Year 4 Multimedia Knowledge Map

Expectations

- I can use photos, video and sound to create an atmosphere when presenting to different audiences.
- I am confident to explore new media to extend what I can achieve.
- I can change the appearance of text to increase its effectiveness.
- I can create, modify, and present documents for a particular purpose.
- I can use a keyboard confidently and make use of a spellchecker to write and review my work.
- I can use an appropriate tool to share my work and collaborate online.
- I can give constructive feedback to my friends to help them improve their work and refine my own work.

Vocabulary to use

Animate/animation
App
Backspace
Clipart
Comic strip
Document
Edit
Enter
Folder
Font
Greenscreen
Image
Insert
Heading
Hyperlink
Narration
Presentation
Right click
Select
Shift
Slides
Software
Sound effect
Space bar
Storyboard
Text

Vocabulary *to develop*

Audience
Layout
Persuasive
Screen shot
Style
Template

Skills

- Use a keyboard effectively, including the use of numbers
- Know how to use spellcheck
- Be aware of keyboard shortcuts on laptops and PCs.
- Change font sizes and colour of text
- Use appropriate screen capture and insert in document or presentation
- Rename documents and other files
- Create hyperlink to a website
- Recognise appropriate online sources for clipart and images

Expected prior learning

- Use images with variety of apps and software
- Amend text by highlighting and using select/delete and copy/paste
- Use save and save as
- Copy and rename files to edit

Cross curriculum context

- English
- Capture learning in a topic
- Choose to use technology to present historical, geographical, religious, cultural, mathematical, or other learning

Experiences

- Create a comic book
- Create a persuasive advert
- *Use music creation software*
- *Create and edit video*

Concepts and understanding

- Tools can be used to create atmosphere
- Using constructive feedback and providing constructive feedback can improve the effectiveness of outcomes
- Appropriate tools allow collaboration online

Develop Computational thinking

Expectations: Computational thinker model http://bit.ly/compthinkingSomerset

Attitudes
Comfortable making mistakes
Perseverance
Imagination
Collaboration

Skills
Pattern recognition
Decomposition
Algorithm design
Abstraction and generalisation

Year 4 Programming Knowledge Map

Expectations

- I can use logical thinking to solve open-ended problem by breaking it up into smaller parts.
- I can use an efficient procedure to simplify program.
- I can use a sensor to detect a change which can select an action within my program.
- I know that I need to keep testing my program while I am putting it together.
- I can use a variety of tools to create a program.
- I can recognise an error in a program and debug it.
- I recognise that an algorithm will help me to sequence more complex programs.
- I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.

Vocabulary to use

Algorithm
Background
Block
Collaboration
Command
Control
Costume
Debug
Design
Effect
Event
Forever
Imagine
Implement
Input
Make mistakes
Movement
Pattern
Output
Persevere
Repeat
Rotation
Sequence
Sprite
Stage
Wait / Pause

***Vocabulary** to develop*

Computational thinking
Selection (If Then)

Skills

- Copy and rename files
- Continual testing and debugging of parts of sequence as a program is made
- Use decomposition to identify parts of a problem
- Plan more than one sequence in an algorithm for specific outcomes
- Set rotation style for a sprite
- Make a background
- Use of if…then selection block and Forever block
- Use of if on edge bounce block
- Explanation of purpose of blocks
- Collaboration to support and learn from others
- Self-assessment using RAG model
- Peer assessment (2 stars and a wish)

Expected prior learning

- Use repeat command to increase efficiency of a program
- Programming more than one sprite in Scratch
- Sequence in Scratch can run without or with a control block
- Use of sound and costumes in Scratch
- Recognition of making mistakes as part of programming

Cross curriculum context

- English: participation in collaborative conversations, give well-structured descriptions; use pattern recognition and decomposition within spelling, word reading and structure of writing; algorithms when planning writing; abstraction to identify main ideas
- Maths: understanding of number, properties of shapes, problem solving

Experiences

- Predict purpose of sequences for Etch a Sketch
- Modify and make sequences for own Etch a Sketch
- Predict, investigate, modify, and make game
- Sensor used to select an action in a game
- Decomposition to plan algorithms for parts of game
- Use of block challenges to assess knowledge
- RAG algorithm and implement as a program
- Debug own and programs of others
- Apply knowledge using other software / apps
- *Apply knowledge to program a physical object*

Concepts and understanding

- Importance of ongoing continual testing as a program is built
- Importance of algorithm to implement more complex programs
- Selection increases programming possibilities

Develop Computational thinking

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Perseverance
Imagination
Collaboration

Skills
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Decomposition
Algorithm design
Abstraction and generalisation

Year 4 Technology in our Lives Knowledge Map

Expectations

- I can tell you whether a resource I am using is on the Internet, the school network, or my own device.
- I can identify key words to use when searching safely on the World Wide Web.
- I think about the reliability of information I read on the World Wide Web.
- I can tell you how to check who owns photos, text, and clipart.
- I can create a hyperlink to a resource on the World Wide Web.
- I can recognise that websites use different methods to advertise products

Vocabulary to use

Blog
Communicate
Computing devices
Copyright
email
Hyperlink
Internet
QR Code
Reliability
Search engine
Search result
Search query

Vlog
Webpage
Website
World Wide Web

***Vocabulary** to develop*

Citation
Filter

Skills

- Browse to a specified website
- Create hyperlink to a website
- Recognise appropriate online sources for clipart and images
- Check for reliability of information
- Add knowledge to an online tool
- Identify key words to use for a search query
- Acknowledge work of other people
- Navigate school network
- Find a document on device or school network
- Create hyperlinks to content on world wide web

Expected prior learning

- Use appropriate search engine eg Swiggle
- Use filters for efficient searching eg + and – and ‘’
- Evaluate information online
- Recognise copyright and images that can be used
- World Wide Web is one part of Internet

Cross curriculum context

- English: ask relevant questions, explain understanding of information, develop and order ideas, use spoken language, identify main ideas, write for different purposes
- Explore information for a topic
- Investigate information for historical, geographical, religious, cultural, mathematical or other learning

Experiences

- Investigate a spoof website
- Discuss what is ‘true’ online and how we can check for reliable information
- Use online tool (eg Padlet) to share learning
- See the use of a citation to recognise the source of a photo and acknowledge source in own work
- Investigate and find resources on school network
- Create a guide to school network
- Add hyperlink to a webpage within project work
- Investigate use of different search engines

Concepts and understanding

- Web pages need to be checked for reliability
- Sources of information must be acknowledged
- Digital information can be stored locally or online

Develop Computational thinking

Expectations: Computational thinker model http://bit.ly/compthinkingSomerset

Attitudes
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Perseverance
Imagination
Collaboration

Skills
Pattern recognition
Decomposition
Algorithm design
Abstraction and generalisation

Year 4 Data Handling Knowledge Map

Expectations

- I can organise data in different ways.
- I can collect data and identify where it could be inaccurate.
- I can plan, create and search a database to answer questions.
- I can choose the best way to present data to my friends.
- I can use a data logger to record and share my readings with my friends.

Vocabulary to use

Branching database
Chart
Collect
Data
Database
Data logger
Decision tree
Graph
Information
Interpret
Investigate
Predict
Questions
Record
Results
Tally
Sort
Venn diagram

Vocabulary *to develop*

Field
Hypothesis

Skills

- Rename documents and other files
- Use appropriate screen capture and insert in document or presentation
- Add data to a graphing program
- Interrogate data
- Plan a database
- Create a branching database
- Sort a database to answer questions
- Use a data-logger or data logging app to record discrete and continuous data

Expected prior learning

- Use a data logger (app or device) to sense and record changes
- Use appropriate apps and/or software to collect and record data
- Collect and present data in different ways
- Generate questions for an investigation and make decisions about data that will need to be collected
- Use and answer questions from a branching database

Cross curriculum context

- English: ask relevant questions, explain understanding of information, develop and order ideas, use spoken language to share learning
- Maths: Use appropriate software and apps to present and interpret data. Interpret data collected with data-loggers.
- Investigate and represent information for scientific, geographical, mathematical or other learning

Experiences

- Discuss differences between data and information
- Measure sound levels using a data logger or data logging app
- Record changes in noise levels
- Plan an investigation of sound insulation and present findings
- Use a graphing program or spreadsheet
- Create a branching database *to sort and classify game characters*
- Use an online database
- *Search database to answer questions*

Concepts and understanding

- Data becomes information when it has a context and units of measure
- Information can be collected as discrete or continuous data
- A database can be filtered to provide answers to questions

Develop Computational thinking

Expectations: Computational thinker model http://bit.ly/compthinkingSomerset

Attitudes
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Perseverance
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Collaboration

Skills
Pattern recognition
Decomposition
Algorithm design
Abstraction and generalisation