GSHNJ and Ericsson

Limited Edition 5G & IoT Patch

“5G isn’t just a new generation of mobile networks – it’s transforming the world as we know it and Ericsson is proud to call itself a leader in this. With such a life changing technology, it is Ericsson’s goal to teach our next generation all about this fastest generation of cellular networks to lead this change.”

These activities may be completed with your troop, on your own, or with your family. Once you’ve completed the patch requirements, pick up your free 5G &IoT patch from a GSHNJ council shop.
Patch Requirements

This patch program includes activities that will introduce Girl Scouts to 5G and the Internet of Things (IoT). Each topic has options to Engage, Explore, and Explain 5G and IoT. Girl Scouts can do more or modify the activities to adapt to their skill levels as needed.

Complete the following requirements for your program grade level:

**Daisies:** Complete 1 Engage from the 5G category. Complete 1 Engage from the IoT category.

**Brownies:** Complete 1 Engage and 1 Explore from the 5G category. Complete 1 Engage and 1 Explore from the IoT category.

**Juniors:** Complete 1 Engage, 1 Explore, and 1 Explain from the 5G category. Complete 1 Engage, 1 Explore, and 1 Explain from the IoT category.

**Cadettes:** Complete 1 Engage, 1 Explore, and 1 Explain from the 5G category. Complete 1 Engage, 1 Explore, and 1 Explain from the IoT category.

**Seniors & Ambassadors:** Complete 1 Engage, 1 Explore, and 1 Explain from the 5G category. Complete 1 Engage, 1 Explore, and 1 Explain from the IoT category.

All levels should then complete the “For All” section.

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Daisy, Brownie, & Junior

<table>
<thead>
<tr>
<th>5G</th>
<th>Internet of Things</th>
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</thead>
<tbody>
<tr>
<td><strong>Engage:</strong> Watch <em>Explaining 5G to Kids</em> &amp; discuss with your troop or an adult.</td>
<td><strong>Engage:</strong> Watch <em>Internet of Things Explained</em> &amp; discuss with your troop or an adult.</td>
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<tr>
<td><strong>Explore:</strong> Visit a local cellular service store with your troop or an adult and ask a specialist about 5G technology. They can tell you what it is and how it makes life easier.</td>
<td><strong>Explore:</strong> Read with an adult and discuss <em>What is the Internet of Things?</em></td>
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<tr>
<td><strong>Explain:</strong> Interview an adult for a historic explanation of phone usage. Then make a short video about a family member’s first cell phone.</td>
<td><strong>Explain:</strong> Discuss with your parents: what was connected previously through wires and is not anymore? Eg: <em>smart watch, headphones, music players, and cameras</em>. Discuss what they did before the advent of new technology and how things have evolved.</td>
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# Cadette

## 5G

### Engage:
Watch *Everything You Need to Know About 5G* & discuss with your troop or an adult.

Read *5G Explained - How 5G Works* & discuss with your troop or an adult.

### Explore:
Visit the Interactive website *What is 5G?*

Visit the Interactive website *Ericsson Tech Traveler 5G – Recommended browser: Internet Explorer*

### Explain:
Call, e-mail, or visit a professional at a local cellular service store and interview them regarding 5G technology and its improvements. After your interview, discuss what surprised you the most with an adult, friend, or fellow Girl Scout. Based on what you’ve learned from your interview, don’t forget to share where you think 5G might take us.

## Internet of Things

### Engage:
Watch *Internet of Things Explained* & discuss with your troop or an adult.

Watch *Internet of Things: How It Works* & discuss with your troop or an adult.

### Explore:
Call or email an educator at a local high school, college, University, or contact a professional and interview them regarding engineering careers that are linked to the Internet of Things.

### Explain:
Imagine you are in charge of a project to design a light that turns on automatically for a classroom when sunlight is limited due to the time of day or weather. Draw a picture of the device and a map that shows the path of the technology needed for it to turn on the lights. Share your design with an adult, friend or fellow Girl Scout.

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## Seniors & Ambassadors

## 5G

### Engage:
Visit the Interactive website *5G Fundamentals*

Read *5G Explained - How 5G Works* & discuss with your troop or an adult.

### Explore:
Call, e-mail, or visit a professional at a local cellular service store and interview them regarding 5G technology and its improvements.

Visit the Interactive website *5G Cases*

Visit the Interactive website *Ericsson Tech Traveler 5G – Recommended browser: Internet Explorer*

### Explain:
Find a cell tower and make a video explaining how 5G would change the world for you. Share the video you made with a friend or fellow Girl Scout. Or, with an adult’s permission, post your video on social media and tag @gsheartofnj, @ericsson, #girlscoutstalk5G.

## Internet of Things

### Engage:
Visit the Interactive website *Introduction to the Internet of Things (IoT)*

Watch *Internet of Things: How It Works* & discuss with your troop or an adult.

### Explore:
Call or email an educator at a local high school, college, University, or a professional and interview them regarding computer science careers that are linked to the Internet of Things.

### Explain:
Imagine you are in charge of a project to design a small device that alerts parents in your neighborhood when their kids wander too close to a pond in the backyard. They want to receive the notification on their home smart speaker. Draw a picture of the device and a map that shows the path of the technology needed for it to transmit the alert to the home. Share your design with an adult, friend, or fellow Girl Scout.
For All

<table>
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<tr>
<th>Fact or Fiction Health effects of 5G: Explore this site to learn about some 5G myths and facts.</th>
<th>Explain: Discuss with your troop or an adult how mmWave spectrum is safe and does not cause harm to our health.</th>
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Additional Resources

**Ericsson’s Introduction to 5G!**
Click on the PowerPoint icon below for a brief introduction to 5G created by our friends at Ericsson.

**Jump to JumpStart!**
Jumpstart is an online platform developed by Ericsson for Girl Scouts to enable them to go digital. This platform hosts all the content for the STEM badges. This allows self-learning for the girls and content access to their parents and troop leaders. Patches are also made available for the girls here. One of the many advantages of this digital platform is that the troop leaders need not buy binders for the content. Also, this enables Girl Scouts to earn patches online in these unprecedented times. This 5G/IoT patch will also be hosted on Jumpstart soon.

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Thank you to Ericsson for developing this patch program!