Cesar Cipher

When computers (and people) communicate online, there is a danger that what they are saying or doing can be intercepted. This can be a problem when you are sending private information like passwords. To keep information private, we **ENCRYPT** our information, which scrambles it into unreadable data. Then the end user has to decipher the data using a key so that it can be read. This is not a new concept. 2000 years ago, around the year 100 AD, Julius Caesar created a **CIPHER WHEEL** that still is used today in various formats.

To make our own wheel simply cut these two wheels out and use the brad to fasten them together. There is a minor problem with this wheel though. If you move the inner wheel then your end user won’t know what your settings are. To fix this problem, start with the letter A on the inside circle and put a 0. 1 would correspond to B, and so on.

Let’s talk about how to use the wheel.

1. The outer circle is the actual message. The inner wheel will be the encryption.
2. For example, if the encryption key is 4, then when the coder writes E, it would correspond to the letter A. LIEZ with a key of 4 would be HEAD.

Use the Galactic Quest 4-H STEM Challenge to gain a better understanding and for other ideas on how to apply this!

