

Scytale

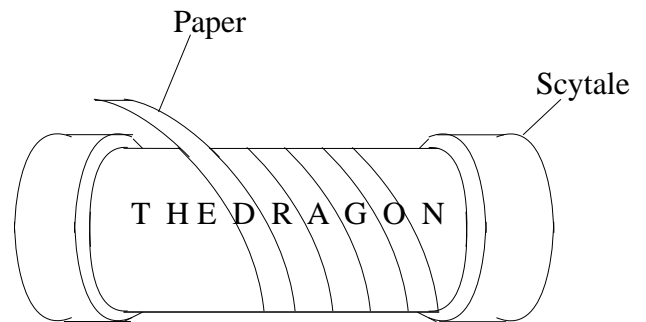
Overview: In this lesson, I'll show you how to use a actual cipher machine called a *scytale*. This was first used in ancient Greek and Roman times, most notably by the Spartans. To make a scytale, use a cylinder with a piece of paper wrapped around it. Then simply print your message in rows that run along the length of the cylinder. When the paper is unwrapped, the message is scrambled!

Materials

- Marker pen
- Paper strip (Make your own by cutting your paper into 1" strips and taping them together end-to-end.)
- Cylindrical object, like a toilet paper tube or paper towel tube

Activity: The Scytale machine is a cylindrical object that gets a long strip of paper wrapped around it. Start at one end and start wrapping the paper around the tube, keeping the edges of the paper lined up.

Now write your secret on the paper by placing one letter on each strip section as shown.



I have a message: "THE DRAGON EGG IS HIDDEN UNDER THE BUSHES".

After you write your message, unwrap the strip and you'll find a garbled message. The neat part of this type of cipher is that the receiver must not only get the strip, but also the correct diameter tube in order to decode the message.

Now it's your turn! Work out the exercises below. (You'll find answers at the back of this book.)

Exercises

1. What is the name of the cryptographic machine that was first used by the ancient Greeks and in Roman times to send secret messages?
2. What is the shape of the machine named above?
3. Where is the message written when using this machine?
4. Apart from the machine, what else is required to be able to encode the message?
5. Who were the people who most notably used the type of cryptography named?
6. What is the major problem that the recipient must figure out to easily decode the message?
7. Is it true that first letter in the original message would be the first letter on the encoded message? Explain.

Answers to Exercises: Scytale

1. Scytale
2. Cylindrical in shape
3. A strip of paper rolled on its (Scytale)curved surface
4. Paper
5. Spartans
6. A Scytale of the same size as the encoder
7. No, The encoder may chose to begin writing the first row of the message some centimeters away then end up beginning another row that the beginning of the paper strip.