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Information Technology

	Nursery	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Animation	I can animate a simple image to speak in role (storyland-chatterpix	• I can animate a simple image to speak in role • I can create a simple animation to tell a story including more than one character.	• I can add filters and stickers to enhance an Animation of a character. • I can create an Animation to tell a story with more than one scene. • I can add my own pictures to my story Animation.	• I can create multiple Animations of an image and edit these together. • I can create a simple stop motion Animation. • I can explain how an Animation/flip book works	• I can create Animations of faces to speak in role with more life-like realistic outcomes. • I can improve stop motion Animation clips with techniques like onion skinning. • I can use Animation tools in presenting software to create simple Animations.	• I can take multiple Animations of a character I have created and edit them together for a longer video. • I can use software to create a 3D animated story. • I can use line draw tool to create Animations. .	• I can record Animations of different characters and edit them together to create an interview. • I can add green screen effects to a stop motion Animation. • I can create flip book Animation using digital drawings and export as a Gif or video	• I can mix Animations and videos recordings of myself to create video interviews. • I can plan, script and create a 3D Animation to explain a concept or tell a story. • I can choose and create different types of Animations to best explain my learning
Presentation	I can sort physical objects, take a picture and discuss what I have done I know the difference between	• I can record my voice over a picture • I can create a simple digital collage • I can move and resize images	• I can add labels to an image • I can order images to create a simple storyboard	• I can add voice labels to an image • I can add a voice recording to a storyboard • I can add speech bubbles to an image to show	• I can create an interactive comic with sounds, formatted text and video. • I can annotate an image with videos	• I can create an interactive quiz eBook introducing hyperlinks. • I can create an eBook with text,	• I can collaborate with peers using online tools, e.g. blogs, Google Drive, Office 365	• I can create a web site which includes a variety of media. • I can design an app prototype that

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	a photograph and video	with my fingers or mouse	• I can create a simple spider diagram • I can sequence a series of pictures to explain my understanding of a topic	what a character thinks • I can import images to a project from the web and camera roll	• I can create a simple web page. • I can create a simple digital timeline/mind map	images and sound. • I can create a Presentation demonstrating my understanding with a range of media. • I can create a digital timeline/mind map and include different media - sound and video	• I can create and export an interactive Presentation including a variety of media, Animations, transitions and other effects. • I can create an interactive guide to an image by embedding digital content and publishing it online. • I can create a webpage and embed video.	links multimedia pages together with hyperlinks. • I can choose applications to communicate to a specific audience. • I can evaluate my own content and consider ways to improvements
AR and VR	I can use a painting app and explore the paint and brush tools (Draw and tell) I can explore a 360 image (animals/ different countries they're from)	• I can scan a QR code • I can explore a 360 image • I can talk about AR objects in my class	• I can explore an interactive 360 image • I can scan a trigger image to begin a AR experience • I can pretend to interact with AR objects	• I can draw my own 360 image and explore it in VR • I can bring objects into my surroundings using Augmented Reality • I can create my own QR code	• I can create my own digital 360 image and explore it in VR • I can create my own images and bring it into my surroundings through AR	• I can create my own 360 video • I can use the camera to create a 360 image • I can add multiple objects into my surroundings	• I can create an interactive VR experience • I can create an animated object and bring it into my surroundings through AR	• I can create and upload my own VR Google Expedition • I can create an interactive poster using AR • I can explain how VR and AR works

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							through AR to explain a concept	• I can create an AR experience using objects I have created to explain a concept	
Video Creation	I can create a simple digital collage I can record a short film using the camera	• I know the difference between a photograph and video • I can record a short film using the camera • I can record and play a film • I can watch films back	• I can record a film using the camera app • I can select images and record a voiceover • I can highlight and zoom into images as I record	• I can write and record a script using a teleprompter tool • I can use tools to add effects to a video • I can begin to use green screen techniques with support	• I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut film clips and add titles and transitions • I can independently create a green screen clip • I can create my own movie trailer	• I can add music and sound effects to my films • I can add animated titles and transitions • I can add simple subtitles to a video clip • I can use confidently use green screen adding animated backgrounds	• I can use cutaway and split screen tools in iMovie • I can evaluate and improve the best video tools to best explain my understanding • I can further improve green screen clips using crop and resize and explore more creative ways to use the tool - wearing green clothes and the masking tool	• I can use the green screen masking tool with more than one character • I can use picture in picture tools in iMovie • I can add animated subtitles to my film to further enhance my creation • I can create videos using a range of media - green screen, Animations, film and image.

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Data Handling	I can record sounds/voices in storytelling and explanations I can identify a chart	• I can identify a chart • I can sort physical objects, take a picture and discuss what I have done • I can present simple data on a digital device	• I can sort images or text into two or more categories on a digital device • I can collect data on a topic • I can create a tally chart and pictogram • I can record myself explaining what I have done and what it shows me.	• I can sort digital objects into a range of charts such as Venn diagrams, carroll diagrams and bar charts using different apps and software • I can orally record myself explaining what the data shows me • I can create a branching database using questions	• I can create my own sorting diagram and complete a Data Handling activity with it using images and text. • I can start to input simple data into a spreadsheet. • I can create a feelings chart exploring a story or character's feelings	• I can create my own online multiple choice questionnaire. • I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. • I understand how data is collected.	• I can create and publish my own online questionnaire and analyses the results. • I can use simple formulae to solve calculations including =sum and other statistical functions • I can edit and format difference cells in a spreadsheet.	• I can write spreadsheet formula to solve more challenging math's problems. • I can create and publish my own online quiz with a range of media (images and video)
Sound	I can record my voice over a picture	• I can record sounds with different resources • I can find ways to change your voice (tube, tin can, shouting to create an echo) • I can record sounds/voices in	• I can create a sequence of sounds (instruments, apps/software) • I can explore short and long sounds • I can record my voice and	• Create a musical composition using software • I can record my own sound effects • I can record my voice over a compositions to perform a song	• I can create and edit purposeful compositions using music software to create mood or a certain style • I can experiment with live loops to create a song.	• Edit sound effects for a purpose • Create a simple four chord song following the correct rhythm • I can record a radio broadcast or audiobook	• Add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast • Create a remix of a popular song	• Add voice over and edit sound clips (volume, pitch, fade, effect) to use in a film or radio broadcast (podcast) • Compose a soundtrack that

		storytelling and explanations	add different effects					can be added to a film project
Photography	I can take a photograph and use it in an app I can take a photograph	• I can edit a photo with simple tools • I can use a paint/drawing app to create a digital image • I can begin to cut out an image to layer on another image	• I can edit a photo with simple tools • I can use a paint/drawing app to create a digital image • I can begin to cut out an image to layer on another image	• I can edit a photo (crop, filters, mark up etc.) • I can select and use tools to create digital imagery - controlling the pen and using the fill tool • I can cut images with accuracy to layer on other images.	• I can confidently take and manipulate photos • I can create a digital image using a range of tools, pens, brushes and effects • I can create transparent images with Instant Alpha	• I can enhance digital images and photographs using crop, brightness, contrast & resize • I can manipulate shapes to create Digital Art • I can draw a series of images and export as an animated GIF	• I can make a digital photo using camera settings • I can enhance digital photos and images using crop, brightness and resize tools • I can link and explain how to Photoshop images and how this is used in the media	• I can edit a picture to remove items, add backgrounds, merge 2 photos • I can evaluate and discuss images explaining effects and filters that have been used to enhance the media • Use a 3D drawing app to create a realistic representation of world objects
Word processing		• I can play on a touch screen game and use computers/keyboards/mouse in role play • I can type letters with increasing	• I can confidently type words quickly and correctly on a digital device. • I can use the space bar to make space and	• I can use the space bar only once between words and use touch to navigate to words letter to edit • I can copy and paste images and text	• I can use index fingers on keyboard home keys (f/j), use left fingers for a/s/ d/f/g, and use right fingers for h/j/k/l	• I can combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents,	• I can start to apply other useful effects to my documents such as hyperlinks. • I can import sounds to	• I can confidently choose the best application to demonstrate my learning. • I can format text to suit a purpose.

| | | confidence using a keyboard and tablet • I can dictate short, clear sentences into a digital device. | delete to delete letters/words • I can make a new line using enter/return • I can dictate into a digital device more accurately and with punctuation | • Use caps locks for capital letters. • I can add images alongside text in a word processed document. • I can dictate longer passages into a digital device with accurate punctuation | • I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. • I can use cut, copy and paste to quickly duplicate and organise text | eBooks, scripts, leaflets. • Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text • Use font sizes appropriately for audience and purpose. Use spell check and thesaurus including through Siri and other AI technology | accompany and enhance the text in my document. • I can organise and reorganise text on screen to suit a purpose | • I can publish my documents online regularly and discuss the audience and purpose of my content |

Computer Science

	Nursery	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Computational Thinking		I can follow simple oral instructions I can spot simple patterns, such as similarities and differences I can sequence simple familiar tasks	• I understand what algorithms are • I can write simple algorithms • I understand the sequence of algorithms is important • I can debug simple algorithms	• I can write algorithms for everyday tasks • I can use logical reasoning to predict the outcome of algorithms • I understand decomposition is breaking objects/processes down	• I can create algorithms for my programming projects • I can decompose projects (such as an Animation) into steps to create an algorithm • I understand abstraction is focusing on	• I can use abstraction to focus on what's important in my design • I can write more precise algorithms for use when programming • I can use simple selection and repetition in algorithms	• I can solve problems by decomposing them into smaller parts • I can use selection in algorithms • I can use logical reasoning to explain how a variety of	• I can write precise algorithms for use when programming • I can decompose a design or code to focus on specific parts • I can use abstraction to hide complexity

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				• I can debug algorithms	important information • I can identify patterns in an algorithm	• I can use logical reasoning to detect and correct errors in programs	algorithms work • I can evaluate the effectiveness of algorithms	in my design or code • I can recognise and make use of patterns in my design and code • I can critically evaluate my work and suggest improvements
Coding and Programming		I can follow simple oral instructions I can spot simple patterns, such as similarities and differences I can sequence simple familiar tasks	• I can create a simple program on a digital device e.g. Bee Bot • I can use sequence in programs • I can locate and fix bugs in my program	• I understand programs follow precise instructions • I can create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet • I can debug programs of increasing complexity • I can use logical reasoning to predict the outcome of simple programs	• I can design a program • I can create a program using a design • I can create a sequence of code • I can work with different inputs • I can evaluate my program	• I can use repetition in programs • I can use simple selection in programs • I can work with different outputs • I can use logical reasoning to systematically detect and correct errors in programs	• I can create programs by decomposing them into smaller parts • I can use a variety of selection commands in programs • I can use conditions in repetition commands • I can work with variables • I can create programs that control or simulate	• I can use a range of sequence, selection and repletion commands to implement my design • I can identify the need for, and work with, variables • I can create procedures to hide complexity in programs • I can identify and write generic code for use across

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							physical systems • I can evaluate my work and identify errors	multiple projects • I can critically evaluate my work and suggest improvements • I can demonstrate how to make references to and acknowledge sources I have used from the internet
Computer Networks					• I understand that computers in a school are connected together in a network • I understand why computers are networked • I understand the difference between the Internet and the World Wide Web (WWW)	• I understand that servers on the Internet are located across the planet • I understand how email is sent across the Internet • I understand how the Internet enables us to collaborate	• I understand how we view web pages on the Internet • I use search technologies effectively • I understand that web spiders index the web for search engines • I appreciate how pages are ranked in a search engine	• I understand what HTML is and recognize HTML tags • I know a range of HTML tags and can remix a web page • I can create a webpage using HTML

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Digital Literacy

	Nursery	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Self-Image and Identity		• I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset • I can explain how this could be either in real life or online	• I can recognise that there may be people online who could make me feel sad, embarrassed or upset • If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust	• I can explain how other people's identity online can be different to their identity in real life • I can describe ways in which people might make themselves look different online • I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help	• I can explain what is meant by the term 'identity' • I can explain how I can represent myself in different ways online • I can explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; using an avatar; social media)	• I can explain how my online identity can be different to the identity I present in 'real life' • Knowing this, I can describe the right decisions about how I interact with others and how others perceive me	• I can explain how identity online can be copied, modified or altered • I can demonstrate responsible choices about my online identity, depending on context.	• I can describe ways in which media can shape ideas about gender • I can identify messages about gender roles and make judgements based on them • I can challenge and explain why it is important to reject inappropriate messages about gender online • I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might

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							get help, both on and offline • I can explain why I should keep asking until I get the help I need
Online Relationships		• I can recognise some ways in which the internet can be used to communicate • I can give examples of how I (might) use technology to communicate with people I know	• I can use the internet with adult support to communicate with people I know • I can explain why it is important to be considerate and kind to people online	• I can use the internet to communicate with people I don't know well (e.g. email a pen pal in another school/ country) • I can give examples of how I might use technology to communicate with others I don't know well	• I can describe ways people who have similar likes and interests can get together online • I can give examples of technology-specific forms of communication (e.g. emoji's, acronyms, text speak) • I can explain some risks of communicating online with others I don't know well • I can explain how my and other people's feelings can be hurt by what is said or written online	• I can describe strategies for safe and fun experiences in a range of online social environments • I can give examples of how to be respectful to others online	• I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault • I can make positive contributions and be part of online communities • I can describe some of the communities in which I am involved and describe how I collaborate	• I can show I understand my responsibilities for the well-being of others in my online social group • I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming) • I can demonstrate how I would support others (including those who are having difficulties) online

					• I can explain why I should be careful who I trust online and what information I can trust them with. I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried • I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life. I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online		with others positively	• I can demonstrate ways of reporting problems online for both myself and my friends
Online Reputation		• I can identify ways that I can	• I can recognise that information can	• I can explain how information put online about me	• I can search for information	• I can describe how others can find out	• I can describe how others can	• I can explain how I am developing an

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		put information on the internet	stay online and could be copied • I can describe what information I should not put online without asking a trusted adult first	can last for a long time • I know who to talk to if I think someone has made a mistake about putting something online	about myself online • I can recognise I need to be careful before I share anything about myself or others online • I know who I should ask if I am not sure if I should put something online	information about me by looking online • I can explain ways that some of the information about me online could have been created, copied or shared by others	find out information about me by looking online • I can explain ways that some of the information about me online could have been created, copied or shared by others	online reputation which will allow other people to form an opinion of me • I can describe some simple ways that help build a positive online reputation
Online Bullying		• I can describe ways that some people can be unkind online • I can offer examples of how this can make others feel	• I can describe how to behave online in ways that do not upset others and can give examples	• I can give examples of bullying behaviour and how it could look online • I understand how bullying can make someone feel • I can talk about how someone can/would get help about being bullied online or offline	• I can explain what bullying is and can describe how people may bully others • I can describe rules about how to behave online and how I follow them	• I can identify some online technologies where bullying might take place • I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat) • I can explain why I need to think carefully about how content I post might affect	• I can recognise when someone is upset, hurt or angry online • I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone	• I can describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me • I can identify a range of ways to report concerns both in school and at home about online bullying

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						others, their feelings and how it may affect how others feel about them (their reputation	• I can explain how to block abusive users • I can explain how I would report online bullying on the apps and platforms that I use • I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. ChildLine)	
Manage Online Information		• I can talk about how I can use the internet to find things out • I can identify devices I could use to access information on the internet • I can give simple examples of how to find to find	• I can use the internet to find things out • I can use simple keywords in search engines • I can describe and demonstrate how to get help from a trusted	• I can use keywords in search engines • I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections)	• I can use key phrases in search engines • I can explain what autocomplete is and how to choose the best suggestion • I can explain how the internet can be used to	• I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'	• I can use different search technologies • I can evaluate digital content and can explain how I make choices from search results	• I can use search technologies effectively • I can explain how search engines work and how results are selected and ranked • I can demonstrate

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| | | information (e.g. search engine, voice activated searching) | adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened | • I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri)
• I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'
• I can explain why some information I find online may not be true | sell and buy things
• I can explain the difference between a 'belief', an 'opinion' and a 'fact' | • I can describe how I can search for information within a wide group of technologies (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 that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people
• can explain why lots of people sharing the same | • I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence
• I understand the difference between online miss-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead). I can explain what is meant by 'being sceptical'
• I can give examples of | the strategies I would apply to be discerning in evaluating digital content
• I can describe how some online information can be opinion and can offer examples
• I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting')
• I can demonstrate |

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| | | | | | | opinions or beliefs online does not make those opinions or beliefs true | when and why it is important to be 'sceptical'. I can explain what is meant by a 'hoax' • I can explain why I need to think carefully before I forward anything online • I can explain why some information I find online may not be honest, accurate or legal • I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might | strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important • I can identify, flag and report inappropriate content |

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							happen (e.g. the sharing of misinformation either by accident or on purpose)	
Health, Well-being and Lifestyle		• I can identify rules that help keep us safe and healthy in and beyond the home when using technology • I can give some simple examples	• I can explain rules to keep us safe when we are using technology both in and beyond the home • I can give examples of some of these rules	• I can explain simple guidance for using technology in different environments and settings • I can say how those rules/guides can help me	• I can explain why spending too much time using technology can sometimes have a negative impact on me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos	• I can explain how using technology can distract me from other things I might do or should be doing • I can identify times or situations when I might need to limit the amount of time I use technology • I can suggest strategies to help me limit this time	• I can describe ways technology can affect healthy sleep and can describe some of the issues • I can describe some strategies, tips or advice to promote healthy sleep with regards to technology	• I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose • I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise) • I can explain the importance of self-

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							regulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents)
Privacy and Security		• I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location) • I can describe the people I can trust and can share this with; I can explain why I can trust them	• I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school) • I can explain why I should always ask a trusted adult before I share any information about myself online • I can explain how passwords	• I can describe why other people's work belongs to them • I can recognise that content on the internet may belong to other people	• I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I am not sure or I feel pressured, I should ask a trusted adult • I understand and can give reasons why passwords are important • I can describe simple strategies for creating and keeping passwords private	• I can explain what a strong password is • I can describe strategies for keeping my personal information private, depending on context • I can explain that others online can pretend to be me or other people, including my friends • I can suggest reasons why they might do this	• I can create and use strong and secure passwords • I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others • I can explain how and why	• I use different passwords for a range of online services • I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories) • I know what to do if my password is lost or stolen • I can explain what app permissions are and can give

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					• I can describe how connected devices can collect and share my information with others	• I can explain how internet use can be monitored.	some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing	some examples from the technology or services I use • I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe ways in which some online content targets people to gain money or information illegally • I can describe strategies to help me identify such content e.g. scams, phishing)
			can be used to protect information and devices					
Copyright and Ownership		• I know that work I create belongs to me • I can name my work so that others know it belongs to me	• I can explain why work I create using technology belongs to me • I can say why it belongs to me (e.g. 'it is my	• I can describe why other people's work belongs to them • I can recognise that content on the internet may belong to other people	I can explain why copying someone else's work from the internet without permission can cause problems • I can give examples of what	• When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have	• I can assess and justify when it is acceptable to use the work of others • I can give examples of content that is	• I can demonstrate the use of search tools to find and access online content which can be reused by others

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			idea' or 'I designed it') • I can save my work so that others know it belongs to me (e.g. filename, name on content)		those problems might be	the right to reuse it • I can give some simple examples	permitted to be reused	• I can demonstrate how to make references to and acknowledge sources I have used from the internet