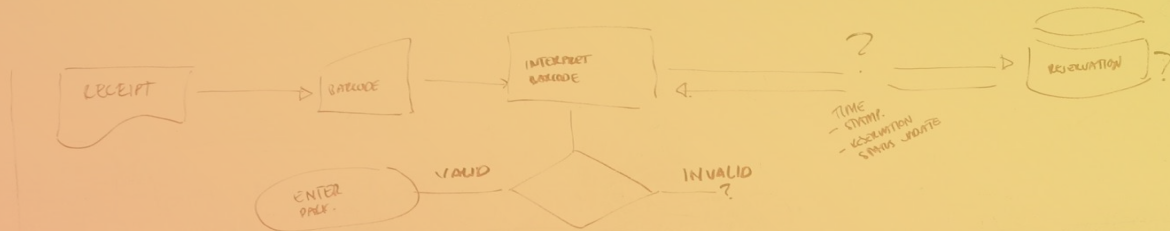
Software

Online Environment:
No experience
required

+

Curriculum

Teaching Materials:
Ready to use
in class

+

Training

Skills teachers need:
Adopt immediately

# Online Learning Environment

Developed with teachers, in classroom environments, BSD Online contains all the tools and information to scaffold teachers with no prior experience, and empower students as learning progresses.

It enables teachers to curate a personalized learner experience, provides information at their fingertips to address questions, and offers the live insights to really understand how students are progressing.

Students are given the freedom to progress at their own pace and access unbridled creativity, or the safety of a more guided experience. As they learn, they automatically create the digital portfolio that will enhance their future prospects and applications.

- Online Learning Platform, accessible anywhere
- Works on all operating systems
- Instant one-click online student project hosting
- Collaborative working and student portfolios
- Classroom Management tools
- Real time learning analytics

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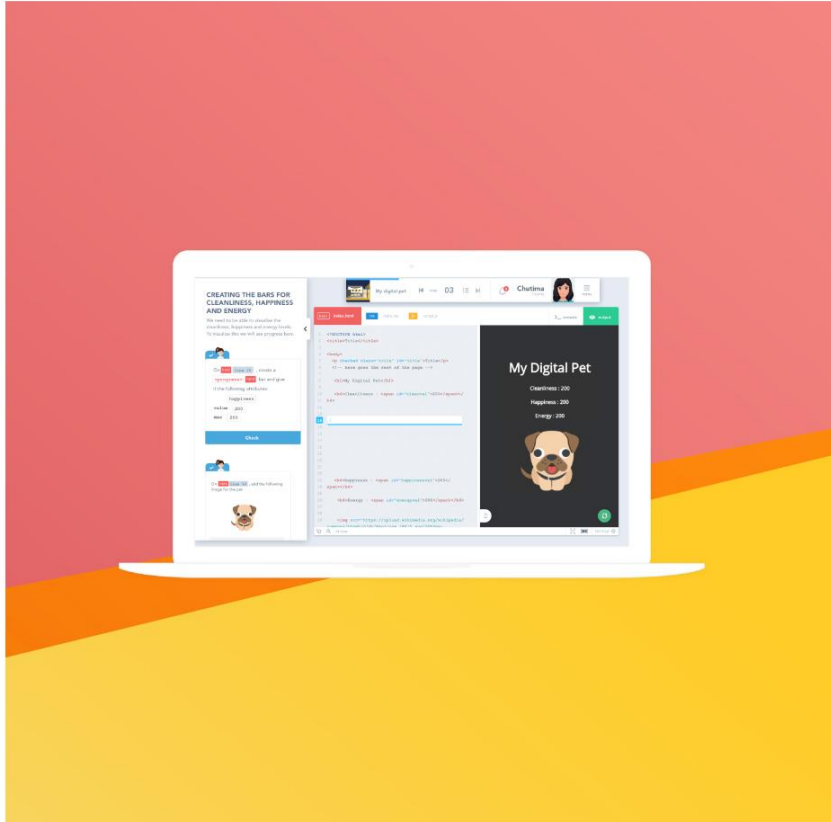
TechReady

Technology Program
Age 8-14

Tech Learning Progression

- The internet and our World
- Communicating with Technology
- Data
- Artificial Intelligence
- App Development
- Game Development

TechConnected

Cross Curricular
Age 8-14

Subject Integrated Projects

- English
- Mathematics
- Science
- Geography
- Humanities
- Language Learning

TechFuture

Connect2Work (Sep 2019)
Age 16-18

Vocational + Work Experience

- Programming
- Design and UX
- Data
- Digital Marketing

Technovators

After School / Camp
Age 8-14

Informal Tech Education

- Game Design
- Code Squad
- Robotics
- Hardware Inventor
- Tech Entrepreneur
- E-Sports

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TechReady

Technology Program

- 18 Units and Projects
- 360 hours content
- Rubric
- Capstone Project

TechConnected

Cross Curricular

- 126 Projects
- 200+ hours content
- Rubric

TechFuture

Connect2Work (Sep 2019)

- 60-360 hours content
- Capstone Projects
- Rubric
- Pearson BTEC Mapped

Technovators

After School / Camp

- 100 After School lessons
- 10 Tech Camps

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TechReady

Technology Program

Used by schools as:

- Multi Year Course Pathway
- Single Year Course
- Single Semester Course
- Single Trimester Course
- Individual Units
- Single Unit Topics

TechConnected

Cross Curricular

Used by schools as:

- Curriculum Toolkits
- Subject Enhancements
- Grade Project Enhancements
- Interdisciplinary Projects

TechFuture

Connect2Work (Sep 2019)

Used by schools as:

- Vocational training course
- IT BTEC Diploma course

Technovators

After School / Camp

Used by Schools and Education Businesses as:

- After School Clubs
- Day Camps
- Week Camps

Training

Our expert instructors give all teachers the skills and confidence they need to adopt, implement and sustain the delivery of BSD curriculum seamlessly in their classroom.

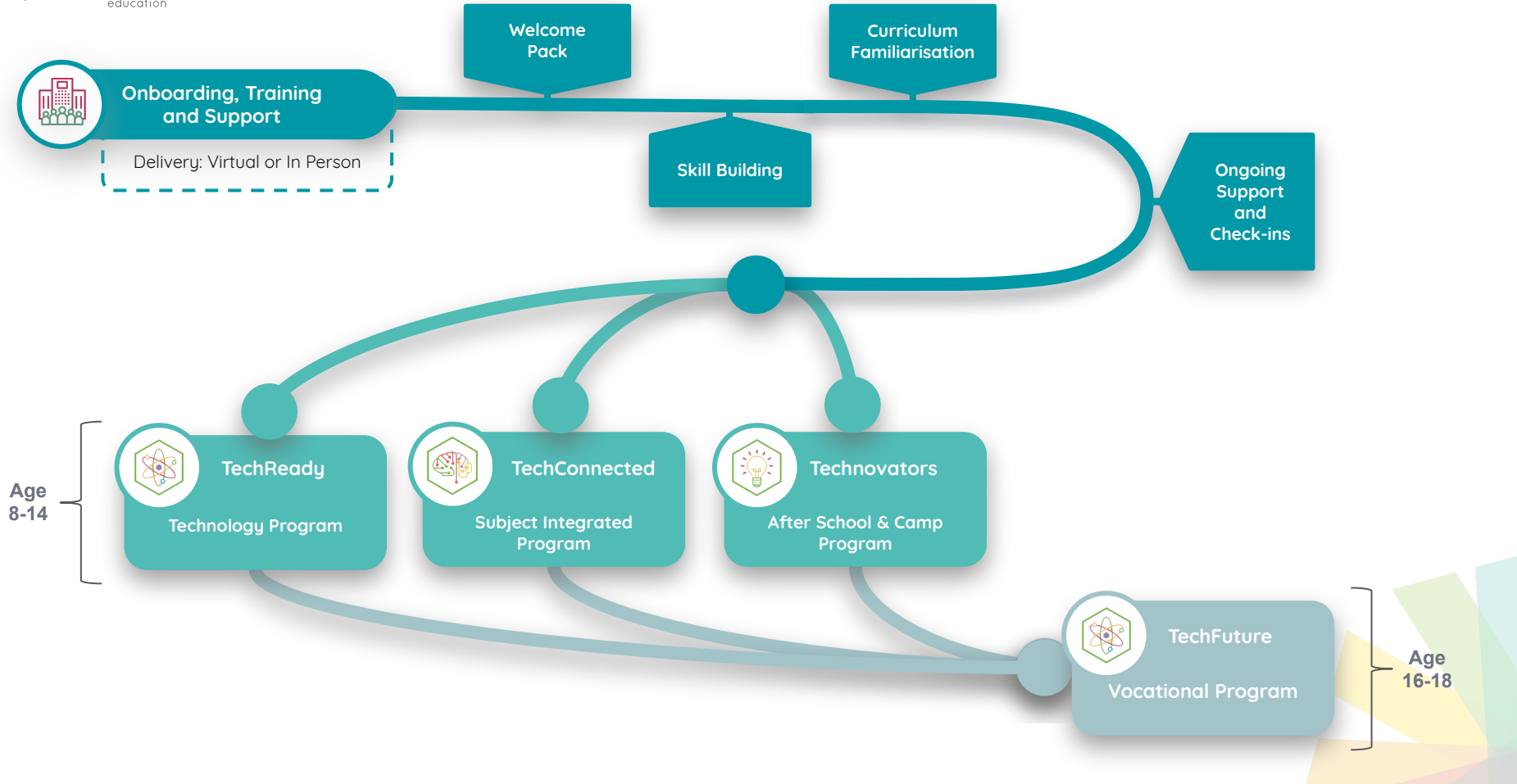During their training, teachers will complete:

- Orientation to BSD Online*
- Skill learning
- Curriculum familiarisation

* Can be self learned through video

- Training can typically be completed in just 6 hours
- Access to hands-on, professional support throughout the school year
- Over 75% of the teachers that have successfully brought BSD curriculum into their classrooms are not computing teachers

Overview of Curriculum Journey

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Onboarding, Training and Support

Delivery: Virtual or In Person

Welcome Pack

Curriculum Familiarisation

Skill Building

Ongoing Support and Check-ins

Age 8-14

TechReady
Technology Program

TechConnected
Subject Integrated Program

Technovators
After School & Camp Program

Age 16-18

TechFuture
Vocational Program

TechReady: Technology Program

The [BSD Technology Program](#) empowers students to develop computational thinking, design thinking, understanding of user experience to solve real-world problems. This tech program has deep connections with computing, digital citizenship, literacy, and cross-curricular learning opportunities. Students will be challenged to investigate how their community, society and different industries are impacted by technology. To articulate and apply this knowledge and understanding, students will research, plan, prototype and create solutions using the technical skills and concepts. Students will leverage technology to actively design, solve and collaborate to prepare them to be effective contributors and communicators. Each school year has a course that is divided into three units: Real World Skills Building 1, Real World Skills Building 2 and Developing for your Community. The overarching topics for each academic year are is infused, contextualized and enforced throughout the curriculum.

Aims

The BSD TechReady Program aims for students to:

- understand and effectively apply different uses of technology
- build solutions using HTML, CSS, and JavaScript to help their community
- expand their knowledge and understanding of the real-world application of technology tools across different industries
- exercise the fundamental principles and processes of computational thinking, design thinking, and user experience design
- build communication skills as students present their findings and share their conclusions.

Each course is divided into three 20 hour units:

- Unit 1: Real World Skills Building 1
- Unit 2: Real World Skills Building 2
- Unit 3: Developing for your Community

Units within each academic year will have modular flexibility to a certain extent. Schools will be able to do unit 1 (20 hours) on its own, or a combination of units 1 and 2, units 1 and 3 or units 1, 2 and 3. However, schools cannot do unit 3 without having completed prerequisites of unit 1.

Each unit will be completed with a real-world project as a piece of summative assessment to conclude the learning.

The Internet and Our World

This course addresses how the development of the internet has shaped our society.

In Unit 1, students will explore the history and the rise of the internet, harness skills in Computational Thinking, as well as explore design and coding through unplugged activities and real-world tech projects to gain a perspective on how technology has changed our daily lives.

In Unit 2, students will further develop their skills in coding and design by looking into the future and get creative in predicting future tech possibilities and investigate different industries that have been affected by technology.

In Unit 3, students will be introduced to UI/UX concepts and begin to apply their learning in creating a website on a tech topic of their choice for a particular audience in mind.

Communicating with Technology

In this course, students focus on how communication has evolved and the impact it has on our lives.

In [Unit 1](), students explore the history and the development of communication technology and how it has increased our ability to share and obtain information. Students will experience first-hand in exercising their creativity in new forms of communication, such as graphics, podcasts, and videos. The unit concludes with students creating an informative web-based poster on a chosen topic or issue about communication technologies, such as the Digital Divide.

In Unit 2, students will dive deeper into various forms of broadcasting and user-generated content, such as blogs, videos, podcasts, and newsletters and explore a combination of techniques to effectively create and present content online. Students will investigate new challenges that come along with the advent of the Internet such as privacy and online vs. physical behavior.

In Unit 3, students' learnings will come together to design and launch a communication channel with a specific audience in mind. Students will consider the advantages and disadvantages of various tech communication tools, as well as being mindful of any social challenges involved in their creation process.

Data

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This data course teaches students how to interpret and use data to solve real-world problems. From exploring spreadsheets to making key decisions, students experience data by collecting, cleaning, and visualizing data.

Unit 1 introduces students to data and data analysis. Students explore different types of data, organize, present and collect data to draw conclusions and infer relationships. In addition, students will investigate databases, data privacy and address complex problems with algorithms. Finally, students synthesize their learning by producing a data dashboard that explores an environmental issue.

Unit 2 will allow students to go deeper with data through the theme of personal health. Students will work with larger sets of data and external data (aka. Big Data) and use code to extrapolate findings. Students will start working with multiple sets of data and represent them visually to produce a health logger app.

In Unit 3 students will have the opportunity to build a real-world project using their learnings on data so far. Students will learn how to utilize data to address an issue they care about in their community. Students will choose their own approach to finding a solution, from collecting, cleaning, visualizing and analyzing data, Students will produce a working solution to present their solutions with a selected audience segment in mind.

Artificial Intelligence

This course demystifies AI concepts and techniques. It gives a basic understanding of how they work and the ways they disrupt today's industries.

Unit 1 introduces students to the emergence of AI. Students will discover the primary approaches to the implementation of increasingly advanced forms of artificial intelligence. Structured around the Design Thinking process, students will engage in hands-on coding projects aimed at problem-solving and application of AI.

Unit 2 leads students to a more in-depth exploration and project-based experiences of logic-based and machine learning AI. Students will explore and speculate on how machine learning is disrupting in different industries. Students will be challenged to apply their knowledge to create a simple logic-based AI system.

Unit 3 students will synthesize their learning from the previous units with UI/UX design skills to design and develop a smart suggestion chatbot to address issues they care about in their local community.

App Development

This course introduces students to the world of Mobile App Development. They will experience the process of building mobile apps to solve real-world situations and problems.

In Unit 1, students will be introduced to the world of mobile applications. Using industry-standard frameworks, students will learn how to approach building apps from the early stages of ideation and research through to designing the user interface and prototyping their first app. Using and building their own brief, students will explore the empathy of how to work and collaborate as they would with a real client.

In Unit 2, students will dive deeper into the world of mobile apps. As databases are the core of every app, students will learn how to create, read, update, and delete data across various real-world scenarios.

Unit 3 will have students build a real-world capstone project using their learnings on app development. Students will learn how to work with real-world projects by receiving a client brief that will allow them to build a solution to a global problem. Students will then work to produce a working solution to their project and present their solutions to an audience of their peers.

Game Development

This course provides an opportunity for students to expand their experience and knowledge about the game industry. Students will explore how to plan, write, and create 2D games. From writing a game story to designing game flows, students experience different roles within the field of game development, such as game programming, game design, game marketing, and game writing. This course will also discuss opportunities, challenges, and issues, such as equity in the gaming industry.

In Unit 1, students will create a classic text-based "choose your own adventure" RPG (role-playing game) game. Students will research, plan, write, and code their game to relate to a real-world issue. Along with building and customizing their own game, students will also learn about the issues surrounding internet and gaming addiction, and issues of equality within the video game industry.

In Unit 2, students will dive deeper into game programming and logic through building a series of mini 2D games and learn to create more advanced and dynamic gameplay with keyboard controls and moving characters.

In Unit 3, students will investigate how the games are used beyond entertainment and synthesize their learning to design a game to enhance their community. Students will apply their experience in coding and apply design thinking to create a product with a specific audience in mind.

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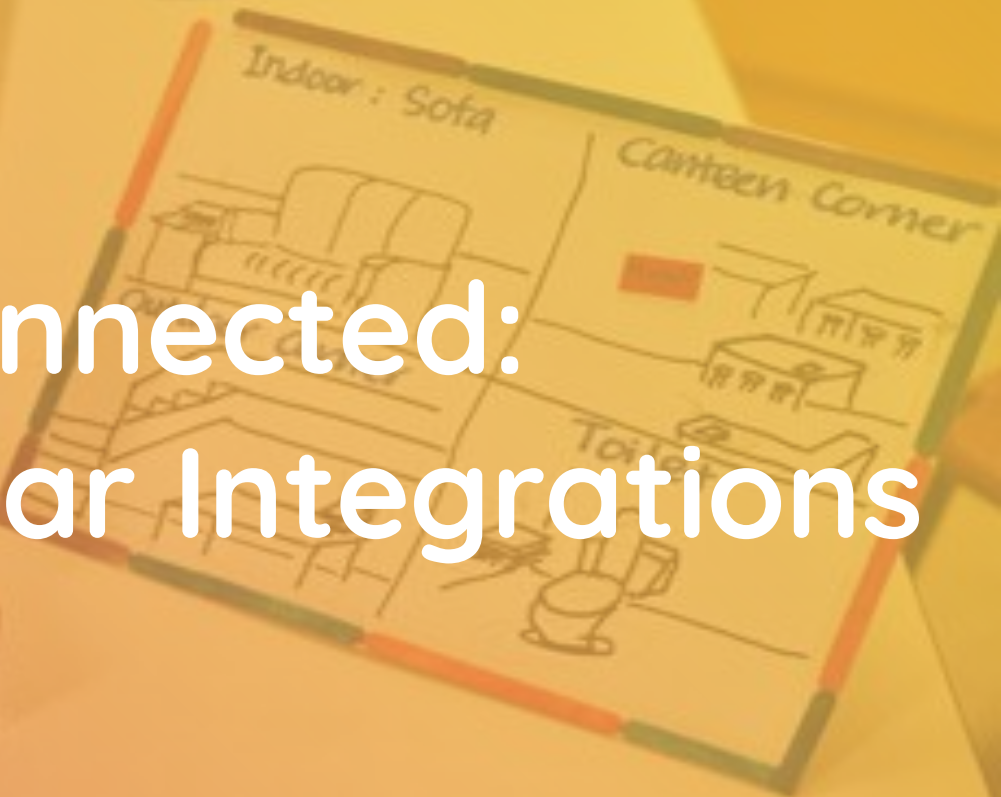
English

Grade 3-4

- Reading
- Writing

Grade 5-6

- Reading
- Writing

Grade 7-8

- Reading
- Writing

Maths

Grade 3-4

- Numbers
- Fractions
- Measurement
- Statistics
- Geometry

Grade 5-6

- Numbers
- Fractions
- Measurement
- Geometry
- Statistics
- Ratio & Proportion
- Algebra

Grade 7-8

- Reasoning
- Problem Solving
- Numbers
- Algebra
- Ratio
- Probability
- Statistics

Science

Grade 3-4

- Working Scientifically
- Plants
- Animals
- Rocks
- Forces and Magnets
- Living Things
- Matter

Grade 5-6

- Working Scientifically
- Living Things
- Properties and changes in materials
- Earth and Space
- Forces

Grade 7-8

- Working Scientifically
- Living Things
- Interactions and Interdependencies
- Chemical Reactions
- Earth and atmosphere
- Energy
- Motion
- Forces

Geography

Grade 3-6

- World knowledge
- Geographical data and information
- Maps, navigation and orientation
- Human and physical features

Grade 7-8

- World knowledge
- Geographical data and information
- Processes in human and physical geography
- Maps, navigation and orientation

Humanities

Grade 3-6

- Curiosity, creativity and critical thinking
- Society and the people within it
- Materials and design techniques
- Constructing knowledge and organising information

Grade 7-8

- Curiosity, creativity and critical thinking
- Society and the people within it
- World developments and trends over time
- Comparison of content, music and oratory

Foreign Language Learning

Grade 3-6

- Vocabulary and expression

Grade 7-8

- Vocabulary and understanding
- Expression, discussion and opinion

Project	Subject	Topic Integrations	Subject Connection
Build an English Website	English	Writing	- Using organizational devices such as headings and subheadings to guide readers - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Plan writing by identifying audience and purpose of writing
Personal Portfolio Showcase	English	Writing/Presenting Information	- Using organizational structures to guide readers and curate projects - Curating with a specific audience in mind - Organizing different types of communication and media types (video, images and text) in a logical and cohesive manner - Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Choose Your Own Adventure	English	Reading/Writing	- Identifying themes and conventions in a wide range of books - Reading books that are structured in different ways and for a range of purposes - Discussing words and phrases that capture the reader's interest and imagination - Draft and write by creating settings, characters and plots
Online Poster	English	Reading/Writing	- Plan writing by discussing and recording ideas - (in non narrative writing) using organizational devices such as headings and subheadings - Evaluating the effectiveness of others writing and suggesting improvements
Online Newspaper	English	Reading/Writing	- Plan writing by discussing and recording ideas - (in non narrative writing) using organizational devices such as headings and subheadings - Evaluating the effectiveness of others writing and suggesting improvements - Identifying main ideas drawn from more than 1 paragraph and summarizing these

Project	Subject	Topic Integrations	Subject Connection
Story Generator	English	Reading/Writing	- Reading books that are structured in different ways and for a range of purposes - Asking questions to improve understanding of a text - Draft and write by creating settings, characters and plot
Story Timeline	English	Reading/Writing	- Identifying main ideas drawn from more than 1 paragraph and summarizing these - Plan writing by discussing and recording ideas - Draft and write by creating settings, characters and plot
Online Journal	English	Writing	- (In non narrative writing) using organizational devices such as headings and subheadings - Plan writing by discussing and recoding ideas
Story Location Mapper	English	Reading	- Identifying themes and conventions in a wide range of books - Drawing inferences such as inferring character's feelings, thoughts and motives from their actions, and justifying inferences with evidence
Story Boarder	English	Reading/Writing	- Identifying main ideas drawn from more than 1 paragraph and summarizing these - Plan writing by discussing and recording ideas

Project	Subject	Topic Integrations	Subject Connection
Personal Library	English	Reading	- Identifying themes and conventions in a wide range of writing - Making comparisons within and across books - Recommending books they have read to their peers, giving reasons for their choices - Proofread for spelling and punctuation
Character Builder	English	Reading	- Drawing inferences such as inferring character's feelings, thoughts and motives from their actions, and justifying inferences with evidence
Media Site	English	Writing	- Plan writing by identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own - Draft and write using further organizational and presentational devices to structure text and to guide the reader - Evaluate and edit by assessing the effectiveness of their own and others' writing - Plan writing by noting and developing initial ideas, drawing on reading and research where necessary - Proofread for spelling and punctuation - Evaluate and edit by proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning

Project	Subject	Topic Integrations	Subject Connection
Point and Click Adventure Game	English	Reading/Writing	- Identifying themes and conventions in a wide range of writing - Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions and justifying inference with evidence - Draft and write by describing settings, characters and atmosphere and integrating dialogue to convert character and advance the action - Proofread for spelling and punctuation
Character Profile	English	Reading/Writing	- Planning writing by noting and developing initial ideas, drawing on reading and research where necessary - Draft and write by describing settings, characters and atmosphere - Draft and write using further organizational and presentational devices to structure text and to guide the reader - Identifying themes and conventions in a wide range of writing - Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions and justifying inference with evidence - Proofread for spelling and punctuation

Project	Subject	Topic Integrations	Subject Connection
Poem Formats	English	Reading/Writing	- Knowing how language, including vocabulary choice presents meaning - Recognising a range of poetic conventions and understanding how these have been used

Project	Subject	Topic Integrations	Subject Connection
Creative Writing Blog	English	Writing	- Write accurately, fluently, effectively and at length for pleasure and informative through summarizing and organizing material, and supporting ideas and argument with any necessary factual detail - Plan, edit and proofread through considering how their writing reflects the audiences and purposes for which it was intended
Book Comparison Webpage	English	Reading/Writing	- Re-read books encountered earlier to increase familiarity with them and provide or a basis for making comparisons - Understanding increasingly challenging texts through making inferences and referring to evidence in the text - Study a range of authors, including at least 2 in depth - Understanding increasingly challenging texts through knowing the purpose, audience for and context of the writing and drawing on this knowledge to support comprehension - Make critical comparisons across texts

Project	Subject	Topic Integrations	Subject Connection
Book Review App	English	Reading/Writing	- Re-read books encountered earlier to increase familiarity with them and provide a basis for making comparisons - Make critical comparisons across texts - Study a range of authors - Plan, edit and proofread through considering how their writing reflects the audiences and purposes for which it was intended

Project	Subject	Topic Integrations	Subject Connection
Stop Watch	Mathematics	Measurement	- Estimate, record and compare time in seconds, minutes and hours
Money Saving Calculator	Mathematics	Numbers	- Estimate the answer to a calculation and use inverse operations to check answers - Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction
Abacus Builder	Mathematics	Numbers	- Count in multiples - Compare and order numbers - Solve problems involving, multiplying and adding
Cake/Food Sharing	Mathematics	Fractions/Numbers	- Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems - Multiplication tables up to and including the 12 multiplication table

Project	Subject	Topic Integrations	Subject Connection
Treasure Hunt	Mathematics	Geometry	- Describe position on a 2-D grid as coordinates in the first quadrant - Describe movements between positions as translations of a given unit to the left/right and up/down
Etchy-Sketchy	Mathematics	Geometry	- Describe position on a 2-D grid as coordinates in the first quadrant - Describe movements between positions as translations of a given unit to the left/right and up/down - Draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry

(All early grade projects can be used by higher grade students)

Project	Subject	Topic Integrations	Subject Connection
Decipher Cryptography	Mathematics	Algebra	- Use symbols and letters to represent variables and unknowns
Monster Battle	Mathematics	Numbers/Algebra	- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Solve problems involving multiplication and division, and a combination of these, including understanding the meaning of the equals sign - Use symbols and letters to represent variables and unknowns
Trivia Game	Mathematics	Numbers	- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Mondrian Fractions	Mathematics	Fractions	- Go beyond the measurement and money models of decimals

Project	Subject	Topic Integrations	Subject Connection
Rat Race (Mini Stock Market)	Mathematics	Statistics	- Solve comparison, sum and difference problems using information presented in a line graph - Calculate and interpret and mean as an average, know when appropriate to find the mean of a data set
Recipe Converter	Mathematics	Measurement	- Convert between different units of metric measure - Use all four operations to solve problem involving measure

Project	Subject	Topic Integrations	Subject Connection
Balancing Equations Scale	Mathematics	Algebra	- Express missing number problems algebraically - Use symbols and letters to represent variables and unknowns - Find pairs of numbers that satisfy an equation with 2 unknowns
Coin Flip	Mathematics	Probability	- Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale
Dice Roll	Mathematics	Probability	- Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale
Data Visualizer (Bar Chart)	Mathematics	Statistics	- Construct and interpret appropriate tables, charts and diagrams - Describe, interpret and compare observed distributions of single variable
Data Visualizer (Pie Chart)	Mathematics	Statistics	- Construct and interpret appropriate tables, charts and diagrams - Describe, interpret and compare observed distributions of single variable

Project	Subject	Topic Integrations	Subject Connection
Data Visualizer (Pictograph)	Mathematics	Statistics	- Construct and interpret appropriate tables, charts and diagrams - Describe, interpret and compare observed distributions of single variable
The Traveller	Mathematics	Numbers/Algebra	- Use a calculator and other technology to calculate results accurately and interpret them appropriately - Model situations translating them into algebraic expressions - Work with coordinates in all four quadrants
Whack-a-Mole	Mathematics	Reasoning/Problem Solving	- Identify variables and express relations between variables algebraically - Make and test conjectures about patterns of relationships
Pong	Mathematics	Numbers/Algebra	- Identify variables and express relations between variables algebraically - Make and test conjectures about patterns of relationships - Begin to model situations mathematically and express results using formal mathematical representations - Interpret mathematical relationships both algebraically and graphically - Solve problems involve direct and inverse proportion, including graphical and algebraic representation

Project	Subject	Topic Integrations	Subject Connection
Budgeting	Mathematics	Problem Solving/Reasoning/Ratio	- Develop use of mathematical knowledge to solve problems and evaluate outcomes - Develop use of mathematical knowledge to solve problems and evaluate outcomes including financial mathematics - Begin to model situations mathematically and express results using formal mathematical representations
Pro Caterer	Mathematics	Ratio & Proportion	- Use scale factors, scale diagrams - Solve problems involving percentage change

(All early grade projects can be used by higher grade students)

Project	Subject	Topic Integrations	Subject Connection
Build a Science Website	Science	Working Scientifically/ Presenting Information	- Gathering, recording and presenting data in a variety of ways to help answering questions - Reporting on findings from enquiries including displays or presentations or results and conclusions - Using evidence to answer questions
Personal Portfolio Showcase	Science	Working Scientifically/ Presenting Information	- Using organizational structures to guide readers and curate project - Curating with a specific audience in mind - Organizing different types of communication and media types (video, images and text) in a logical and cohesive manner - Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Digital Plant	Science	Plants	- Exploring the requirements of plants for life and growth - Compare the effects of different factors on plants for growth
Trivia Game	Science	Animals/Rocks//Living Things/Plants/Matter/Working Scientifically/Forces and Magnets	- Using evidence to answer questions - Revision tool
Animal Classification	Science	Working Scientifically/Forces and Magnets	- Compare and contrast the diets of different animals, group them according to diet - Use classification keys to help group, identify and name a variety of living things in their local and wider environment - Construct and interpret food chains
Plant Cycle	Science	Plants	- Explore the life cycle of flowering plants, including pollination, seed formation and seed dispersal - Recording findings in labelled diagrams

Project	Subject	Topic Integrations	Subject Connection
Online Poster	Science	Animals/Rocks/Living Things/Plants/Matter/Working Scientifically/Forces and Magnets	- Gathering, recording and presenting data in a variety of ways to help answering questions - Reporting on findings from enquiries including displays or presentations or results and conclusions - Using evidence to answer questions
Food Chain Builder	Science	Living Things/Animals	- Compare and contrast the diets of different animals, group them according to diet - Use classification keys to help group, identify and name a variety of living things in their local and wider environment - Construct and interpret food chains
Top Rocks	Science	Rocks	- Compare and group together different kinds of rocks on the basis of appearance and physical properties

Project	Subject	Topic Integrations	Subject Connection
Canon Simulator	Science	Working Scientifically	- Plan enquiries to answer questions, recognizing and controlling variables
Experiment Log App	Science	Working Scientifically	- Plan enquiries to answer questions, recognizing and controlling variables
Our Solar System and Orbit Speed	Science	Earth and Space	- Describe planets, solar system and their relative movements to each other
Timezone Time Generator	Science	Earth and Space	- Compare times of day at different places on earth through internet links and communication
Timeline Builder (Life Cycles)	Science	Living Things	- Describe different life cycles of mammals, amphibians, insects and birds - Use timelines to indicate stages of growth - Describe life processes in plants and animals

Project	Subject	Topic Integrations	Subject Connection
Ocean Racing	Science	Properties and changes in materials	- Compare and group materials together according to properties - Give evidence based on comparative and fair tests for the uses for everyday materials (metal, wood, plastic)

Project	Subject	Topic Integrations	Subject Connection
Running Simulator	Science	Energy/Forces/Motion	- Representation of a journey on a distance-time graph - Compare amounts of energy transferred - Compare energy value of different foods - Forces being needed to cause objects to stop or start, change speed or direction
Element Mixer	Science	Chemical Reactions	- The pH scale for measuring acidity/alkalinity - The effects of catalysts
Maze Ball Game with Gyroscope	Science	Forces	- Forces arising from the interaction between two objects - Forces being needed to cause objects to stop or start, change speed or direction - Change depending on direction and size of force - Apply mathematical concepts and calculate results

Project	Subject	Topic Integrations	Subject Connection
Calorie Calculator	Science	Living Things	- Calculations of energy requirements in a healthy diet - Consequences of imbalances in diet, including obesity, starvation and deficiency diseases
Ecosystem Map	Science	Interactions and Interdependencies	- The interdependence of organisms in ecosystems - The effect of organisms on the environment and the effect of the environment on organisms - Variation between individuals within a species being continuous or discontinuous, including measurement and graphical representation of variations
Digital Pet	Science	Living Things	- Calculations of energy requirements in a healthy diet - Consequences of imbalances in diet, including obesity, starvation and deficiency diseases

Project	Subject	Topic Integrations	Subject Connection
Build a Geography Website	Geography	Presenting Information	- Collect analyse and communicate with a range of data gathered through fieldwork experiences - Communicate geographical information in a variety of ways including through maps, numerical and quantitative skills and writing
Personal Portfolio Showcase	Geography	Presenting Information	- Using organizational structures to guide readers and curate project - Curating with a specific audience in mind - Organizing different types of communication and media types (video, images and text) in a logical and cohesive manner - Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Flags of the World	Geography	World Knowledge	- Develop knowledge of globally significant places - Understand geographical differences, similarities and links between places
Compass	Geography	Maps, navigation and orientation	- Use maps, atlases, globes and computer mapping to locate countries and describe features
Data Visualizer (Bar Chart)	Geography	Geographical Data and Information	- Collect analyse and communicate with a range of data gathered through fieldwork experiences - Communicate geographical information in a variety of ways
Data Visualizer (Pictograph)	Geography	Geographical Data and Information	- Collect analyse and communicate with a range of data gathered through fieldwork experiences - Communicate geographical information in a variety of ways
Natural/World Wonders Website (class project)	Geography	World Knowledge	- Use maps, atlases, globes and computer mapping to locate countries and describe features
Map Coloring Challenge	Geography	Maps, navigation and orientation	- Use maps, atlases, globes and computer mapping to locate countries and describe features

Project	Subject	Topic Integrations	Subject Connection
Interactive Volcano	Geography	Processes in Human and Physical Geography	- Understand processes in physical geography relating to geological and climate change scale - Understand geographical differences, similarities and links between places
Climate Heatmap	Geography	Geographical Data and Information	- Understand processes in physical geography relating to geological and climate change scale - Understand geographical differences, similarities and links between places
Carbon Footprint Quiz	Geography	Geographical Data and Information	- Understand how human and physical processes interact to influence the environment and climate

Project	Subject	Topic Integrations	Subject Connection
Interactive Infographics	Geography	World Knowledge/Geographical Data and Information/Maps, navigation and orientation/Human and physical features	- Interpret a range of sources of geographical information including maps, diagrams, globes, aerial photographs and geographical information systems - Use geographical information systems to collect, analyse and draw conclusions from geographical data using multiple sources of information - Communicate geographical information in a variety of ways including through maps, numerical and quantitative skills and writing
Human Migration Simulator	Geography	Human and physical features	- Understand processes in human geography relating to use of natural resources - Understand processes in human geography relating to population and urbanization, economic activity
Country Profiler	Geography	World Knowledge	- Use geographical knowledge, concepts, approaches and skills to analyse and interpret data sources - Use geographical information systems to collect, analyse and draw conclusions from geographical data using multiple sources of information

Project	Subject	Topic Integrations	Subject Connection
Map and Scale	Geography	Maps, navigation and orientation	- Interpret maps using grid references and scale - Interpret a range of sources of geographical information including maps, diagrams and globes
Compare-a-gram	Geography	Processes in Human and Physical Geography	- Understand processes in physical geography relating to geological and climate change scale - Understand geographical differences, similarities and links between places - Compare and contrast human and physical geography of international locations

Project	Subject	Topic Integrations	Subject Connection
Build a History Website	Humanities	Curiosity, creativity and critical thinking/Presenting Information	- Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Select and organise relevant information - Increase self confidence, creativity and sense of achievement
Build a Business Website	Humanities	Curiosity, creativity and critical thinking/Presenting Information	- Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Select and organise relevant information - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Build a Media Website	Humanities	Curiosity, creativity and critical thinking/Presenting Information	- Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Select and organise relevant information - Increase self confidence, creativity and sense of achievement
Build a Design Website	Humanities	Curiosity, creativity and critical thinking/Presenting Information	- Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Select and organise relevant information - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Personal Portfolio Showcase	Humanities	Presenting Information	- Using organizational structures to guide readers and curate project - Curating with a specific audience in mind - Organizing different types of communication and media types (video, images and text) in a logical and cohesive manner - Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement

Project	Subject	Topic Integrations	Subject Connection
Fractal Art	Humanities	Curiosity, creativity and critical thinking	- Understand concepts such as continuity and change, causes and consequences, similarity, difference and significance - Inspire curiosity, challenge students to invent and create their own works - Develop critical engagement and thinking
Online Poster	Humanities	Materials and Design Techniques/Constructing knowledge and organizing information/Curiosity, creativity and critical thinking	- Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement - Select and organize relevant information - Construct knowledge from a range of sources - Describe differences and similarities between practices and disciplines, reflecting on students own creations - Use a range of material and media to design and make products
Random Art Generator	Humanities	Curiosity, creativity and critical thinking	- Inspire curiosity, challenge students to invent and create their own works - Construct knowledge from a range of sources - Understand concepts such as continuity and change, causes and consequences, similarity, difference and significance

Project	Subject	Topic Integrations	Subject Connection
Chatbot (Historical Edition)	Humanities	Society and the people within it/Constructing knowledge and organizing information	- Understand about the wider world, ask perspective questions, weigh evidence, develop insight into the complexity of different lives, diversity in society and relationships between different societal groups - Understand concepts such as continuity and change, cause and consequences, similarity, difference and significance, use this understanding to make connections, draw contrast, analyze trends, frame historically valid questions, create structured accounts including written narrative
Hieroglyphics Translator (History)	Humanities	Society and the people within it/Constructing knowledge and organizing information/Curiosity, creativity and critical thinking	- Inspire curiosity, challenge students to invent and create their own works - Develop critical engagement and thinking - Understand about the wider world, ask perspective questions, weigh evidence, develop insight into the complexity of different lives, diversity in society and relationships between different societal groups

Project	Subject	Topic Integrations	Subject Connection
My News Collection Website	Humanities	Curiosity, creativity and critical thinking/World developments and trends over time	- Use technology to appreciate and understand a wide range of content and style - Develop critical engagement and thinking - Understand about the wider world, ask perspective questions, weigh evidence, develop insight into the complexity of different lives, diversity in society and relationships between different societal groups
JavaScript Music Maker (midi/8-bit)	Humanities	Curiosity, creativity and critical thinking/Comparison of content, music and oratory	- Inspire curiosity, challenge students to invent and create their own works - Compare and contrast to a wide range of music - Analyze and evaluate creative projects - Use technology to appreciate and understand a wide range of context and style
Data Visualizer (line graph)	Humanities	Curiosity, creativity and critical thinking	- Inspire curiosity, challenge students to invent and create their own work - Analyze trends over arcs of time

Project	Subject	Topic Integrations	Subject Connection
Timeline Builder (History)	Humanities	Society and the people within it/Constructing knowledge and organizing information/Curiosity, creativity and critical thinking	- Understand about the wider world, ask perspective questions, weigh evidence, develop insight into the complexity of different lives, diversity in society and relationships between different societal groups - Understand concepts such as continuity and change, cause and consequences, similarity, difference and significance, use this understanding to make connections, draw contrast, analyze trends, frame historically valid questions, create structured accounts including written narrative - Study interconnections in world developments
Art Style Comparison	Humanities	Curiosity, creativity and critical thinking	- Inspire curiosity, challenge students to invent and create their own work - Use technology to appreciate and understand a wide range of context and style

Project	Subject	Topic Integrations	Subject Connection
Personal Portfolio Showcase	Foreign Language Learning	Vocabulary, expression, discussion and opinion, presenting information	- Using organizational structures to guide readers and curate projects - Curating with a specific audience in mind - Organizing different types of communication and media types (video, images and text) in a logical and cohesive manner - Use a range of techniques to record observations as a basis for exploring ideas - Writing with a specific audience in mind - Organizing written communication in a logical and cohesive manner - Inspire curiosity, challenge students to invent and create their own works - Increase self confidence, creativity and sense of achievement
Build a Foreign Language Website	Foreign Language Learning	Vocabulary, expression, discussion and opinion, presenting information	- Describe people, places things and actions - Broaden vocabulary - Develop and use wide ranging vocabulary - Give and justify opinion - Express and develop ideas with increasing accuracy - Read and show comprehension of original and adapted materials from a range of difference sources - Write creatively to express ideas and opinions

Project	Subject	Topic Integrations	Subject Connection
Vocabulary Flashcard	Foreign Language Learning	Vocabulary and expression	- Engage in conversation, ask and answer questions, express opinion and respond to others - Broaden vocabulary - Develop ability to understand new words
Trivia Game	Foreign Language Learning	Vocabulary and expression	- Engage in conversation, ask and answer questions, express opinion and respond to others - Broaden vocabulary - Develop ability to understand new words
Profile Page	Foreign Language Learning	Vocabulary and expression	- Engage in conversation, ask and answer questions, express opinion and respond to others - Broaden vocabulary - Develop ability to understand new words - Describe people, places things and actions

Project	Subject	Topic Integrations	Subject Connection
Conversation translator	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Initiate and develop conversation - Make use of social conventions including formal modes of address - Express and develop ideas with increasing accuracy - Write creatively to express ideas and opinions - Read and show comprehension of original and adapted materials from a range of different sources
Recipe Book	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Make use of social conventions including formal modes of address - Express and develop ideas with increasing accuracy - Write creatively to express ideas and opinions - Read and show comprehension of original and adapted materials from a range of different sources

Project	Subject	Topic Integrations	Subject Connection
English Mad Libs	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Express and develop ideas with increasing accuracy
French Mad Libs	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Express and develop ideas with increasing accuracy
Spanish Mad Libs	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Express and develop ideas with increasing accuracy
Digital Assistant	Foreign Language Learning	Vocabulary and expression	- Develop and use wide ranging vocabulary - Initiate and develop conversation - Make use of social conventions including formal modes of address - Express and develop ideas with increasing accuracy - Write creatively to express ideas and opinions - Read and show comprehension of original and adapted materials from a range of different sources

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change"

Charles Darwin

bsd
education

build
something
different