Subject: Purple Mash unit 6.5 Text Adventures

Key Concept/ Theme: • To find out what a text adventure is. • To use 2Connect to plan a story adventure. • To make a story-based adventure using 2Create a Story. • To read and understand given code for a text adventure game. • To debug and improve a text adventure game.

Prior Learning links:

	Cycle A	Cycle B
Year 1/2	Unit 1.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging Unit 1.4 Lego Builders • Algorithms • Logical decision making • Sequencing instructions • Following instructions Unit 2.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging	Unit 1.6 Animated Stories • Use of 2Create a Story tool. Unit 2.4 Questioning • Logical decision processing. • Forward planning to achieve a solution. • Binary decision making. Unit 2.8 Presenting ideas • Presenting a narrative in alternative ways.
Year 3/4	Unit 3.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging Unit 3.6 Branching Databases • Logical decision processing • Modelling selection on a binary model. Unit 4.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging	Unit 3.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging Unit 4.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging
Year 5/6	Unit 5.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. Unit 5.5 Game Creator • Game Design planning • Refining and reviewing games Unit 5.7 Concept maps • Use of 2Connect in a variety of ways for different purposes	Unit 5.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. Unit 6.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging

	Unit 6.1 Coding • Familiarity with the functionality of 2Code • Planning and designing for a logical outcome. • Debugging	

Key Vocabulary

Text-based Adventure
A computer game that uses text instead of graphics.

Debug\ Debugging
Fixing code that has errors so that the code will run the way it was designed to.

Function
In this context, a section of code that gets run when it is called from the main code. A function in a program is usually a piece of code that gets run lots of times.

Sprite
A computer graphic which may be programmed to move on-screen.

Flow of Control
The order that the computer program executes the commands it contains.

Selection
When selection is used, a program will choose a different outcome depending on a condition.

Step Through
A way of executing one line of code at a time to help programmers see what happens at each stage of a program. This can be helpful when debugging.

Vocabulary:
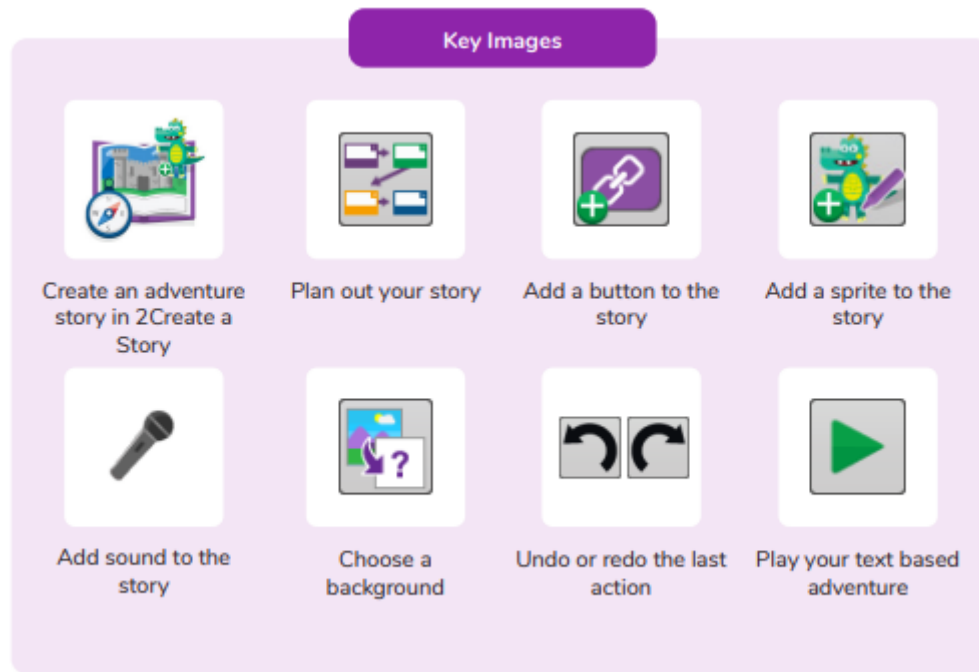
Key Images:

Resources needed for each lesson – 2dos to set.

Lesson 1:

Unless otherwise stated, all resources can be found on the main unit 6.5 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. You can select the following objectives when setting the 2Dos to make future assessment easier: Purple Mash Computing Scheme of Work Unit 6.5 – Text Adventures – Lesson 1 Need more support? Contact us: Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware 6

Year: Y6

Subject: Computing

Strand: Computer Science

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. ☑

Use sequence, selection and repetition in programs; work with variables and various forms of input and output. ☐

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. ☑

Understand computer networks, including the Internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. ☑

Year: Y6

Subject: Computing

Strand: IT

Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. ☐

Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. ☑

• Examples of the 'Choose your own Adventure' books would be useful but not essential. If children have any of these at home, they could bring them in to use for ideas and prompts for their own adventures.

• Red Riding Hood Adventure Game. For use on the whiteboard.

• Story Plan for Red Riding Hood.

 • 2Connect Tool this is found in the Tools section in Purple Mash.

Lesson 2

Unless otherwise stated, all resources can be found on the main unit 6.5 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. You can select the following objectives when setting the 2Dos to make future assessment easier: Purple Mash Computing Scheme of Work Unit 6.5 – Text Adventures – Lesson 2 Need more support? Contact us: Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware 9

Year:	Y6	⌄
Subject:	Computing	⌄
Strand:	Computer Science	⌄

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	✓
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	☐
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	✓
Understand computer networks, including the Internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration.	✓

Year:	Y6	⌄
Subject:	Computing	⌄
Strand:	IT	⌄

| Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. | ☐ |
| Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | ✓ |

• Children's completed and printed Red Riding Hood planning sheets from last lesson.

• Red Riding Hood Adventure Game. You might wish to set this as a 2Do so that children can refer to it when making their stories.

• 2Create a Story Tool. This is found with the English tools in Purple Mash.

• Create a display board for children to share their completed games. Use the Display board guide if required.

Lesson 3

Unless otherwise stated, all resources can be found on the main unit 6.5 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. You can select the following objectives when setting the 2Dos to make future assessment easier:

• Text Adventure Example 6.5. Set this as a 2Do for your class to open and experience a text adventure on Slide 5.

• Paper code comprehension activity (works well on A3 with space to write around it). Best used 1 between 2 to allow partner working and social learning.

• 2Code Code Comprehension To have on screen during Activity 1 with the Paper Code comprehension.

<u>Lesson 4</u>

Unless otherwise stated, all resources can be found on the main unit 6.5 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. You can select the following objectives when setting the 2Dos to make future assessment easier:

• 2Code Code Comprehension. Use this to recap last lesson's learning.

• Debugging Activity. Set this as a 2Do for children to debug and then develop.

• Completed Debugging Activity. Use this if required when going through answers.

• Pencils and paper for children to sketch out plans and ideas.

1. Unit 6.5 Lesson 1	**Deeper learning questions: Why is a choose your own adventure book exciting? How many endings are there?**
	Reconnection: Remind children of online safety rules. Go over previous words encountered in previous units.
	LO: To find out what a text-based adventure game is and to explore an example made in 2Create a Story. **To use 2Connect to plan a 'Choose your own Adventure' type story.**
	Activity: Go over new vocab for lesson Introduce the genre of adventure games. Can children answer the question? Children were introduced to text adventures in coding unit 6.1. Clicking reveals the answer. Open the example story adventure and play the game a few times making different choices. How many endings are there? Before making a story adventure, you need to plan it. In Purple Mash, you can use a tool called 2Connect to do this. Do you remember using this tool before? Look at the Red Riding Hood example: What happens if she chooses to play in the woods? Which path does the traditional story take? What do the colours represent? Choices are coloured red. The story endings are purple. The yellow node shows a decision that will take you to a different storyline. Children should use a similar system to this as it will make coding their adventure much more straightforward. Give an overview of the use of 2Connect, if children are familiar with the tool, this can be used to point out anything particularly relevant to the adventure planning rather than used in detail. Clicking the icon in the top right of the slide will open 2Connect to demonstrate. Children should then make and save their plans. Give an overview of the use of 2Connect, if children are familiar with the tool, this can be used to point out anything particularly relevant to the adventure planning rather than used in detail.

	Clicking the icon will open 2Connect to demonstrate. Children should then make and save their plans.
	Direct children to print their plans ready for the next lesson in which the children will be making their story using 2Create a Story and using the plans as a working document to structure the story.
	Edit this to include instructions specific to your school.
	Go over vocab and success criteria.
	Extension: Try to plan in two separate areas within the story that might lead to the same situation. For example: Both the path choice and the park choice could lead to the river Use the edit node tool to link two separate nodes to the same outcome to show how this will work
2. Unit 6.5 Lesson 2	**Deeper learning question**: Why would making a ebook be more beneficial than a choose your ending book? **Reconnection:** Remind children of online safety rules. Go over previous words encountered last lesson. **LO**: To use 2Connect plans for a story adventure to make the adventure using 2Create a Story. **Activity**: Go over previous vocab and new vocab for the lesson. If they have been following the scheme of work, children will have been introduced to 2Create a story in unit 1.6 and will have used it within other units (unit 2.8 and unit 3.7). Use children's knowledge to inform you as to the level of detail to then explain the use of the tool over the following slides. Explore the tools that children will need to use to make their adventure. Explain what children should do. Clicking reveals each step. Instruct children on which displayboard to share to. You will need to approve these as they are added so children can try each other's games. Go over vocab in the lesson and success criteria. **Extension: Revisit each page and add animated elements to your game using the techniques mentioned earlier in the lesson.** **You could try to animate some sprites to 'misdirect' a player, e.g. Move the on-screen character to the left, when the correct choice in their adventure may be to go right, or to move a character towards an object that should not be taken.**

3. Unit 6.5 Lesson 3	**Deeper learning question: How did this adventure differ from the story-based adventures? How many variables are used in this program?** **Reconnection:** Remind children of online safety rules. Go over previous words encountered last lesson. **LO:** To read and understand given code for a text adventure game. Make sure children are familiar with the concept of Text Adventure Games. The player is given a text-based description of a place and some options that they can enter to move forward in the game. These were very popular on the early personal computers in the 1980s before computer graphics improved and became the focus of computer games. They were used as interactive stories. There has been a revival since the 2000s. Make sure the children understand the difference between the text adventure and a linear story without choices. Hand out the code comprehension sheets, preferably printed on A3 to allow space for notes and ideas and go to the next slide to begin with a whole-group activity on screen in pairs. Launch the link on the slide to the 2Code Code comprehension. Show how the flow of control (what's being executed) moves through the program. Click the step button to run the program one step at a time and make sure children number the lines of code in the order that they are executed by the computer. When all the lines of code have been covered, discuss what would happen if you continued. (You would run the same commands over and over again). Ensure children have time in pairs to look at the questions, make notes on the sheets whilst figuring out how the code works, and share ideas. Focus on giving the children clues rather than answers as they tackle this activity. Explain that we will be presenting our ideas/answers for questions as a class. Giving each other a chance to share their thoughts. Encourage discussion and questioning. Click on the 'Reveal' button to begin activity. Here are some likely answers for the teacher to support the discussion. **Activity:** Go over new vocab for lesson

	Go over vocab in lesson. **Extension: unpick someone else's code.**
4. Unit 6.5 Lesson 4	**Deeper learning question: What's new? What do you think it should do? Can you improve the debugged game from Activity 1?** **Reconnection:** Remind children of online safety rules. Go over previous words encountered last lesson. Remind children about the Text Adventure they looked at last lesson. Share it and as a class briefly go over how it worked and some of the key components within it such as the purpose of the IF Selector, the number of variables, what function they can see and what it does when it is called. **LO: To debug a text adventure.** **To independently design and implement improvements to a text adventure game.** **Activity:** Go over new vocab for the lesson. Remind children about the Text Adventure they looked at last lesson. Share it and as a class briefly go over how it worked and some of the key components within it such as the purpose of the IF Selector, the number of variables, what function they can see and what it does when it is called. Introduce the debugging activity. What can the children see has been added to this code? In the Main Loop tab, the "Repeat Until" loop is different to the "Timer Repeat" loop in the Code Comprehension. Can the children understand how it works? What do the children think the new code will do differently? Run the code and show that it doesn't work. Children working independently, in guided groups, or with stage-by-stage guidance as your class need. Reveal answers on the next few slides. Launch the completed (answer) version if required. Check the answers to the debugging activity – Room 2 Tab. Check the answers to the debugging activity – Main_Loop Tab.

Use this slide and the following slide to support with ideas.

Make available pencils and paper for noting ideas and designs.

Some children may wish to work on this at home and could create something really impressive if you extend the 2Do to allow time for this.

If appropriate, you could arrange further lesson time for the children to continue developing or trying each other's programs.

Make available pencils and paper for noting ideas and designs.

Some children may wish to work on this at home and could create something really impressive if you extend the 2Do to allow time for this.

If appropriate, you could arrange further lesson time for the children to continue developing or trying each other's programs.

Discuss and leave these prompts on the main board to prompt your class to problem-solve more effectively.

Guide children with sharing their games. Blog posts will need to be approved before they are visible to children.

Go over vocab in lesson

Extension: Evaluate your game.

End of unit quiz & reflect on gaps from the unit:

Unit 6.5 Quiz – found on unit page on PM

 Questions:

A text based adventure is a type of game that uses text rather than graphics to tell the story. The player normally selects the next move from a series of text based options.

When planning a text adventure, a concept map is useful. What is a concept map?

What is meant by debugging?

Drag the statement to the correct answer.

Fill the gaps for the sentence.

The story planner view shows how the story flows.

What do these buttons do in 2Create a Story?

Can you match the definition to each key coding concept?

End Points:

What is a text based adventure? A text based adventure is a type of game that uses text rather than graphics to tell the story. The player normally selects the next move from a series of text based options.

Why is it important to plan a text based adventure? Text based adventures can often be complicated and give the player lots of options about what to do next. Planning the game ensures the player doesn't make a decision that has no outcome.

Evaluation: What have the end of unit quizzes, pupil self-reflections and termly work told you about what the children can remember and recall? What are the gaps? Ensure that the areas that need further reinforcement are documented in the next subject unit MTP. **Plan in time to revisit gaps within units, determined by the quizzes.**

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