



# BRILLIANT LABS CYBER SECURITY INTRODUCTION KIT



## Activity 6 : Our intelligent community 1.0

### Purpose of Activity 6

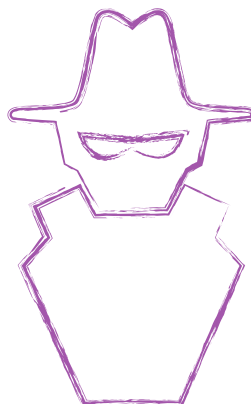
This activity is the last of the introductory level and will allow you to use all the concepts you learned with the first five activities. You will be asked to create a small classroom model of a smart community with the concepts learned using as many of the electronic and technological resources included in the kit as possible. The goal here will be to let students create their vision of a smart city using the materials in the kit and as needed recycled materials.

### Targeted Soft Skills for Cyber Security

Resourcefulness, Observation and Critical Thinking

### Please Note

All of our activities can be done during class time and inserted into your various curricula.





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## Mots utiles pour mieux réussir l'activité 6

We suggest that you and your students do a short search on the web or directly access the [Canadian Centre for Cyber Security's glossary](#).

- Real-time information system
- Internet of Things (IoT)
- Smart Community
- City services
- City Hall
- Mobility
- Renewable energy
- Effective Management
- Governance
- Interconnected systems
- Information and Communication Technologies (ICT)





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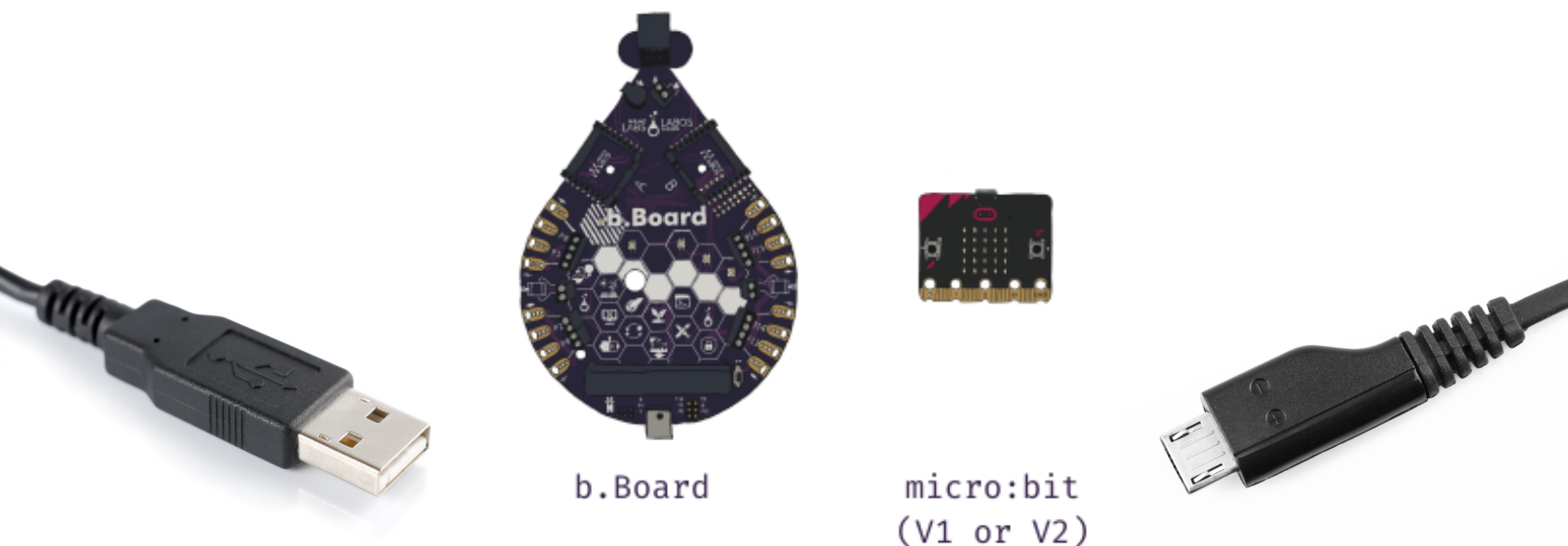


## Before the beginning of the activity

Make sure you have the necessary materials and tools on hand before the students arrive. Decide on the best way to distribute the materials. Don't hesitate to ask your students to help out. Why not appoint one or two students to be responsible for preparing the materials before the activity is presented? We suggest teams of 4 or 5 students for this activity.

## Materials required from the kit

The kit contains several types of materials that will be used throughout our activities. For Activity 6, we encourage you to use all the materials included in the kit. It is also possible to add other technological and computer materials that you already have at school as well as recycled objects.



b.Board

micro:bit  
(V1 or V2)



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## **Part 1 - Micro:bit programming activity: The creation of our intelligent community**

You will be asked to create a small classroom model of a smart community with the concepts learned using as many of the electronic and technological resources included in the kit as possible. The goal here will be to let students create their vision of a smart city using the materials in the kit and as needed recycled materials.

We encourage you to be creative, innovative and go as far as possible. The size of your model can vary from one square metre (1 m<sup>2</sup>) or more depending on the space you have available and the interest of the students in making this activity a large group project. You can build small houses, roads, municipal services and public transportation. If possible, you can use materials that you already have at school such as small robots, lego blocks or other. For example, there could be traffic signs, remote controlled doors and lights, automatic traffic lights, moving vehicles and installations controlled by the Internet of Things.

At the end of the creation, we will ask you to make a small report that you can send us by email. We leave it up to you to decide how you would like to present your work and your smart city to us. We invite you to include photographs and comments that explain what you learned and how it works and the different parts of your smart city with its name and components. You can also include materials you may have produced in other activities such as flyers, interviews, or posters about cybersecurity. Your communications could take the form of one or more of the following:

- PowerPoint, Keynote or Prezi presentation. If needed, these documents could be sent in PDF format;
- Link to a short video presentation;
- Link to a photo album with comments (Flickr, Google photos or other);
- Word document, Pages. If needed, these documents could be sent in PDF format;
- A link to a web page or blog with the elements of your smart city presentation.



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## Our Community

We had such a great time creating our small community. With objects all around our place, we managed to build something really exciting. Try it yourself and put your imagination at work.



Basically, it's a little celebration of how far you've come with your students since the first activity. It's also a great time to take a moment to pause and understand all that you've had the chance to learn. You may want to consider whether you would like to continue your learning in cybersecurity and programming by continuing with the new intermediate level activities that will be available soon. If so, just let the Brilliant Labs representative you have been working with know. We will then be able to inform you as soon as these new activities are available. We can also send you additional materials to bring your experience to another level of learning.

## End of Part 1



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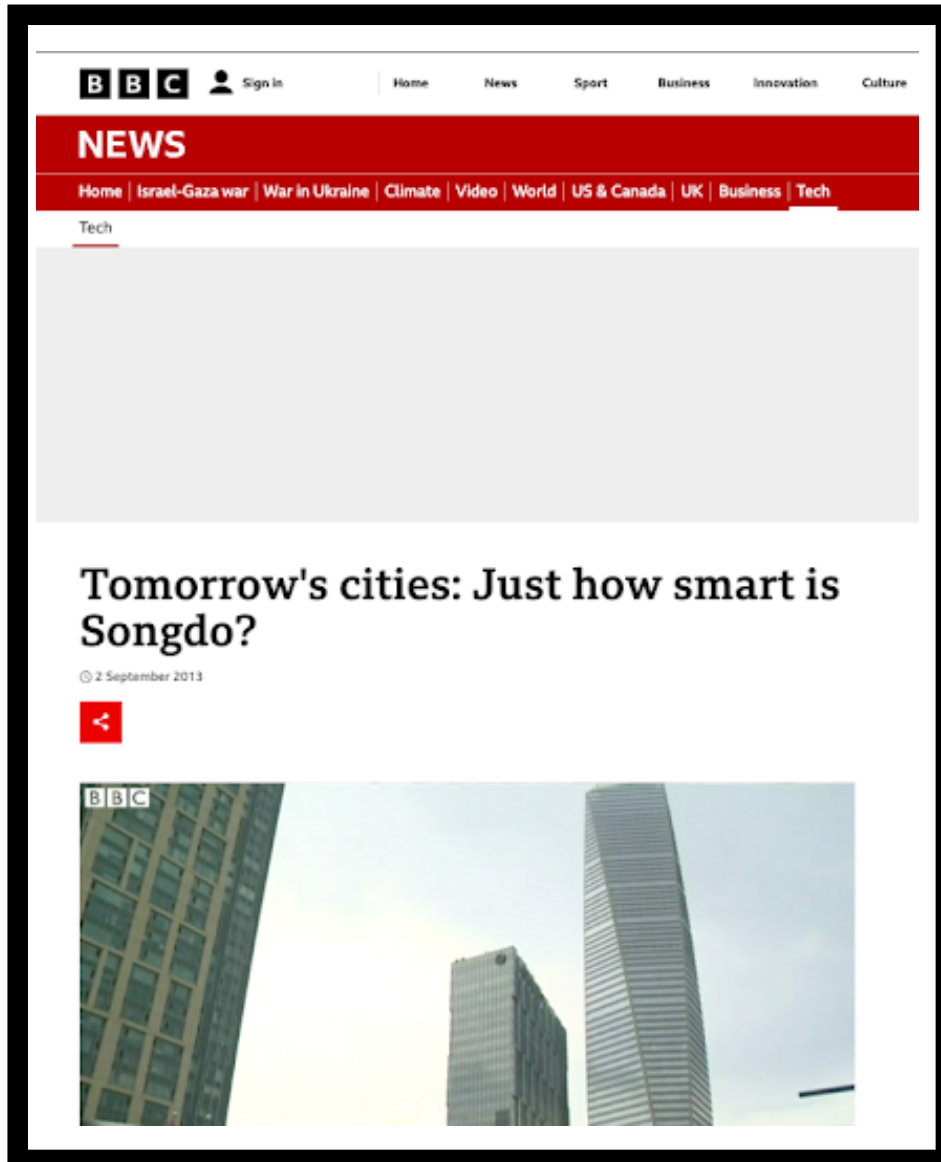


## Part 2 - Cybersecurity learning: Tomorrow's cities: Just how smart is Songdo?

Let students read the articles below and take time to have a large group discussion. You can project the articles on a large screen or let students explore them from their computers.

Article link and source:

<https://www.bbc.com/news/technology-23757738>





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## Questions to ask and possible discussion with students after reading the article

- What do you remember from reading this article?
- How do you find the ideas of Songo's leaders to develop their smart city?
- Would this be possible in Canada?
- What are the advantages of a smart community?
- What are the disadvantages?
- Are connected objects currently being used in Canada?

## Suggestions for possible complementary activities to do in class

- Research the number of connected objects in the world.
- Make a poster that explains connected objects or the internet of things (IoT).
- Invite a city official, engineer, or politician to discuss what you learned and ask questions about their perception of their smart city concept.
- Organize a visit to other classes in your school to invite them to see your models and explain what you have learned.
- Demonstrate and explain your model to other school staff, parents in the evening, or the community at a community event.
- Keep a log with digital photos of your model construction from start to finish.



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## Suggested links to learn more and to go further with this activity

*Please note that the links below are from a third party, Brilliant Labs is not responsible for their content or suggested links published by them. We strongly suggest that you take the time to review each of these links before using them and ensure that they are consistent with your values and what you normally use in your classroom with your students.*

- News Article | CBC ; “This is big money” : [New cities promise a smarter, greener future but will reality match the pitch?](#)
- YouTube Video | CNBC International ; [What is a smart city? | CNBC Explains](#)
- YouTube Video | NBC News ; [The Smart Cities Of Tomorrow Are Already Here | Mach | NBC News](#)
- Website | Wikipédia ; [Smart city](#)
- News Article and Podcast | CBC ; [Confused by “smart city” hype? This expert explains what it is and why we should care](#)
- Infographic | Get Cyber Safe, Government of Canada ; [“OK, Smart Device: Let’s Be Friends”](#)
- Website | Canada’s Center for Digital and Media Literacy, MediaSmarts ; [Cybersecurity Recommended Teachers Resources Website](#)
- Website | Brilliant Labs ; [Cyber Security Resource Database](#)
- Website | Canadian Center for Cyber Security, Government of Canada ; [Cybersecurity Glossary](#)





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## Objectivation questions to complete the activity

*You can also create other questions if you deem it necessary.*

- What did we learn from this activity?
- What was easy to do?
- What was the most difficult?
- If we did this activity again. What would we do differently? Similar?
- Why is it important as a citizen to understand the concept of "smart community"?
- How do you see the future of smart communities?
- What is the role of cybersecurity in smart communities?
- Would you like to learn even more?
- Other questions from the teacher...

**End of Activity 6**