

# Activity Crypto Battle

## Instructions

### Preparation of print materials

From **Year 7** onwards, we recommend using the **easy** version. It is also advisable to only provide a selection of algorithm blocks (e.g., two blocks each for consonants, vowels and letters) in this context. Make sure that the building block 'If it's a letter, move forward 5 letters in the alphabet' is included. From **Year 10** onwards, the **medium** level can be used. All algorithm building blocks should now be made available. From **Year 11** onwards, the **advanced** level can be used.

For each pair of students, you will need:

- Task sheet „Algorithm\_Catch the thief!“ (according to level needed),
- Task sheet „AISystem\_Catch the thief!“ (according to level needed),
- 1 set of cut out algorithm
- General task printout
- Pencil and paper
- Cardboard or similar as partition wall
- Information text

### Preparation of student workspaces

Place the cardboard wall between the students' seats. Place the task 'Algorithm\_Catch the thief!' and the algorithm building blocks on one side, and the task 'AISystem\_Catch the thief!' on the other. Position the general task so that it can be read by both students.

Provide paper and pencils or ask the students to bring them.

### Structure of the lesson

The students enter the room. The robbery scenario (see tasks) is presented to the class. Then the students work individually to decipher the clues. After decrypting the text, they compare the methods they used and read the information text. Finally, the results are discussed and reviewed with the class.

### Information on decryption procedures

The **easy** version uses the **Caesar cipher**. All letters must be shifted forward by 5 letters.

The **medium** level uses **ROT-13 encryption**. All letters must be shifted 13 letters forward/backward.

In the **advanced** level, **consonants** have to be **shifted forward by 1** and **vowels** have to be **shifted backward by 3**.

#### Tips for troubleshooting

If the students need help, you can give them the following tips:

1. Each character only needs to be shifted once to obtain the decrypted letter.
2. The third word is „loot“.

#### **Solution/ Decrypted Text**

**Have sunk loot in the lake near the big rock**

**Recovery Monday four a.m.**

**Meeting point: boat dock**

**Fred**