

# DTiF

Digital Technologies in focus

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ASSESSMENT AND  
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## CLASSROOM IDEAS: YEARS 3–6

### Create a 'choose your own adventure' story

In Digital Technologies, students from Year 3 onwards should be planning and implementing projects that include branching (decision-making). Creating a 'choose your own adventure' story is an excellent way for students to design and implement a project that makes use of branching. The following sample activities show two possible ways that students could do this using:

- Presentation software: PowerPoint /Google Slides or Keynote on iPad/Mac (branching)
- Scratch 3.0 (branching and iteration)



Figure 1: PowerPoint title slide for a choose your own adventure story

**PowerPoint/Google Slides** (or Keynote on iPad/Mac)

**Example:** View the example story Going to the Park (Figure 1):

<https://australiancurriculum.edu.au/media/6635/acara-simple-choose-your-own-adventure-story-going-to-the-park.pptx>

**Years 3–4**

**Content descriptions:** [ACTDIP010\\*](#), [ACTDIP011\\*](#), [ACTDIP013](#)

(\*Marked content descriptions are partially addressed in this activity. Visual program relates to the Scratch version of this activity only as Scratch is a visual programming language).

**Sequence:**

1. Plan a story with choices to create an algorithm (sequence of steps).

Hint: Allow students to look at images from Creative Commons (CC) or open-source photograph sites or use their own photographs or pictures during the planning phase.

This sort of story could be planned in teams with a group of four planning the beginning and then pairs splitting off to come up with the outcomes for the two choices.

Alternatively, start as a whole class and give students the story starter. Then have teams plan their own choices and come back as a creative writers' circle to plan the next part of the story.

- See simple planning template (two choices)  
[www.australiancurriculum.edu.au/media/6634/simple-2-choice-choose-your-own-adventure-planning-template.pptx](http://www.australiancurriculum.edu.au/media/6634/simple-2-choice-choose-your-own-adventure-planning-template.pptx)
  - See advanced planning template (four choices)  
<https://australiancurriculum.edu.au/media/6633/4-choice-choose-your-own-adventure-story-template.pptx>
2. Select pictures and plan layout (design user interface). This can be done concurrently with step 1 if there is access to the internet during story planning phase.
  3. Plan hyperlinks between slides in the presentation (computational thinking – algorithm).  
Note: See useful links in this document for instructions on how to do this.

Implement program in PowerPoint using paired programming (students sit in pairs and work on the project).



Figure 2: Start screen for a choose your own adventure story made using Scratch 3.0

### Scratch 3.0

**Example:** View the example choose your own adventure story (Figure 2):

<https://scratch.mit.edu/projects/325099291/>

### Years 5–6

**Content descriptions:** [ACTDIP017](#), [ACTDIP018](#), [ACTDIP019](#), [ACTDIP020\\*](#), [ACTDIP022](#)

### Sequence:

1. Plan story with choices to create an algorithm.  
Hint: Allow students to look at backdrops and sprites available in Scratch and import backdrops from open-source photograph sites or use their own photographs or pictures during the planning phase. This sort of story could be planned in teams with a group of four planning the beginning and then pairs splitting off to come up with the outcomes for the two choices. Alternatively, start as a whole class with a story starter. Teams can then plan their own choices and come back as a creative writers' circle to plan the next part of the story.
  - See planning template (Figure 3).
  - See example story plan (Figure 4).
2. Select pictures and sprites (design user interface) This can be done concurrently with step 1 if there is access to Scratch during the story planning phase.
3. Plan code blocks (computational thinking – algorithm).
4. Implement program in Scratch using paired programming (students sit in pairs and work on sections of the project). Discuss more efficient ways of coding the story.

## Choose your own adventure story – sample story plan template

(Copy, paste and modify as required. Not all branches need to be followed and extra boxes can be added.)

Download a copy of this template at the following link

<https://australiancurriculum.edu.au/media/6636/choose-your-own-adventure-story-planning-template.docx>

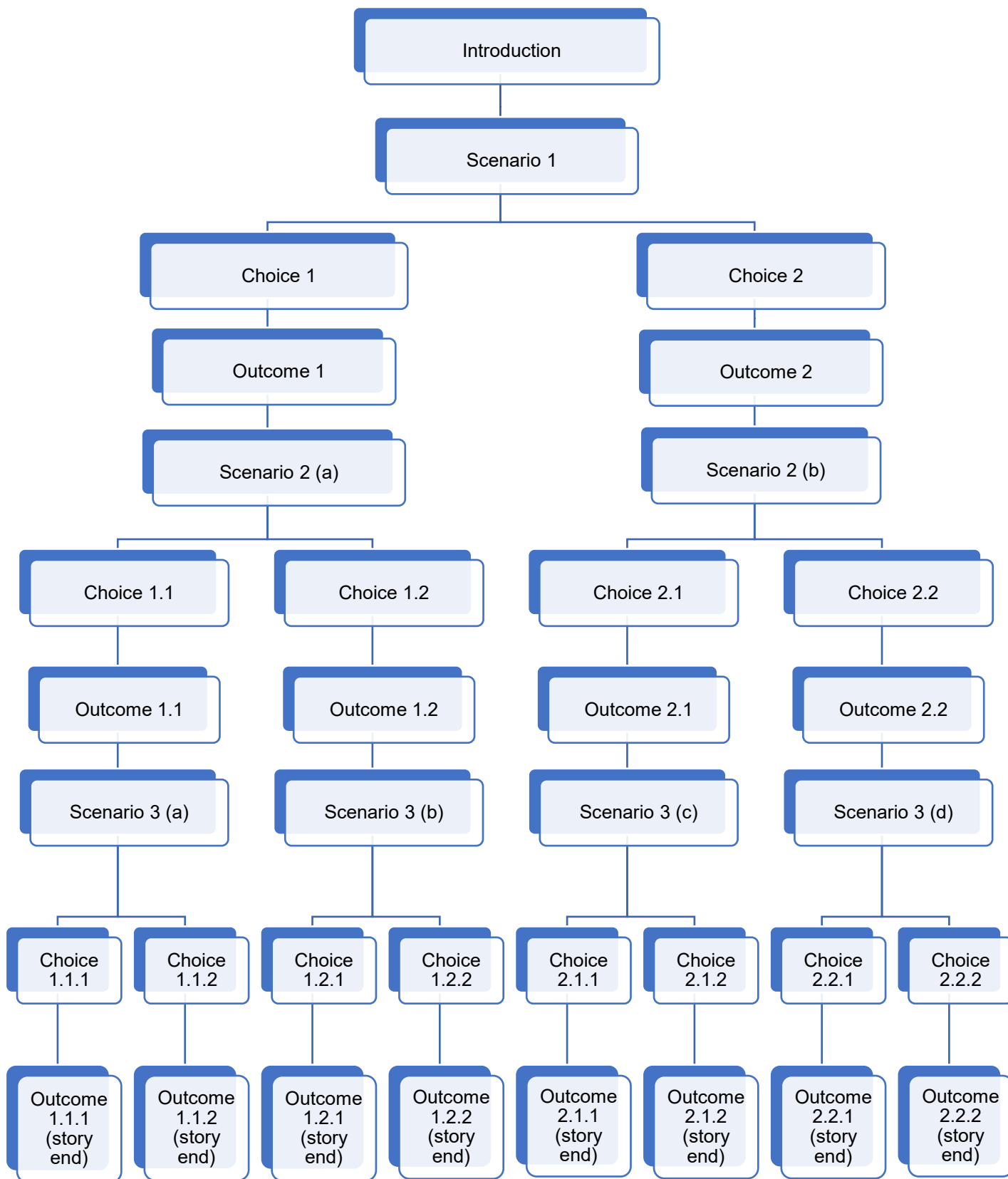


Figure 3

## Choose your own adventure example story plan

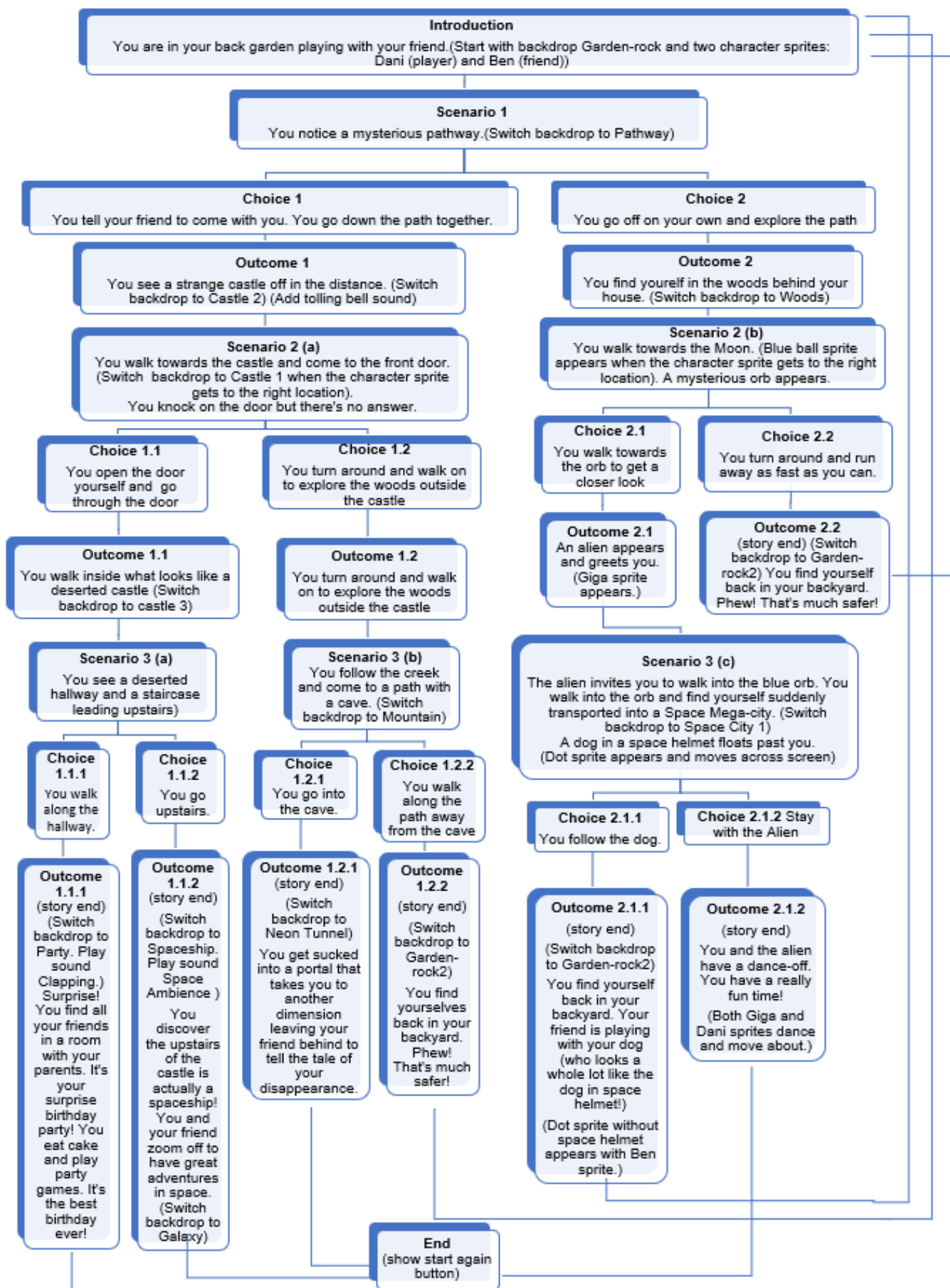


Figure 4

## Links to the Australian Curriculum

Tables 1 and 2 outline Australian Curriculum links which may be addressed depending on the task.

Table 1: Links to the Australian Curriculum: Digital Technologies Years 3–4

<p><b>Digital Technologies</b></p> <p><b>Achievement standard</b></p>	<p><b>Years 3 and 4</b></p> <p>By the end of Year 4, students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. They explain how the same data sets can be represented in different ways.</p> <p>Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. They explain how the solutions meet their purposes. They collect and manipulate different data when creating information and digital solutions. They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used.</p>		
<p><b>Strands</b></p>	<p>Digital Technologies processes and production skills</p> <ul style="list-style-type: none"> <li>• Creating designed solutions by             <ul style="list-style-type: none"> <li>– investigating and defining</li> <li>– producing and implementing</li> <li>– collaborating and managing</li> </ul> </li> </ul>		
<p><b>Content descriptions</b></p>	<p><b>Years 3 and 4</b> (<i>Depending on the task, one or more of the following may apply.</i>)</p> <ul style="list-style-type: none"> <li>• Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (<a href="#">ACTDIP010</a>)</li> <li>• Implement simple digital solutions as visual programs* with algorithms involving branching (decisions) and user input (<a href="#">ACTDIP011</a>) [*visual programs relates to Scratch version of this activity only]</li> <li>• Plan, create and communicate ideas and information independently and with others, applying agreed ethical and social protocols (<a href="#">ACTDIP013</a>)</li> </ul>		
<p><b>Key concepts</b></p>	<ul style="list-style-type: none"> <li>• specification</li> <li>• algorithms</li> <li>• implementation</li> <li>• interactions</li> </ul>	<p><b>Key ideas</b></p>	<p>Thinking in Technologies</p> <ul style="list-style-type: none"> <li>• computational thinking</li> </ul>
<p><b>Cross-curriculum priorities</b></p>		<p><b>General capabilities</b></p>	<ul style="list-style-type: none"> <li>• Information and Communication Technology (ICT) Capability</li> <li>• Literacy</li> </ul>

### Useful links

- Digital Technologies Hub
  - Visual programming [www.digitaltechnologieshub.edu.au/teachers/topics/visual-programming](http://www.digitaltechnologieshub.edu.au/teachers/topics/visual-programming)
  - Plan a choose your own adventure story [www.digitaltechnologieshub.edu.au/teachers/lesson-ideas/integrating-digital-technologies/plan-a-'choose-your-own-adventure'-story](http://www.digitaltechnologieshub.edu.au/teachers/lesson-ideas/integrating-digital-technologies/plan-a-'choose-your-own-adventure'-story)
- PowerPoint
  - How to hyperlink to a slide within a presentation [www.tinyurl.com/y3l3kz4g](http://www.tinyurl.com/y3l3kz4g)
  - How to set up PowerPoint with hyperlinks and in kiosk mode for improved user interface <https://www.youtube.com/watch?v=MITJc9d02TE>

Table 2: Links to the Australian Curriculum: Digital Technologies Years 5–6

<p><b>Digital Technologies</b></p> <p><b>Achievement standard</b></p>	<p><b>Years 5 and 6</b></p> <p>By the end of Year 6, students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. They explain how digital systems use whole numbers as a basis for representing a variety of data types.</p> <p>Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. They incorporate decision-making, repetition and user interface design into their designs and implement their digital solutions, including a visual program.</p> <p>They explain how information systems and their solutions meet needs and consider sustainability. Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.</p>		
<p><b>Strands</b></p>	<p>Digital Technologies processes and production skills</p> <ul style="list-style-type: none"> <li>• Creating designed solutions by             <ul style="list-style-type: none"> <li>– investigating and defining</li> <li>– generating and designing</li> <li>– producing and implementing</li> <li>– collaborating and managing</li> </ul> </li> </ul>		
<p><b>Content descriptions</b></p>	<p><b>Years 5 and 6</b></p> <ul style="list-style-type: none"> <li>• Define problems in terms of data and functional requirements drawing on previously solved problems (<a href="#">ACTDIP017</a>)</li> <li>• Design a user interface for a digital system (<a href="#">ACTDIP018</a>)</li> <li>• Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (<a href="#">ACTDIP019</a>)</li> <li>• Implement digital solutions as simple visual programs* involving branching, iteration (repetition), and user input (<a href="#">ACTDIP020</a>) [*visual programs relates to Scratch version of this activity only]</li> <li>• Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (<a href="#">ACTDIP022</a>)</li> </ul>		
<p><b>Key concepts</b></p>	<ul style="list-style-type: none"> <li>• specification</li> <li>• algorithms</li> <li>• implementation</li> <li>• interactions</li> </ul>	<p><b>Key ideas</b></p>	<p>Thinking in Technologies</p> <ul style="list-style-type: none"> <li>• computational thinking</li> </ul>
<p><b>Cross-curriculum priorities</b></p>		<p><b>General capabilities</b></p>	<ul style="list-style-type: none"> <li>• Information and Communication Technology (ICT) Capability</li> <li>• Literacy</li> </ul>

### Useful links

- Australian Curriculum [www.australiancurriculum.edu.au/](http://www.australiancurriculum.edu.au/)
  - Digital Technologies in focus implementation resources and information [www.australiancurriculum.edu.au/resources/digital-technologies-in-focus](http://www.australiancurriculum.edu.au/resources/digital-technologies-in-focus)
  - Digital Technologies Curriculum information [www.australiancurriculum.edu.au/f-10-curriculum/technologies/digital-technologies/](http://www.australiancurriculum.edu.au/f-10-curriculum/technologies/digital-technologies/)
- Scratch website [www.scratch.mit.edu/](http://www.scratch.mit.edu/)
  - Scratch tutorials [www.scratch.mit.edu/projects/editor/?tutorial=getStarted](http://www.scratch.mit.edu/projects/editor/?tutorial=getStarted)
  - Resources for teachers [www.scratch.mit.edu/educators/#resources](http://www.scratch.mit.edu/educators/#resources)

\* Content descriptions may be wholly or partially addressed depending upon the activity and or whether visual programming such as Scratch is used.

PowerPoint/Slide show templates are adapted from source: <https://www.ursinus.edu/live/files/1380-choose-your-own-adventure-templatepptx> accessed 1/11/19)

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