



<b>LAW AND ORDER</b>	
<p>To know how to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs (NC)</p> <p>To know how to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts (NC)</p>	
<b>COMPOSITES</b>	<b>COMPONENTS</b>
To know how to create a 3D world within Kodu	<p>To know that 2D means two-dimensional, i.e. something that has two dimensions – length and width</p> <p>To know that 3D means three-dimensional, i.e. something that has three dimensions – width, height and depth (length)</p> <p>To know that Kodu Game Lab is a video game development platform developed by Microsoft to introduce young children to the basic concepts of computer programming</p> <p>To know that Kodu is a visual programming language (VPL) which teaches coding via simple visual elements</p> <p>To know that in Kodu you connect tiles containing underlying code to build 3D worlds and games without the need to master complex syntax and typing abilities</p> <p>To know how to use a range of tools within to create a 3D world within Kodu</p>
To know how to identify selection	<p>To know that selection allows you to choose whether to run a section of code</p> <p>To know that selection allow you to choose to run code only IF / WHEN a certain condition is met</p> <p>To know selection will most like include one of the words IF / THEN / WHEN / ELSE</p>



LAW AND ORDER (cont.)	
COMPOSITES	COMPONENTS
To understand and use selection in programming ( <i>within Kodu</i> )	<p>To know that repeat within an algorithm means that something happens or is done again</p> <p>To know that when something occurs again in an algorithm / program it is called a repeat / loop</p> <p>To know that a flowchart is a diagram of a sequence of functions / actions</p> <p>To know that algorithms can be represented as flowcharts</p> <p>To know how repetition is used in algorithms practically (<i>Zorba's Dance</i>)</p> <p>To know that repetition within instructions / algorithms can make them clearer and more concise</p> <p>To know how to use selection to choose whether to run a section of code (<i>in Kodu</i>)</p> <p>To know how to use selection allow you to choose to run code only IF / WHEN a certain condition is met (<i>in Kodu</i>)</p>



## PICTURE OUR PLANET

To 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 (NC)

To 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 (NC)

To know how to use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact (NC)

### COMPOSITES

To understand how to edit photos using advanced tools and filters

### COMPONENTS

To know that photo editing is the process or art of enhancing photos to make them look more visually appealing

To know that edits to photos are often called adjustments

To know that photos can be edited in a variety of ways e.g. to adjust contrast and brightness, shadows and highlights, correct colours, crop or resize, retouch or restore images and for advertisement and marketing

To know that photos are mainly edited electronically using photo editing software

To know that photo editing software contains a variety of tools, blending modes, adjustments, and filters that can help to create a different atmosphere or effect in a photo

To know and use the tools, blending modes, adjustments, and filters within photo editing software



PICTURE OUR PLANET (cont.)	
COMPOSITES	COMPONENTS
To understand email and be able to draft and send them	<p>To know that the internet is a network, or system, that connects millions of computers worldwide</p> <p>To know that electronic mail, or 'email,' uses electronic devices to deliver messages</p> <p>To know that email uses the internet to send these messages</p> <p>To know the advantages of using emails e.g. efficiency, not using paper etc.</p> <p>To know how to type using a keyboard / touch screen</p> <p>To know that emails have a specific format / address and contain the @ symbol followed by a domain / organisation name</p> <p>To know that you can save emails in draft form</p> <p>To know that Cc means carbon copy and Bcc means blind carbon copy</p> <p>To know that carbon copy is produced when a sheet of carbon paper is placed between two sheets of writing paper – this was used before photocopying and email but is still used today</p> <p>To know and be able to use the functions of Send, Reply, Forward, To, Cc and Bcc</p>



## A WORLD OF DIFFERENCE / CRY FREEDOM

To know how to 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 (NC)

To know how to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (NC)

COMPOSITES	COMPONENTS
To know how to create a quiz using a presentation program	<p>To know how to generate questions</p> <p>To know that research is the process of finding facts / information in an organised manner</p> <p>To know that research can be completed using the internet</p> <p>To know how what a search engine is</p> <p>To know how to navigate to and use a search engine or given websites and find information</p> <p>To know how to pick out key information from a text</p> <p>To know that evaluate means to study carefully and judge</p> <p>To know that a presentation is a way of showing someone information</p> <p>To know what an on-screen presentation looks like</p> <p>To know that a slide is one page of a presentation</p> <p>To know how to navigate the internet or a given website in order to read and extract relevant information to use in a presentation</p> <p>To know how to type using a keyboard / touch screen</p> <p>To know to add text to presentation software</p> <p>To know how to locate and save an image</p> <p>To know how to import an image to presentation software</p> <p>To know how to play a slideshow on presentation software</p>

# Computing



A WORLD OF DIFFERENCE / CRY FREEDOM (cont.)	
COMPOSITES	COMPONENTS
	<p>To know that a transition within presentation software is the way one slide changes into the next</p> <p>To know that an animation within presentation software is the way an element on a slide come to life</p> <p>To know how to change, format, add and edit a presentation's style, background, font, images, sounds</p> <p>To know how to add animations and transitions to a presentation</p>



LIGHTNING SPEED	
To 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 (NC)	
COMPOSITES	COMPONENTS
To understand that the computers in a school are connected together in a network	<p>To know that local means the nearby area</p> <p>To know that an area is a space</p> <p>To know that a network is a group of connected things or people</p> <p>To know that a Local Area Network (LAN) is a network of connected computers / devices in a specific area (<i>in this case, a school</i>)</p> <p>To know that devices can connect wirelessly to a network (without wires)</p> <p>To know that a server is a computer that is always left switched on that serves the network, a bit like waiter serving customers in a restaurant</p> <p>To know that a server serves the network by running programs (Scratch, Kodu, Internet browsers) which people wish to use; storing files created by users; allowing access to printing; allowing access to the Internet</p>
To understand why computers are networked	<p>To know, in a network, that all the computers / devices are connected to a switch and a switch simply helps them connect together</p> <p>To know that devices on a network are called workstations</p> <p>To know that computer networks can overcome geographic barriers and enable the sharing of information</p> <p>To know that computer networks enable the usage and sharing of any number of applications and services, including emails, video, audio, and plenty of other types of data, over the internet</p>





LIGHTNING SPEED (cont.)	
COMPOSITES	COMPONENTS
To understand the difference between the internet and the World Wide Web (WWW)	<p>To know that the internet is a massive network of connected computers and other devices across the globe</p> <p>To know that the internet is the largest network that exists</p> <p>To know that the world wide web ('www' or 'web' for short) is a collection of webpages found on the internet</p> <p>To know that a web browser uses the internet to access the world wide web.</p> <p>To know that Tim Berners-Lee invented the World Wide Web (WWW)</p>
To understand that servers on the internet are located across the planet	<p>To know that a server is a computer that is always left switched on that serves the network</p> <p>To know there are servers on the Internet in different parts of the world, just like there was a server on our school network</p>
To understand how email is sent across the internet	<p>To know that electronic mail, or 'email,' uses electronic devices to deliver messages</p> <p>To know that email uses the internet to send these messages</p> <p>To know the advantages of using emails e.g. efficiency, not using paper etc.</p> <p>To know the process an email goes through from composition to being received by the sender: type the email; press send from your email address with the domain name, e.g. @gmail.com, transfers to email domain name service provider to find the domain of the receiver; then the email is sent to the receiver once verified, email received by recipient</p>





## SAFE ZONE - YEAR 4 LESSON 1

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### ONLINE RELATIONSHIPS

I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms).

I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.

I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.

#### ONLINE BULLYING

I can recognise when someone is upset, hurt or angry online.

I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).

I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).

### COMPOSITES

I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms).

### COMPONENTS

To know why it is beneficial to spend time relaxing

To know how to use spare time productively to help relax and enjoy doing something positive, and give examples

To know what it means to be safe online

To know what you can do online for fun and give examples of these e.g. gaming

To know that livestreaming is broadcasting to an audience in 'real time' online

To know that we should take precautions to stay safe when communicating online, just as we would offline



## SAFE ZONE - YEAR 4 LESSON 1 (cont.)

COMPOSITES	COMPONENTS
I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.	<p>To know that respect means that you have due regard for the feelings, wishes, and rights of others</p> <p>To know that considerate means to be thoughtful towards the rights and feelings of others</p> <p>To know that kindness is the quality of being friendly, generous, and considerate</p> <p>To know that treating people with kindness, consideration and respect is likely to make them feel good</p> <p>To know how it is possible to be respectful online</p> <p>To know that healthy choices make us, or others, feel good and unhealthy choices are likely to make us feel bad</p> <p>To know, and give examples of, healthy and unhealthy online behaviours</p>
I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	<p>To know that not everyone thinks the same</p> <p>To know that people have different thoughts, feelings and beliefs and we must respect these</p> <p>To know that people have different likes and dislikes</p> <p>To know that we must be aware that content shared online might be seen in a different light by others e.g. something they find funny might not be taken in the same way by someone else</p>
I can recognise when someone is upset, hurt or angry online.	<p>To know if technology has ever made you feel anxious, angry, sad, etc</p> <p>To know what it might look like when someone is upset, hurt or angry online</p> <p>To know that rage quitting is when a player in sports or video gaming is too angry to continue playing a game and usually leaves before the end of the game or match</p> <p>To know that bullying behaviour can make someone feel upset, hurt or angry online and offline</p>



SAFE ZONE - YEAR 4 LESSON 1 (cont.)	
COMPOSITES	COMPONENTS
I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).	<p>To know the difference between accidental and intentional behaviour</p> <p>To know where bullying can happen online e.g. online gaming chat, WhatsApp, social media, etc.</p> <p>To understand how bullying can make someone feel e.g. scared, lonely, upset, anxious, hated</p> <p>To know some of the signs that someone might be being bullied e.g. become withdrawn, quiet, sad</p> <p>To know that someone experiencing bullying is not to blame and they must not feel that way</p> <p>To know how someone can / would get help about being bullied online or offline</p> <p>To know that you should always try your best to help someone if you feel they are being bullied</p> <p>To know that it is the right thing to do to report bullying to a trusted adult</p> <p>To know that if you are upset or worried about something online you should talk to a trusted adult</p> <p>To know and name different people who you could ask for help and support</p> <p>To know that children do not have to fix problems on their own</p>
I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).	<p>To know that a post is a message, such as text or photos, published online by a user while referring to a message board, comment section, or social network</p> <p>To know that you can post a variety of content online</p> <p>To know that what you post online will be seen by others</p> <p>To know that people may make judgements about you based on what you post online</p> <p>To know that we must think about others before posting / saying anything online</p>



## SAFE ZONE - YEAR 4 LESSON 2

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### HEALTH, WELL-BEING AND LIFESTYLE

I can explain how using technology can be a distraction from other things, in both a positive and negative way.

I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.

COMPOSITES	COMPONENTS
I can explain how using technology can be a distraction from other things, in both a positive and negative way.	<p>To know that technology can be both a positive and negative distraction</p> <p>To know that technology can sometimes take all your concentration</p> <p>To know some examples of where it is easy to lose track of time when engaged with technology</p> <p>To know some examples of using technology positively</p> <p>To know some examples of using technology negatively</p>
I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.	<p>To know that the recommended screen time for children aged 5 to 16 is two hours</p> <p>To know how to identify how much time you spend using technology</p> <p>To know that many devices have screentime trackers that can help guide us on how much time we spend using devices</p> <p>To know the long-term effects, both physically and mentally, of spending too much time using technology</p> <p>To recognise when someone might need to limit their time spent using technology</p>



## SAFE ZONE - YEAR 4 LESSON 3

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### ONLINE REPUTATION

I can describe how to find out information about others by searching online.

I can explain ways that some of the information about anyone online could have been created, copied or shared by others.

#### MANAGING ONLINE INFORMATION

I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.

I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).

I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.

I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.

I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.

I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.

### COMPOSITES

### COMPONENTS

**I can describe how to find out information about others by searching online.**

To know how to navigate to and use a search engine or given websites and find information  
To know that you can search for information about yourself online  
To know that you can search for information about others online  
To know how to explain to others how to search online safely

**I can explain ways that some of the information about anyone online could have been created, copied or shared by others.**

To know that, when searching online, most of the content we find belongs to someone else  
To know that anyone can post online and not everything created is necessarily true or accurate



## SAFE ZONE - YEAR 4 LESSON 3 (cont.)

COMPOSITES	COMPONENTS
I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.	To know how to analyse the validity of an online source (Knowledge CHASERS) To know that it important to form your own opinions and not just accept what you see as true
I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).	To know that, especially on social media, people can present information as facts when they may not necessarily be true To know how to use a range of search technologies to find information To know how to corroborate the accuracy of information by comparing sources
I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.	To know that facts are statements that we know to be true To know that opinions are your beliefs about something and might not be true for everyone To know that a belief is a firm thought that something is true To know that facts, opinions and beliefs are all on the internet and it is important to know the difference between the three To know that opinions, facts, and beliefs can be seen in many forms online e.g. webpages, blogs, videos, memes, posts, news stories etc To know that things you find online might not be true To know that not everyone has to agree with your opinion and vice versa To know that some people might disagree over opinions To know that just because lots of people are saying a certain thing, it doesn't necessarily mean it's true
I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.	To know that fake news can be spread by hackers / bots To know that we must be careful when dealing with technology so that we are not tricked by fake accounts / bots





## SAFE ZONE - YEAR 4 LESSON 3 (cont.)

COMPOSITES	COMPONENTS
I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.	<p>To know that fake news is news or stories on the internet that are not true</p> <p>To know that fake news is often created to spread strong and often prejudice opinions</p> <p>To know that people may manipulate photos for a number of reasons e.g. parody, to spread false information</p>





## SAFE ZONE - YEAR 4 LESSON 4

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### SELF-IMAGE AND IDENTITY

I can explain how my online identity can be different to my offline identity.

I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.

I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.

COMPOSITES	COMPONENTS
I can explain how my online identity can be different to my offline identity.	<p>To know that it is important to not give away too much of your identity online in order to stay safe</p> <p>To know that other people's identities online can be different to their identities in real-life</p> <p>I can describe ways in which people might make themselves look different online e.g. avatars, fake pictures etc.</p> <p>To know that an avatar is useful to show people aspects of your personality, but not give away too much information about yourself</p>
I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.	<p>To know that honesty is when you speak the truth and act truthfully</p> <p>To know that it is important to be honest both online and offline</p> <p>To know how to positively interact with others both online and offline</p> <p>To know that people will perceive you differently depending on how you behave towards them</p> <p>To know how to make good choices when interacting with others both online and offline</p>
I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.	<p>To know that impersonation means to pretend to be another person</p> <p>To know that someone might want to change their identity online for many reasons – some good, some bad e.g. safety / discretion, scamming etc.</p> <p>To know that it is difficult to know someone's true identity when communicating with them online</p>



## SAFE ZONE - YEAR 4 LESSON 5

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### COPYRIGHT AND OWNERSHIP

**When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.**  
**I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.**

COMPOSITES	COMPONENTS
<b>When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.</b>	To know that reuse of digital content is when someone takes and uses a part of, or a whole piece of digital content in their own work To know that it is not okay to copy someone's work / content and say it is your own To know that when searching online, most of the content we find belongs to someone else To know that copying someone else's work from the internet without permission can cause problems To know what those problems might be e.g. copyright infringement, upset, taking someone's hard work, etc To know whether you can use someone's content e.g. Creative Commons
<b>I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.</b>	To know that there are different types of content / images available on the internet which may have different copyright licenses i.e. some are free to use; some have copyright licences available to purchase so you can use them; some are free to use for certain things like education or news reporting, but it is important to check; some you are unable to copy at all To know how to find out about these licenses (Google Image search tools) To know some examples of content you cannot reuse without permission



## SAFE ZONE - YEAR 4 LESSON 6

### EDUCATION FOR A CONNECTED WORLD OBJECTIVES

#### PRIVACY AND SECURITY

I can describe strategies for keeping personal information private, depending on context.

I can explain that internet use is never fully private and is monitored, e.g. adult supervision.

I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure.

I know what the digital age of consent is and the impact this has on online services asking for consent.

COMPOSITES	COMPONENTS
I can describe strategies for keeping personal information private, depending on context.	<p>To know that it is important to have support in place to ensure personal information is not given away e.g. parental controls, talking about what to share, etc.</p> <p>To know that private means only for one person or group and not for everyone</p> <p>To know what information should be kept private and what is okay to share</p> <p>To know to speak to a trusted adult before posting anything, especially if you are unsure whether you should post it</p> <p>To know that there are times when things should not be kept private e.g. if someone is unsafe</p>
I can explain that internet use is never fully private and is monitored, e.g. adult supervision.	<p>To know that the internet is never fully private and can be monitored by others for our safety</p> <p>To know that passwords should be kept private to prevent anyone accessing your information / content and that only trusted adults should be able to share these e.g. school teachers knowing school account passwords, parents knowing passwords at home to keep you safe</p>
I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure.	<p>To know that to give consent means to give permission</p> <p>To know that personal information can be used by others for their gain e.g. hackers, advertisers</p> <p>To know that we sometimes give devices permission to share personal information with others when we accept terms and conditions</p> <p>To know that these devices can collect our information</p> <p>To know to speak to a trusted adult if you're unsure about consenting to anything online</p>



## SAFE ZONE - YEAR 4 LESSON 6 (cont.)

COMPOSITES	COMPONENTS
I know what the digital age of consent is and the impact this has on online services asking for consent.	<p>To know that the digital age of consent is 13</p> <p>To know that you must be at least 13 for a company to be able to ask to store your information, and if you are under this age, your parents / carers must consent for you</p>