

## Cycle A marking ladders

### Nursery Cycle A marking ladders

Technology		
<b>I know</b>		
the basic parts of a computer		
how to use the computer safely		
<b>I Can</b>		
explore and operate simple equipment (remote control cars/torches/CD player)		
explore touch-capable technology (iPads)		
turn the computer on		
begin to explore how to use the computer		
use age appropriate computer software		
complete a simple program on a computer		

### EYFS Cycle A marking ladders

Technology		
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the basic parts of a computer		
how to use the computer safely		
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explore touch-capable technology (iPads)		
turn the computer on		
begin to explore how to use the computer		
use age appropriate computer software		
complete a simple program on a computer		
create content such as a video recording, stories, and/or draw a picture on screen		
develop digital literacy skills by being able to access, understand and interact with a range of technologies		
use the internet with adult supervision to find and retrieve information of interest to them		

**KS1 Cycle A marking ladders**

<b>Technology around us</b>		
<b>I know</b>		
that technology is something that can help us		
examples of technology		
how examples of technology help us		
that a computer is an example of technology		
that choices are made when using technology		
why rules are needed when using technology		
<b>I Can</b>		
choose a piece of technology to do a job		
recognise that some technology can be used in different ways		
identify the main parts of a computer		
use a mouse in different ways		
use a keyboard to type		
use the keyboard to edit text		
show how to use technology safely		

<b>Creating media- digital painting</b>		
<b>I know</b>		
what different freehand tools do		
computers can be used to create art		
a tool can be adjusted to suit my need		
when it's appropriate to use each tool		
impact of choices made		
painting using a computer with painting using brushes		
<b>I Can</b>		
create a picture using freehand tools		
use shape and line tools when precision is needed		
use a range of paint colours		
use the fill tool to colour an enclosed area		
use the undo button to correct a mistake		
combine a range of tools to create a piece of artwork		

## Creating media- digital writing

<b>I know</b>		
that a keyboard is used to enter text into a computer		
that the shift key changes the output of a key		
that text can be changed		
that text can be edited		
that the appearance of text can be changed		
the impact of choices made		
<b>I Can</b>		
use letter, number, and Space keys to enter text into a computer		
use punctuation and special characters		
select text		
use the Backspace key to remove text		
position the text cursor in a chosen location		
choose options to achieve a desired effect		
change the appearance of text on a computer		
use undo		

## Data and information- grouping data

<b>I know</b>		
that objects can be counted		
that information can be presented		
that information can be presented in different ways		
<b>I Can</b>		
identify some attributes of an object		
collect simple data		
show that collected data can be counted		
describe the properties of an object		
choose an attribute to group objects by		
explain that objects can be grouped by similarities (attribute)		
group objects to answer questions		
describe a group of objects (based on commonality)		

## Programming A- moving a robot

<b>I know</b>		
words that can be enacted		
what a given command does		

match a command to an outcome		
that a program is a set of commands that a computer can run		
that a series of instructions can be issued before they are enacted		
<b>I Can</b>		
enact a given word		
predict the outcome of a command on a device		
list which commands can be used on a given device		
run a command on a floor robot		
choose a command for a given purpose		
choose a series of words that can be enacted as a program		
choose a series of commands that can be run as a program		
build a sequence of commands in steps		
combine commands in a program		
run a program on a device		

Programming B- introduction to animation		
<b>I know</b>		
commands can be used on a given device		
what a given command does		
how to run a command (press a button)		
that a program is a set of commands a computer can run		
that a series of instructions can be issued before they are enacted		
<b>I Can</b>		
enact a given word		
recall words that can be enacted		
match a command to an outcome		
choose a command for a given purpose		
predict the outcome of a command on a device		
build a sequence of commands in steps		
combine commands in a program		
choose a series of words that can be enacted as a program		
choose a series of commands that can be run as a program		
run a program on a device		

<b>Computer systems and networks- connecting computers</b>		
<b>I know</b>		
what an input is		
that a process acts on the inputs		
that an output is produced by the process		
changing the process can affect the output		
that a digital device is made up of several parts		
that computers can be connected to each other		
how computer systems can change the way we work		
how devices in a network are connected to each other		
that a network is made up of a number of components		
how information is passed through multiple connections		
the benefits of computer networks		
that a computer systems accepts an input and processes it to produce an output		
the role of a switch, server and wireless access point in a network		
how a computer network can be used to share information		
<b>I Can</b>		
identify input and output devices		
identify network devices around me		

<b>Creating media- animation</b>		
<b>I know</b>		
an animation is made up of a sequence of images		
that a capturing device needs to be in a fixed position		
that smaller movements create a smoother animation		
the need for consistency in working		
the impact of adding other media to an animation		
that a project needs to be exported so it can be shared		
<b>I Can</b>		
set up the work area with an awareness of what will be captured		
plan an animation using a storyboard		
capture an image		
use the onion skinning tool to review subject position		
move a subject between captures		
review a captured sequences of frames as an animation		
remove frames to improve an animation		
add media to enhance an animation		

review a completed project		

## Creating media- desktop publishing

<b>I know</b>		
how text and images can be used together to convey information		
that page orientation can be changed		
how different layouts can suit different purposes		
that DTP pages can be structured with placeholders		
how different font styles and effects are used for particular purposes		
the benefits of using a DTP application		
<b>I Can</b>		
define landscape and portrait as two different page orientations		
organise text and image placeholders in a page layout		
add text to a placeholder		
add and remove images to and from placeholders		
edit text in a placeholder		
move resize and rotate images		
choose fonts and apply effects to text		
review a document		

## Data and information- branching databases

<b>I know</b>		
questions with yes/no answers		
attributes that you can ask yes/no questions about		
an attribute to separate objects into two similarly sized groups		
that a branching database is an identification tool		
that a data set can be structured using yes/no questions		
n that a well-structured branching database will enable you to identify objects using fewer questions		
two levels of a branching database using AND		
real-world applications for branching databases		
<b>I Can</b>		
create questions with yes/no answers		
choose questions that will divide objects into evenly sized subgroups		
identify an object using a branching database		
repeatedly create subgroups of objects		
identify an object using a branching database		
retrieve information from different levels of the branching database		

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Programming A- sequence in music		
<b>I know</b>		
that programs start because of an input		
what a sequence is		
that a program includes sequences of commands		
that the sequence of a program is a process		
that the order of commands can affect a program's output		
that different sequences can achieve the same output		
that different sequences can achieve different outputs		
<b>I Can</b>		
build a sequence of commands		
combine commands in a program		
order commands in a program		
create a sequence of commands to produce a given outcome		

Programming B- events and actions		
<b>I know</b>		
that programs start because of an input		
what a sequence is		
that a program includes sequences of commands		
that the sequence of a program is a process		
that the order of commands can affect a program's output		
that different sequences can achieve the same output		
that different sequences can achieve different outputs		
<b>I Can</b>		
build a sequence of commands		
combine commands in a program		
order commands in a program		
create a sequence of commands to produce a given outcome		

## **Computer systems and networks- sharing information**

### **I know**

that computers can be part of a system in an electronic device

that computers can be connected together to form systems

that computers communicate with other devices (including other computers)

input, process, and output in larger computer systems

how information is transferred across the internet

that data is transferred using agreed protocols (methods)

the role of computer systems in our lives

that data is transferred in packets

that connections between computers allow us to access shared stored files

that connections between computers allow us to work together

that the internet lets people in different places work together

that the internet allows different media to be shared

### **I Can**

evaluate different ways of working together

that internet collaborations can be public or private

## **Creating media- vector drawing**

### **I know**

that a vector drawing comprises separate objects

that each object in a drawing is in its own layer

that vector images can be scaled without impact on quality

that objects can be modified in groups

how alignment and size guides can help create a more consistent drawing

the impact of choices made

### **I Can**

add an object to a vector drawing

select one object or multiple objects

delete objects

move objects between the layers of a drawing

group and ungroup selected objects

duplicate objects using copy and paste

modify objects

reposition objects

combine options to achieve a desired effect

create a vector drawing for a given purpose



## Creating media- video editing

I know		
the features of video as a visual media format		
which devices can and can't record video		
the purpose of a storyboard		
features of a video recording device or application		
that filming techniques can be used to create different effects		
the limitations of editing video on a recording device		
that videos can be edited on a recording device or on a computer		
videos can be improved through and reshooting or editing		
the need to regularly review and reflect on a video project		
projects need to be exported to be shared		
I Can		
use different camera angles		
use pan, tilt and zoom		
combine filming techniques for a given purpose		
determine what scenes will convey your idea		
decide what changes I will make when editing		
choose to reshoot a scene or improve later through editing		
use split, trim and crop to edit a video		

## Data and information- flat-file databases

I know		
an approach to answer a question using a database		
that a computer program can be used to organise data		
how ordering data allows us to answer some questions		
that tools can be used to select data to answer questions		
how operands can be used to filter data		
how 'AND' and 'OR' can be used to refine data selection		
that computer programs can be used to compare data visually		
I Can		
navigate a flat-file database		
design a structure for a flat-file database		
choose different ways to view data		
choose which attribute to sort data by to answer a given question		
choose which attribute and value to search by to answer a given question (operands)		
choose multiple criteria to search data to answer a given question (AND and OR)		
ask questions that need more than one attribute to answer		

## Programming A- selection in physical computing

<b>I know</b>		
that a condition can only be true or false		
that a count-controlled loop contains a condition		
a count-controlled loop with a condition-controlled loop		
that a condition-controlled loop will stop when a condition is met		
that when a condition is met, a loop will complete a cycle before it stops		
that selection can be used to branch the flow of a program		
that a loop can be used to repeatedly check whether a condition has been met		
the importance of instruction order in 'if...then...else...' statements		
<b>I Can</b>		
create a condition-controlled loop		
use a condition in an 'if...then...' statement to start an action		
use selection to switch the program flow in one of two ways		
use a condition in an 'if...then...else...' statement to produce given outcomes		

## Programming B- selection in quizzes

<b>I know</b>		
that a condition can only be true or false		
that a count-controlled loop contains a condition		
a count controlled loop with a condition-controlled loop		
that a condition-controlled loop will stop when a condition is met		
that when a condition is met a loop will complete a cycle before it stops		
that selection can be used to branch the flow of a program		
that a loop can be used to repeatedly check whether a condition has been met		
the importance of instruction order in 'if... then... else...' statements		
<b>I Can</b>		
choose a condition to use in a program		
create a condition-controlled loop		
use a condition in an 'if... then...' statement to start an action		
use selection to switch program flow		
use 'if... then... else...' to switch program flow in one of two ways		