

## What's revealed in rubbish?

Investigating - Decoding and analysing information

### Purpose

To develop skills in

- extracting information from a collection of objects
- inductive and deductive reasoning
- building hypotheses
- peer review
- creating imaginative scenarios.

### Age range (years)



### Subjects

Science,  
Mathematics,  
English, Drama,  
Citizenship



### Background

Rubbish or garbage is a useful source of clues for spies. That's why, if you really want to avoid people knowing your secrets, you should use a paper shredder and dispose of your litter carefully.

### Steps

1. In groups or pairs ask students to look at the image on page two (it can be printed out or projected). The picture shows items that have been found in a suspect's rubbish bin
2. What can they ascertain about the suspect from the items shown? Ask students to divide the items into two categories:
  - Good clues (primary or direct evidence)
  - Provide less information but still tell us something (secondary or supporting evidence)
3. Encourage students to record and discuss what they believe can be learnt from each piece of evidence. You can distribute copies of the worksheet on page three to help them note down their thoughts.

4. Ask students to look for patterns *across* pieces of evidence. Do several pieces of evidence combine to suggest something that individual items by themselves cannot?

### Discussion

Take specific items and debate the strength of each group's hypotheses about that object and its relationship to the suspect. Ask students to be clear about the reasoning that led them to their conclusions.

### Extensions

In pairs or groups, get the class to create fictional scenarios from the evidence. Who is the suspect? What do they do?

Who has come up with the most interesting scenario? Or the most likely?

For more advanced students this exercise can be used as a springboard to discuss the differences between inductive reasoning (in which evidence *supports* a conclusion but does not *ensure* it) and deductive reasoning (where conclusions are *necessitated* by previously known facts).



## Evidence record sheet

Description of item	Primary or secondary evidence?	Facts given by the item	Possible explanations
Example: Euroline ticket – London to Paris	Primary (good clue)	The suspect or someone they know has travelled between London and Paris	The suspect was meeting a French contact? The suspect is French? Suspect took an innocent holiday in Paris?

### Final hypothesis

*Who is the suspect and what have they been doing?*