Digital Technologies - Below satisfactory - Years 3 and 4

Portfolio summary

This portfolio of student work shows that the student can describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes (WS1). The student explains how the same data sets can be represented in different ways (WS2).

The student defines simple problems and designs and implements digital solutions using algorithms that involve decision-making and user input (WS3). The student explains how the solutions meet their purposes (WS3) and collects and manipulates different data when creating information and digital solutions (WS2). The student safely uses and manages information systems for identified needs using agreed protocols (WS3) and describes how information systems are used (WS1).

Worksheet: Digital systems

Sample summary

Students have been collaborating, creating and communicating ideas, information and solutions face-to-face and online via a class wiki. They were asked to identify hardware and software used throughout the year and describe other purposes for which they can be used, and to sequence the steps to upload their file to their learning management system folder.

Achievement standard

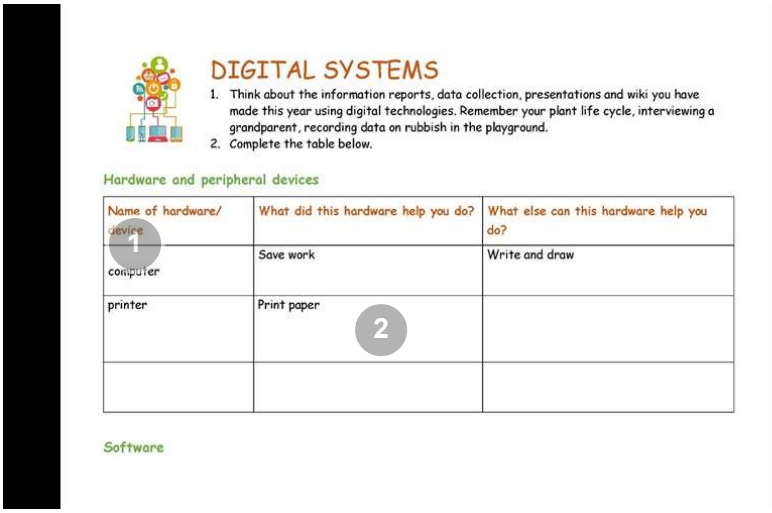
Subject

Learning Area

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.

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.

Systems worksheet



DIGITAL SYSTEMS

1. Think about the information reports, data collection, presentations and wiki you have made this year using digital technologies. Remember your plant life cycle, interviewing a grandparent, recording data on rubbish in the playground.
2. Complete the table below.

Hardware and peripheral devices

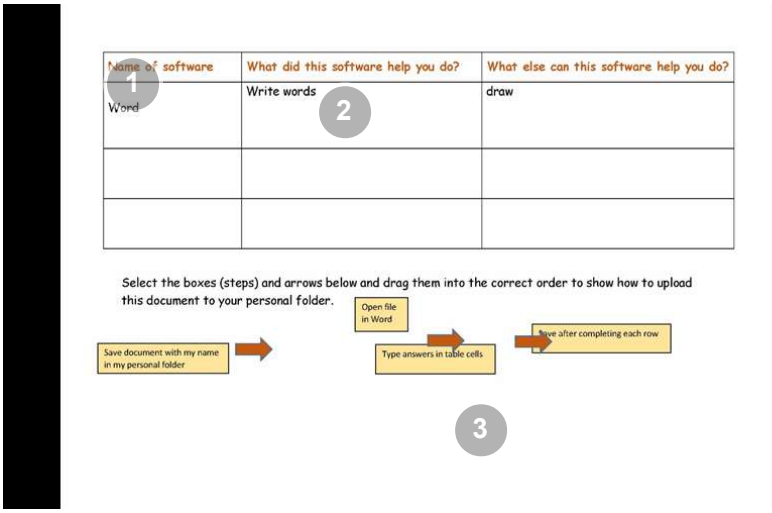
Name of hardware/ device	What did this hardware help you do?	What else can this hardware help you do?
computer	Save work	Write and draw
printer	Print paper	

Software

Annotations

1 Annotation 1
Identifies and names computer hardware and a device with support

2 Annotation 2
Describes the use of computer hardware and a device in basic terms



Name of software	What did this software help you do?	What else can this software help you do?
Word	Write words	draw

Select the boxes (steps) and arrows below and drag them into the correct order to show how to upload this document to your personal folder.

Open file in Word

Save document with my name in my personal folder

Type answers in table cells

Save after completing each row

3

Annotations

1 Annotation 1
With support, identifies and names computer software

2 Annotation 2
Describes the use of computer software in basic terms

3 Annotation 3
Sequences some steps to save a file using the school's learning management system

Data project: Clean school

Sample summary

Students collected, collated and recorded data about rubbish in an assigned area of the school. They represented data as a series of graphs and on a map. They enhanced the map by adding images and a key.

Achievement standard

Subject

Learning Area

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peripheral devices can be used for different purposes. They explain how the same data sets can be represented in different ways.

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.

Data presentation

Digital project: Rapunzel

Sample summary

Students were presented with the problem of rescuing Rapunzel from the tower in 60 seconds. In teams, they designed, built and programmed a device that would allow the prince to safely rescue Rapunzel. They were asked to use tilt and motion sensors to control the device, use appropriate sounds and backgrounds, create a timer, and use simple engineering principles and systems. The device was expected to be sturdy, have at least three safety features and consider the user. Each team was asked to demonstrate their model to the class showing how they carried out the rescue and explaining the science, engineering and programming choices involved.

Achievement standard

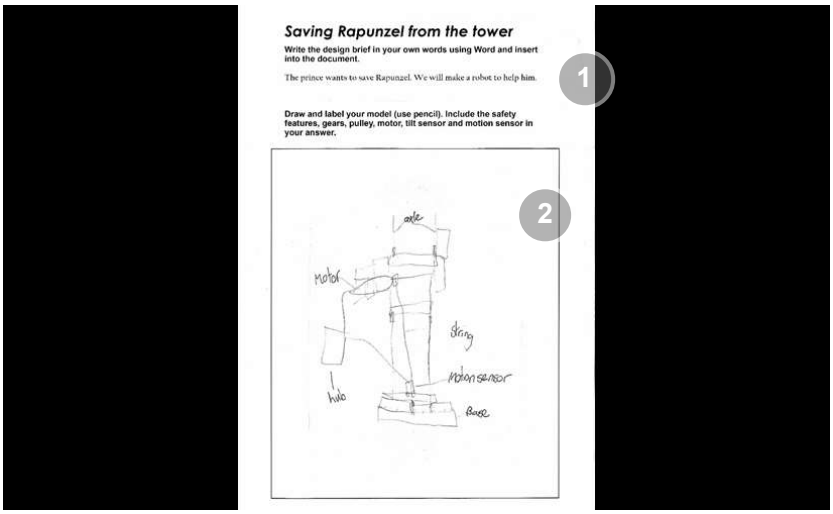
Subject

Learning Area

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.

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.

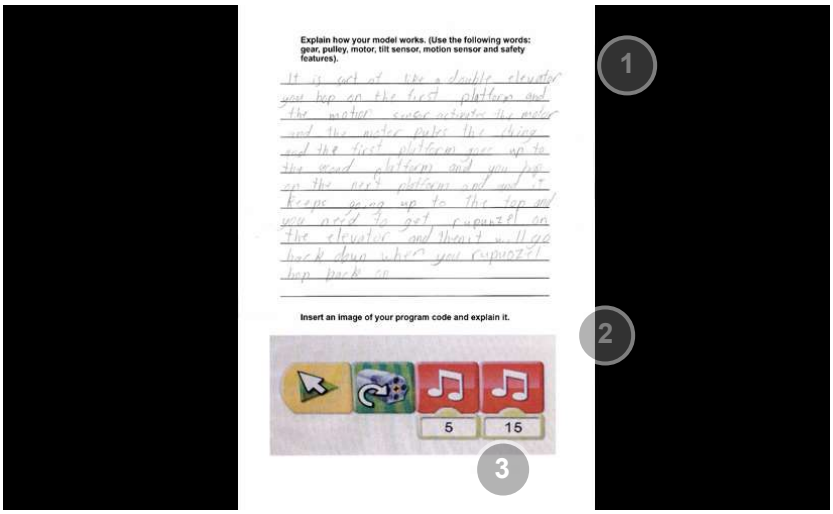
Rapunzel portfolio



Annotations

1 **Annotation 1**
Defines the problem in basic terms

2 **Annotation 2**
Draws a diagram with some key features of the robot

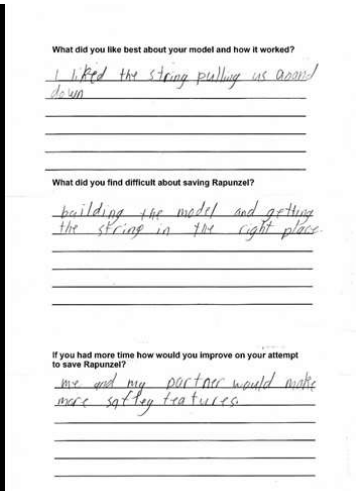


Annotations

1 **Annotation 1**
Provides a basic explanation of how the robot works

2 **Annotation 2**
Selects a few simple coding elements to program the robot

3 **Annotation 3**
Captures a screen shot of the program code



What did you like best about your model and how it worked?

I liked the string pulling us down

What did you find difficult about saving Rapunzel?

building the model and getting the string in the right place

If you had more time how would you improve on your attempt to save Rapunzel?

me and my partner would make more saftey features

1

2

Annotations

1 Annotation 1
Describes briefly what they liked about the robot and what was difficult

2 Annotation 2
Identifies improvements that could be made to the robot

Insert an image of the model you created.

1

Annotations

1 Annotation 1
Takes a digital image and inserts it into the document