DIGITAL TECHNOLOGY

Assessment Task #1

Contents

Part 1
Safe and Ethical Use of ICT

1.0 Introduction

Although the use of Information and Communications Technology (ICT) in schools has a significant number of benefits, there are also many issues surrounding it. The table below (Figure 1) outlines many of these issues surrounding the use of ICT both at school and at home. Three of these issues – cyberbullying, inappropriate content and screen time – will be discussed throughout the following sections, with possible solutions provided for each. It is important that students are educated on these issues as once students are educated they can feel safe, be safe and become Digital Citizens in an ever-growing world of technology.

	Commercial	Aggressive	Sexual	Values
Content (child as recipient)	Adverts Spam Sponsorship Personal info	Violent/hateful content	Pornographic or unwelcome sexual content	Bias Racist Misleading info or advice
Contact (child as participant)	Tracking Harvesting personal info	Being bullied, harassed or stalked	Meeting strangers Being groomed	Self-harm Unwelcome persuasions
Conduct (child as actor)	Illegal downloading Hacking Gambling Financial scams Terrorism	Bullying or harassing another	Creating and uploading inappropriate material	Providing misleading info/ advice

Table taken from *Safer Children in a Digital World: The Report of the Byron Review,* p.16 (www.education.gov.uk/publications/ eOrderingDownload/DCSF-00334-2008.pdf). Contains public sector information licensed under the Open Government Licence v2.0: see www.nationalarchives.gov.uk/doc/open-government-licence/version/2/.

Figure 1 – Categories of Risk

2.0 Cyberbullying

2.1 The Issue for Years 3-6

One of the most well-known issues that arises with the use of ICT is cyberbullying. For students in upp   have access to social media, te   have taken the opportunity   r do face-to-face, and to do   our Year 4 to Year 9 students   occurring in Year 5 (Bullying No Way!, 2009). well as this, 84% of students who were bullied online reported they were also bullied in person (Bullying No Way!, 2009). Thus, this is an incredibly significant issue that must be discussed with upper primary school students to ensure their safety both online and offline.

2.2 The Solution

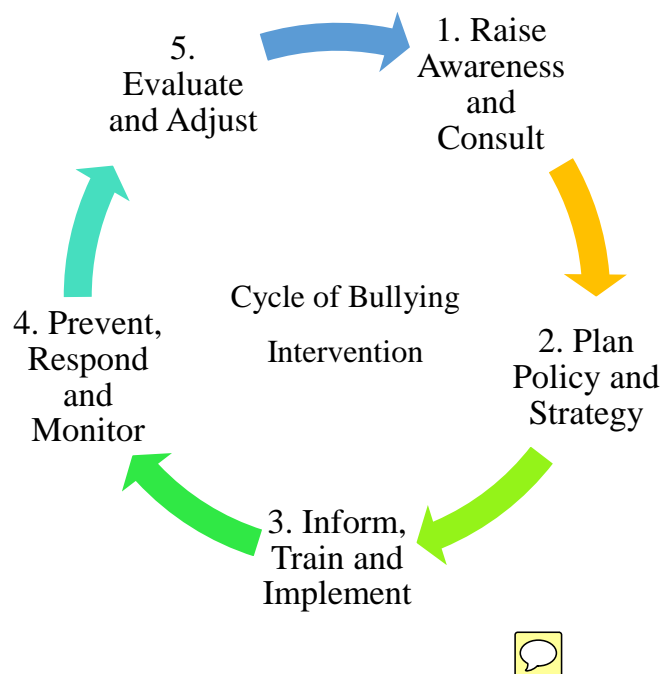To alleviate the issue of cyberbullying, it is recommended that the following cycle be implemented in schools.

Figure 2 – Cycle of Bullying Intervention. Adapted from *Cyberbullying and E-Safety* (p.118), by A. Katz, 2012, London. UK: Jessica Kingsley Publishers.

1. Students of all ages, teachers and parents should be aware of the issues surrounding all forms of bullying, and that there is zero tolerance (Katz, 2012).

2. What proc̲ ̲arly updated? (Katz, 201

3. Students o̲ ̲licies in place (Katz, 201

4. The schoo̲ ̲y can engage students in̲ ̲r plays about cyberbully̲ ̲ing it (Katz, 2012).

5. The strateg̲ ̲ed to ensure they are sti

By implementing this cycle both cyberbullying and bullying can be prevented, and students can be kept safe.

3.0 Inappropriate Content

3.1 The Issue for All Primary Students

Children of all ages are naturally curious and unfortunately this can lead to them exploring inappropriate co̲ ̲ve filters in place to protect students from ina̲ ̲ not at home these filters are rarely in place to̲ ̲ntent such as sites encouraging eati̲ ̲armful for children with mental issues such as depression and eating disorders as it normalises these harmful behaviours (State Government of Victoria, 2017).

For students in Prep to Year 2 they are more likely to explore or be lured in by content such as scams offerir̲ ̲y may explore scams also, however,̲ ̲ese students have the potential to explo̲ ̲g Children Safe, n.d.). As such it is important for students to be protected from these sites both at school and at home.

3.2 The Solution

There are many strategies that can be implemented in order to resolve both the issue of protecting students' privacy and prohibiting inappropriate content. Firstly, as mentioned, most schools have filters in place to prohibit students from accessing, either intentionally or accidentally, inappropriate content on the internet. However, schools should also ensure that there are filters in place to protect students from unreliable websites containing scams. On this note, it is also important that the topic of filters is discussed with parents so they can implement these and protect their children at home.

Secondly, a 'no blame' culture should be implemented in schools (Keeping Children Safe, n.d.). This will e   rting their teachers and/or parents about inappropri

Lastly, all students should be provided with criterion for measuring a website's reliability. This will assist them in steering clear of websites likely to be containing inappropriate content and scams (Keeping Children Safe, n.d.).

If each of these strategies are implemented, then students of all ages can remain safe while using digital devices as there are boundaries in place to protect them from harmful content.

4.0 Screen Time

4.1 The Issue for All Primary Students

Screen time is also an issue when using ICT. Too much screen time can be harmful to students and can   There are hours and hours of endless   vices including video games and   pend hours on end on digital devices   reen time on is not brain-stimulating activities.

4.2 Statistics About the Issue

Studies have shown that 25% children aged four to six years old spend one to two hours per weekday on a comp   lian Institute of Family Studies, 2016   ears old, they will spend on average 30% of their daily waking time on screens (Australian Institute of Family Studies, 2016). This time could be used for spending time with their families and learning new things, t   d-numbing games.

4.3 The Solution

This issue can be alleviated by putting boundaries in place for how long students can spend on their digital devices and what they can use them for. Whilst at school, teachers should ensure tha   the school day – potentially only 3   ents are doing whilst on digital devices to   discussed with parents, so they can be aw   me, potentially through discussing a "scr   ollow (Keeping Children Safe, n.d.). As shown, there are a couple of strategies for managing screen time.

5.0 Students as Digital Citizens

The strategies discussed earlier will assist students in becoming digital citizens as they will be able to recognise   "   understand different ways to report their   confident and have positive engagement   he strategies also align with one of the aims   students will "apply protocols and legal p   ommunications…" (ACARA, 2018). Th   ested earlier, students can become digital citizens in the online world, and understand how to be both safe and responsible online.

6.0 Conclusion

In conclusion, there are several issues surrounding the use of technology, only a few of which have been cove   ded that the solutions provided to alleviating these is   idents are safe online both at school and at home. T   n using technology safely and responsibly, in a way that encourages them to become digital citizens.

References

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Part 2
Animation and Coding Explanation

Accessing the Animation

1. Go to https://www.codeforlife.education/login_form and register as a student by entering the following details.

2. Click on " _____ le of the page.
3. Scroll dow _____ on the drop-down arrow.
4. Click on " _____
5. You will then be able to create a code for the level create _____. (Pictured below in Figure 3)

Figure 3 - Rapid Router Route

Complete Code

Explanations for the components circled in yellow have been provided on the next page.
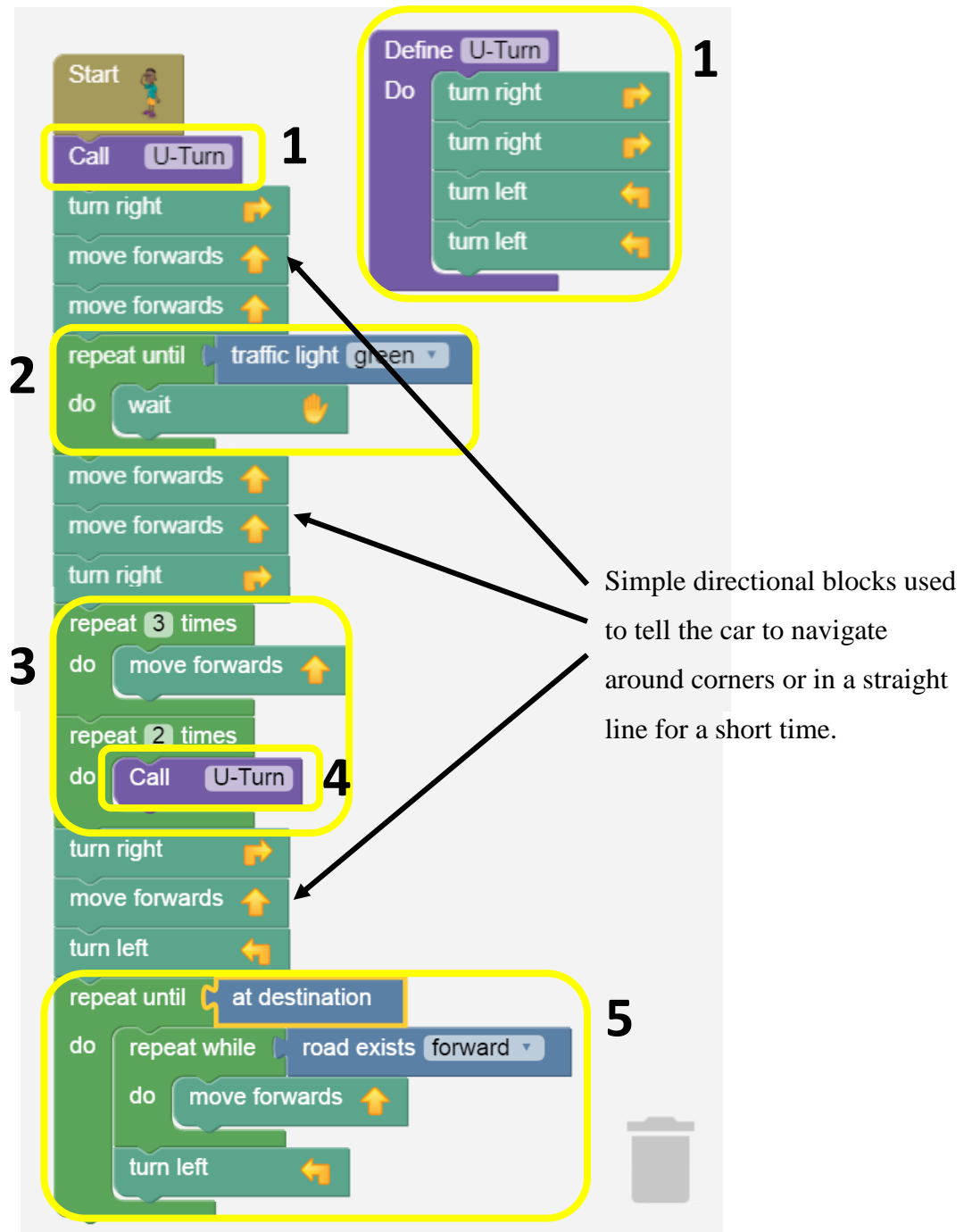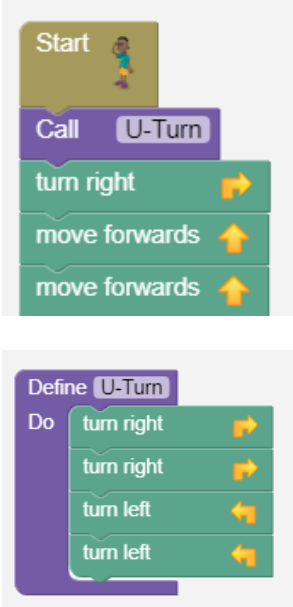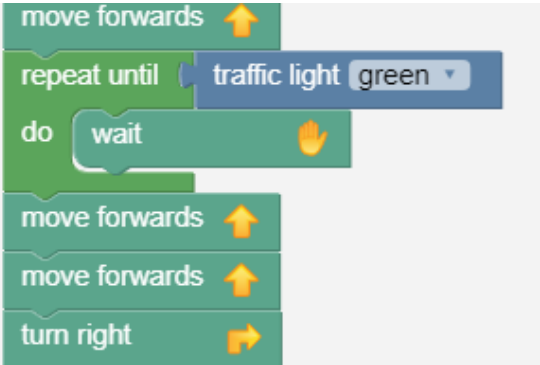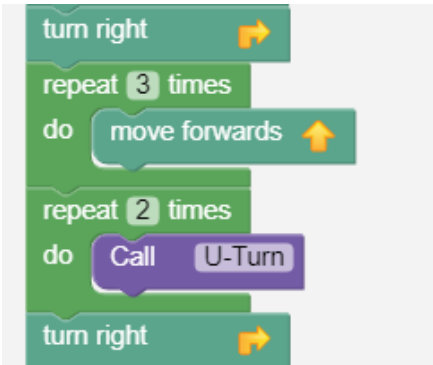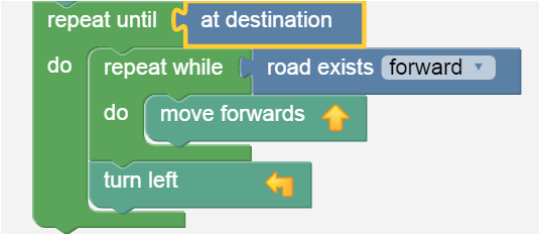

Figure 5 - Rapid Router Code

Explanation of Code Components

Code Component	#	Explanation
	1	Car had to navigate a U-turn like curve in the road, a sequence which also appears later i⸍ ⸍ ⸍ ⸍ ⸍ "call" ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍e" block allows the se⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ithin the "defin⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ car to turn aroun⸍ ⸍ ⸍ ⸍ ⸍ ⸍ r without detailing the sequence again.
	2	Car reached a traffic light. "repeat u⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ed to "traffic light green" bl⸍ ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ the car continues to repeat ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ n listed inside – "wait" – until the traffic light is green.
	3	Car was required to travel in the same way for a number of steps. "repeat ⸍ ⸍ ⸍ ⸍ ⸍ ⸍ l excess directic⸍ ⸍ ⸍ ⸍ ⸍ ee "move forwarc⸍ ⸍ ⸍ ⸍ ⸍ Alterna⸍ ⸍ ⸍ ⸍ ⸍ ⸍ could have been us⸍ ⸍ ⸍ ⸍ ⸍t 2 times" block a⸍ ⸍ ⸍ ⸍ ⸍d the same amount⸍ ⸍

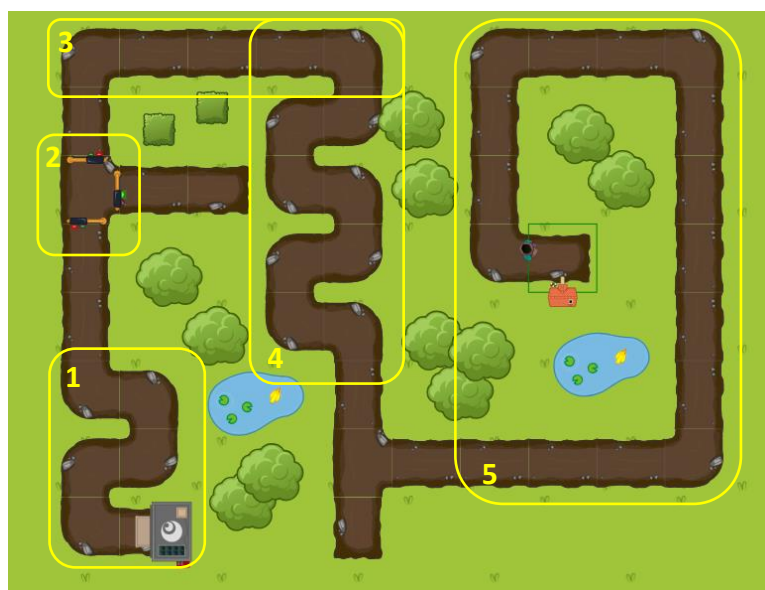|		
repeat 2 times do Call U-Turn turn right move forwards	4	Car was required to travel once again in a U-turn like ("call" block ... peated a pattern that ... ously – this saves unnec... .
repeat until at destination do repeat while road exists forward do move forwards turn left	5	Car was req... left-turning spiral for the... "repeat unti... dition to "at destination" ... so that the car would repea... irections listed inside ... d the destination. For the direc... repeating block – "rep... sed in addition to "... d" connecting block as this ... ll only move forward if it ... ill road in front of it. T... ollowing this combination ... road is not ahead then the car will turn left, thus travelling in a spiral until the destination has been reached.

Figure 4 - Annotated Map