

YOUR GUIDE TO THE DIGITAL DEFENDERS VS. DATA INTRUDERS  
TAKE CONTROL OF YOUR STUFF ONLINE PRIVACY FOR KIDS

[Cover text]

THE INTERNET. IT IS COOL, FAST AND GLOBAL. But it is also complex. Sometimes it can be difficult to see where we are at risk – and where our private stuff online can be read and used by others. Luckily, in our parallel universe where the DIGITAL DEFENDERS fight the evil DATA INTRUDERS, it is easy to see who are the good and who are the bad guys. [www.edri.org](http://www.edri.org)

[colophon]

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Chapters:

Chapter 1: What is the internet? Chapter 2: What is privacy? Chapter 3: Top three tips and tricks Chapter 4: Protect yourself on social networks Chapter 5: Smartphone security Chapter 6: Safer messaging Chapter 7: Surfing the internet Chapter 8: Password security Chapter 9: Photo and video sharing Chapter 10: Apps & tools we like Chapter 11: Hands-on guide for Signal

[intro]

The internet. It is cool, fast and global.

But it is also complex. Sometimes it can be difficult to see where we are at risk – and where our private stuff online can be read and used by others.

Luckily, in our parallel universe where the Defenders fight the evil Intruders, it is easy to see who are the good and who are the bad guys.

The Defenders will show you some tips and tricks to protect yourself online. They will teach you self-defence to fight the Intruders.

So check out this booklet and get ready to join our superhero team, the Defenders!

Your friend,

OH, AND KEEP YOUR EYES OPEN FOR THE EDRi-former GAME

You will find quests throughout the booklet. Every quest has only one right answer that will give you one letter. Together, the letters will form the solution word. Hint: it is a word that consists of six letters. The achievement to unlock: A POWERFUL DIGITAL ARMOUR.

Once you have found the word, you need it to go to a secret page on the internet. Here is how: 1. Find the missing part of the following link: <https://edri.org/xxxxxx> . 2. Replace the xxxxxx with the solution word (six letters) of the game quests and enter the complete link in your browser.

CHAPTER 1 What is the internet?

The internet is a global network of devices.

When you use the internet on your laptop, tablet or phone, it is a part of the network.

One of the special features of the internet is that lots of different technologies can all be used in the same network.

We can even use the same connection to download a video, play a game and chat with our friends at the same time.

The internet is global, it is fast and gives us a whole world of opportunities.

The internet is an amazing and powerful invention. Before the internet spread widely, there was no easy way of connecting lots of people with each other. It was much more difficult to listen to music or watch a movie. Also, the internet is a great place to learn as most of the information and knowledge is shared online.

Internet technology is a bit like a big hill covered with snow – we can use it for skiing, snowboarding or building a snowman. All we need is snow!

In the online world, the hill is our internet connection and the snow is the language the network speaks – the “internet protocol”!

Social networks and many other online services look like they are for free – but we actually pay with the personal information that we put online. Information about what we write or read or watch is used by online companies.

How can we stay in control of the information we share online?

You will find the answer to this question in this booklet.

CHAPTER 2 What is privacy?

If we have privacy, we have control. But what does this mean?

Privacy is our right to decide what to share and with whom we share it.

This means, for example, that you have the right to ask Google, Facebook and others what kind of information they have collected about you. You can also ask them to delete these data.

When we protect our privacy, we are safer and more secure because there might be information that could hurt us if the wrong person knows about it.

It might be information that we wish to share with some people, like our parents or teachers, but not with anyone else.

But we can also help others when we protect our privacy because they might want to share something with us that should not be shared with anyone else.

We all have things we don't want to share with others.

Taking care of our own privacy has a lot to do with taking care of our friends too, because it helps us to be free, safe and trustworthy.

Our parents, friends or anyone who uses the computer after us, can also sometimes see what we searched for. This can happen if we forget to log out or simply when they look at the computer's history.

» DID YOU KNOW?

Only 20 years ago, most homes had only one phone line which only one person could use at a time. Hardly anyone had a mobile phone and not many people had e-mail.

» QUEST 1: THE INTERNET IS... [A] ...a network of devices. [B] ...an efficient fishing tool for international waters. [C] ...a social network.

### CHAPTER 3 Top three tips and tricks

#### 1. Not everyone has to know everything about us

Like in the offline world, it is better to choose carefully what we want to share and with whom. Instinctively, we share some things with some people and not with others. The internet sometimes makes it difficult to make that choice.

This is partly because it's not always clear what is private online and what isn't, and partly because the internet has different rules than the offline world.

For example: Our friends will forgive a stupid comment we made when we were angry, and understand our behaviour because they know us. If someone else reads our comment online, they might not understand what we meant and might think we were being mean.

#### 2. Safety and privacy online isn't difficult

We don't have to be super nerds to keep ourselves safe online. We can protect a tablet, phone or laptop so that our classmates cannot access it. We can use a password that no one else can guess, and watch videos online without being tracked. We can do this in really simple ways.

### 3. Knowing what or who we are protecting ourselves against

Just as banks need to protect themselves from thieves, we also have to protect ourselves - against companies tracking us online, classmates that might be angry about something, or nosy parents being... nosy parents.

We should ask ourselves what the real threats are and what we can do about them. Once we have thought about these threats, we'll find that it really is possible to keep ourselves safe and control our privacy.

#### CHAPTER 4 Protect yourself on social networks

It can be so much fun to use social networks. On social networks, we can chat with friends and family, share pictures, send private messages and post information publicly.

In some countries, children under the age of 13 are not allowed to use some of the social networks. If you want to use social networks, it is best to ask your family and teachers to be sure.

Facebook, Instagram, Twitter, Snapchat, Diaspora and many more are all social networks.

Do you have a favourite? Why do you like them?

Some social networks even store messages we decided not to send! Imagine that, when you write a message to your friend on Facebook and don't send the message, your friend will not know about the message. But Facebook keeps it!

Keep in mind that everything you do on a social network is recorded on the computers of the companies that run it. That doesn't mean that they are going to do something bad with it - but you should know that this is happening.

» DID YOU KNOW?

The things we type into a search engine or write in a chat message to a friend are not completely deleted. Companies that provide the services we use (like Youtube, Facebook, Snapchat and so on) record and keep what we write, the websites we visit and the things we search online.

» QUEST 2: PRIVACY IS IMPORTANT BECAUSE... [T] ... it helps us to watch music videos. [R] ... it helps us to be free and in control online. [G] ... it helps us to share pictures with the entire world.

DIGITAL DEFENDERS v DATA INTRUDERS (I)

MS. ANONYMITY

TEAM: DIGITAL DEFENDERS

POWERS: Government tests have augmented her immune system. She also has the ability to use social networks anonymously, so nobody knows who she really is.

WEAPONS: She is a skilled hand-to-hand fighter

I.D. THIEF

TEAM: DATA INTRUDERS

POWERS: She can see what you do online and then steal your personal information. She pretends to be you and tries to use your name, social media and e-mail accounts for criminal activities.

WEAPONS: The Alpha Virus – which she uses to infiltrate computers and phones.

CHAPTER 5 Smartphone security

Our phones have become very important for using the internet.

We use them when we want to communicate with our friends and family, when we use social networks or just browse the web.

But our phones are also useful for many other things, we can use them as a torch, to play games or to check the time of the next bus.

When you install a new app, do you read what permission you are giving the app and how it can access information on your phone? Does a torch app really need access to your address book?

It is very tempting to just skip past the »Accept« screen, but it is better to stop and think. There are good reasons not to trust an app that is asking for stuff that it obviously does not need.

With just a few clicks we can also check and even restrict the permissions of our phones or apps that are already installed. On most devices we can find those in the »Settings«. Have a browse around the settings of your phone, it is good to learn about how your phone works.

» Many apps get access to the personal stuff stored on your phone.

We can restrict access to our location and to our addressbook and we can add a password or fingerprint check to unlock our phone screen.

Making our phones more secure and privacy-friendly, doesn't take much time. Towards the end of this booklet, you can find a list of great apps for this.

» DID YOU KNOW?

If there is a good reason to give an app permission for something – a photo app, for example, that needs to have access to your camera – then there's little to worry about. But if you think that the app is asking for too much, you can check if there are similar apps in the app store that ask for fewer permissions.

DIGITAL DEFENDERS v DATA INTRUDERS (II)

MIND FREER

TEAM: DIGITAL DEFENDERS

POWERS: He fights for your right to decide what to share and with whom. He has the ability to create a private and secure environment where you can say what you think.

WEAPONS: His mind.

MAN IN THE MIDDLE.

TEAM: DATA INTRUDERS

POWERS: He has mystical powers to intercept what you do online. He can pretend to be a legitimate person online and then use this to hack right into your communications, to read your messages, see your photos and watch your videos.

WEAPONS: His suit and antennas.

CHAPTER 6 Safer messaging

Those of us with mobile phones use it to send messages to friends and family.

But some messaging apps record all our messages and track who we talk to. Some apps do this so they can profit from this information.

» What you say and do online is very valuable for companies.

The companies who make messaging apps often scan what we say. They track who we're talking to so they can show us advertisement to make us buy something or to share it with other companies. You can check out a list of cool messaging apps at the end of the booklet. These messaging apps also ensure that we don't receive texts from strangers. And there is also a guide how to install Signal in this booklet – Signal is a cool app to keep your messages safe.

» QUEST 3: SOCIAL NETWORKS ARE GREAT BECAUSE... [Q] ...I can be sure that they will never use or sell my data. [M] ...I can stay in touch with friends and family. [N] ...I can be sure that only my friends can see the photos I post there.

CHAPTER 7 Surfing the internet

A browser is often how we use the internet.

» It's easy to forget that the browser is a powerful piece of software itself.

It is sometimes the first thing you open when turning on your phone, tablet or computer, and the last thing you close. But a lot goes on inside the browser that you are not aware of and that can be bad (or good) for your privacy.

When we go online to buy something, watch videos or to see what our friends have been posting recently, we leave digital footprints. Some websites and social networks use these footprints to follow us.

» Websites collect lots of stuff about us!

Who our friends are, what we like, what we are searching for and what we are listening to can all be tracked. These websites can do this because they use »cookies« in our browsers. These »cookies « are small files stored on our devices.

They are invisible to us but when enough of data is collected and combined with other information about us, personal details that we think are secret become known to many people and companies.

Most devices come with a browser. On Windows proposes Edge, Apple devices come with Safari, and Android devices' default browser is Google Chrome. But those are not necessarily the browsers that protect your privacy best.

» DID YOU KNOW?

Make sure to check the »privacy options« of your browser and change the default settings so that you take control – just like Perfect Wave! Many people think that the best browser for your privacy and security is Firefox. Why? Because you can customise it, control it, and see how it works. It is possible that it is not yet installed on your computer, but you can download it very easily.

DIGITAL DEFENDERS v DATA INTRUDERS (III)

PERFECT WAVE

TEAM: DIGITAL DEFENDERS

POWERS: He can navigate space, hyperspace and cyberspace on his board. The Perfect Wave does not require food or drink, he can survive by converting data into energy. He is almost totally indestructible.

WEAPONS: His surfboard.

KRAZY KOOKIE

TEAM: DATA INTRUDERS

POWERS: He is always looking for a fight. He hates all Defenders but considers the Perfect Wave his worst enemy. He has a monstrous appetite for your secrets.

WEAPONS: His spinning robot arm.

» QUEST 4: SOME APPS ... [F] ... are so secure that I never have to think about my privacy at all when using them. [L] ... are better than chocolate. [O] ... can access my contacts, pictures, and messages.

CHAPTER 8 Password security

Passwords are very important in the digital age.

Incredibly important, in fact. They form the basis of your security and privacy. And most people's passwords are very, very weak – the most commonly used passwords are »password« and »12345«.

Creating a secure password is not very difficult.

1. Never use the same password twice

This is really one of the most important rules! At least, try to make different versions of the password you created.

Why? Because if criminals (like Data Smuggler) get access to the passwords of one of your accounts, they often try to enter other accounts with the same password. They know that people tend to use the same password on several sites!

2. Never use a word from the dictionary

... no matter how long it may be or how complicated it may look.

Why? Because there are computer programmes that try every single word in the dictionary as a way of »guessing« your password. Every superhero in our Defenders team has a strong and creative password. You can join them – your password is your weapon to get out of danger!

3. Your password should be at least 12 characters long

This is the minimum. The longer a password is, the more difficult it is to hack it.

Why? Because the longer it is, the more difficult it is to guess. Some experts say that it is OK to write it down on a piece of paper, just hide it very well!

DIGITAL DEFENDERS v DATA INTRUDERS (IV)

QUEEN OF LOCKS

TEAM: DIGITAL DEFENDERS

POWERS: She fights for privacy and security. She gives powerful private keys to people who are in danger and helps them to secure their personal information online.

WEAPONS: Her helmet – she uses it to shoot energy beams from her eyes. She can cut right through Finn Phisher's dangerous net.

FINN PHISHER

TEAM: DATA INTRUDERS

POWERS: He possesses superhuman strength, speed and reflexes. He uses his powers to sneak into your phone and fish for your secrets.

WEAPONS: He throws an electrostatic data net to stun his opponents.

» QUEST 5: WHEN I BROWSE THE INTERNET... [X] ...I can do whatever I want and I'm safe – it's not reality! [U] ...I can protect myself by not allowing



cookies and not storing my browser history. [Y] ...being too careful is just paranoid because I have nothing to hide.

## CHAPTER 9 Photo and video sharing

We tell our friends about our daily life by sharing images and videos with them online.

» Sharing is cool – but photos and videos can be copied easily.

Remember that it is always important to make sure that we are not sharing with people we don't want to share with. People might be able to see our private images, and misuse them.

What is the problem? If we send an image or video, we send a copy of it from our device to the device of a friend. Imagine that our friend shares the image again with others. Every copy can be copied again.

If we share a photo or video online, there will always be several copies of it on different devices. Even if we delete the original image from our own devices, the other copies will still be there.

When we share, our stuff can get into the hands of people that we didn't want to share with.

Some people could even try to steal our identity by using our images – just like I.D. Thief.

Snapchat is an app to share pictures that disappear quickly. Unfortunately, it is still possible to save a photo with a few tricks and share it again. Thousands of Snapchat images have already been put on the internet.

This means that we all have to live with the fact that social networks can be used in good ways as well as in bad ways. So you need to think before posting or sending photos and videos over the internet! You should ask yourself if you would put this photo on the blackboard of your school. If not, it's maybe not a good idea to share it online.

If our photo shows other people, we have to ask for their permission before sharing, because it is their right to decide.

For images that we did not take ourselves, we should ask the owner for permission before we share them online.

## DIGITAL DEFENDERS v DATA INTRUDERS (V)

JOHNNY RANDOM

TEAM: DIGITAL DEFENDERS

POWERS: He was born on planet Entropia, somewhere in a far away Galaxy. As all members of his species, he has the ability to change his shape at will. He can shield your secrets with randomly changing passwords.

WEAPONS: His main weaponry are energy charged parts of his body that he can throw and recover at any time.

DATA SMUGGLER

TEAM: DATA INTRUDERS

POWERS: He is very rich and has abilities far superior to humans. He is incredibly flexible and has superhuman strength. He collects precious personal data (like your photos and messages) and sells it on the black market.

WEAPONS: He carries different types of weapons in his suitcase.

CHAPTER 10 Apps & tools we like

SMARTPHONE APPS

App | What it does | Difficulty to use

Signal | Secure messaging and phone calls (WhatsApp alternative) | Easy

Firefox | A privacy-friendly web browser | Easy

KeePass DX | Manages all your passwords | Easy

F-Droid | App store with apps that are open and free software (Google Play alternative) | Easy

K9-Mail | Manages your emails | Medium

Transportr | Public transport, check bus and train times | Easy

Jitsi Meet | Secure video group calls (Skype alternative) | Easy

Tor Browser | Surf the web anonymously | Easy

OpenKeychain | Encrypt emails in K9-Mail | Difficult

SOFTWARE FOR WINDOWS, MAC AND LINUX

Software | What it does | Difficulty to use

Firefox | A privacy-friendly web browser | Easy

Pidgin and OTR Plugin | Messaging (compatible with ChatSecure) | Medium

Thunderbird | Manages your emails | Medium

Enigmail | Add-on to encrypt emails in Thunderbird | Difficult

Tor Browser | Surf the web anonymously | Easy

BROWSER ADD-ONS, PLUG-INS AND EXTENSIONS

Add-on | What it does | Difficulty to use

Ublock Origin | Blocks web advertisement and tracking | Easy

Privacy Badger | Blocks online tracking | Easy

HTTPS Everywhere | Forces websites to encrypt your traffic if possible | Easy  
Cookie AutoDelete | Removes cookies when they are no longer used by open  
browser tabs | Medium  
NoScript | Blocks JavaScript | Difficult

## CHAPTER 11 Hands-on guide for Signal

Signal is a free Android and iPhone app. It doesn't watch what we say or who we talk to. We can use it to text, call, and share pictures, videos, and contacts.

It is not the only app we can use to communicate safely, but it is one of the easiest to use. Here is a handson-guide for it in five simple steps:

1. Go into the Play Store (Android) or App Store (iPhone). Search for »Signal«. Select the app »Signal Private Messenger« and tap ›Install‹. After Signal is installed, open the app.
2. Register your phone number with Signal by entering your mobile phone number and selecting ›Register‹ or ›Verify your device‹. You'll get a text message with a six digit code. Put that code into Signal.
3. Tap the pencil on the bottom right (Android) or the »+« symbol on the top right (iPhone) to start a conversation.
4. Select the person you want to text or call.
5. If you want to change between secure messages via your internet connection and insecure SMS, just hold the »Send« button for a tiny bit longer.

It's much more secure when the person who we're contacting is using Signal too. It uses our internet connection when we contact another Signal user and normal SMS or minutes when we contact someone who is not using Signal.

Remember! You don't have to get everyone you know to use Signal. Just tell your closest friends and the people you contact most often to install it too and then more and more of your friends will start using it.

» QUEST 6: I SHOULD CHOOSE AS MY PASSWORD ... [R] ... a random combination of letters, numbers and special characters. [V] ... 123456789 – it's easy to remember. [D] ... the first word I see when opening a random book from a random page.