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# CyBOK Showcase Event

2<sup>nd</sup> March 2022  
Oxford



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## The proposal

- We design two booklets for toddlers on the topics of **cybersecurity** and **cryptography**
- The key idea is to use simple imagery and text to convey in an intuitive way the basic principles of these topics
- Cybersecurity and cryptography lend themselves well to this approach

# Benefits & Learning Outcomes



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- New and accessible form of dissemination
- New audiences and diversified impact
- Contribution to security literacy, awareness and interest

## LEARNING TOGETHER

### Toddlers

- **Understand** simple concepts
- **Participate** in description by answering simple questions

### Grown-ups

- **Understand** and **discuss** concepts
- **Use** appropriate terminology
- **Identify** and **relate** aspects of everyday life to cybersecurity

# Cybersecurity ... in the playground!



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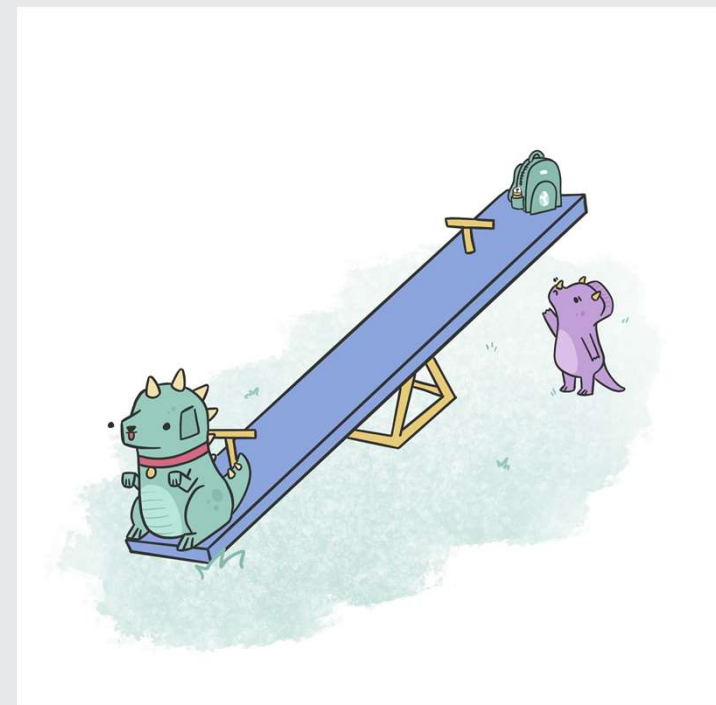


What is this pawprint?

**INTRUSION DETECTION**

Can Triceratops reach the  
water bottle?

**DATA AVAILABILITY**



# Cryptography ... at a birthday party!

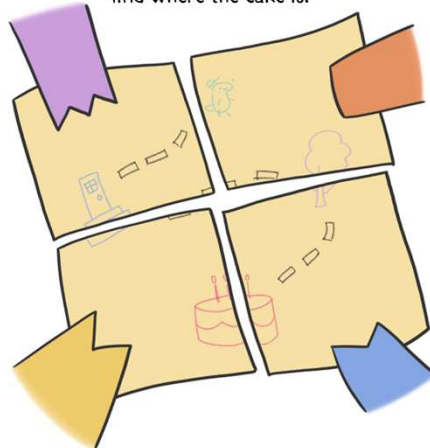


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Everyone gets ONE piece  
of the treasure map.



ALL pieces are needed to  
find where the cake is!



Where is the cake?

**SECRET SHARING**

How do we open the box?

**SYMMETRIC KEYS**

To open the box, you need the  
SAME key that locked it!



# And for the grown-ups...



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Each booklet has a **glossary** which relates the cybersecurity and cryptography concepts to the story, introducing grown-ups to the appropriate terminology.

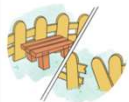
## GLOSSARY



**CYBER SECURITY** deals with the protection of information systems (hardware, software and associated infrastructure), the data on them, and the services they provide, from unauthorised access, harm or misuse (whether intentional or accidental). In our booklet we view the playground, and the activities that happen within it, as a system that needs protection from unauthorised access and misuse.



**ACCESS CONTROL** is about selectively restricting access to a resource. It involves both authentication (the act of verifying who you claim to be) and authorization (the act of granting access to the resource). In our story, the gate controls the access to the playground, preventing the dog, i.e., an unauthorised entity, from entering.



A **VULNERABILITY** is a flaw that can be exploited to gain unauthorised access to a (computer) system. In our story, the gap in the fence can be viewed as a weakness the dog can exploit to enter the playground.



**INTRUSION DETECTION** is the ability to monitor and react to (computer) misuse. In our story, the pawprints in the playground reveal that an intruder has entered the system (i.e., the playground) and following them could help monitor the situation.

There are also QR codes that link to additional resources

## ADDITIONAL RESOURCES



An introduction to cyber security and its knowledge areas:  
[https://www.cybok.org/media/downloads/Introduction\\_v1.1.0.pdf](https://www.cybok.org/media/downloads/Introduction_v1.1.0.pdf)



An introduction to cyber security: Stay safe online - A free course:  
<https://www.open.edu/openlearn/science-maths-technology/introduction-cyber-security-stay-safe-online/content-section-overview?active-tab=content-tab>



Online safety videos for parents, teachers and children  
<https://cyber.org/news/cyber-home>

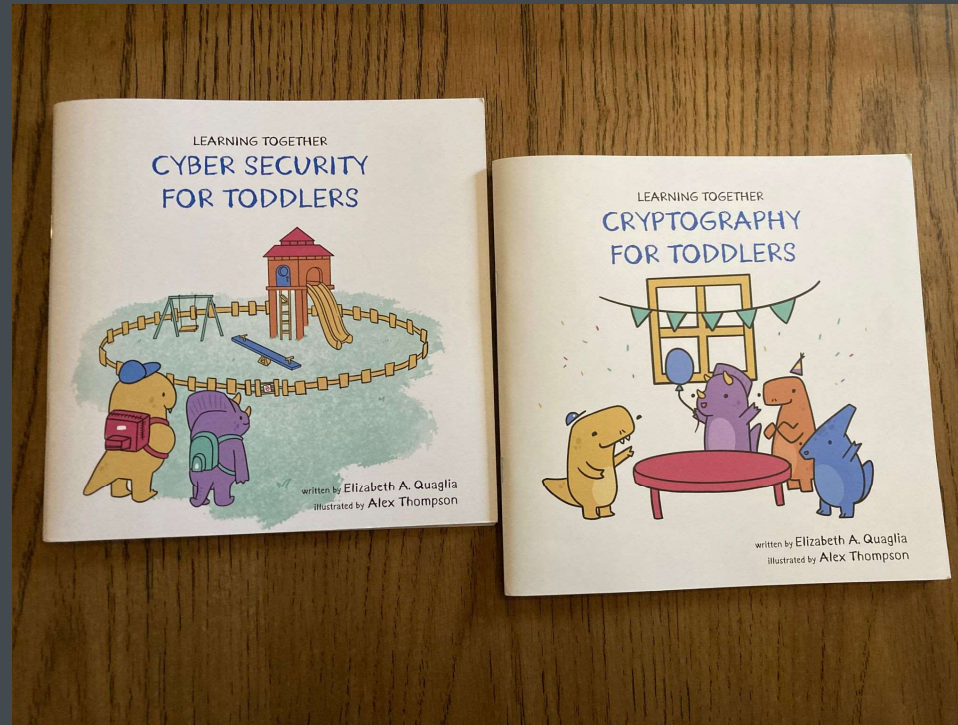
# Thank you!



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- Books illustrated by **Alex Thompson**, digital product designer.
- Text written in collaboration with Dr. **Valentina Zambon**, psychologist.
- Book design by **Michele Villa**, designer.
- Advisory team: Dr. **Jorge Blasco Alis** and Dr. **Jassim Happa**.

Let's get the books  
out there!



Thank you!



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