7 Types of problem used in the Case Studies

Type of problem

Typical examples found in the case studies

Outbreak

Mix ingredients to create an antidote., devise a vaccination programme.

Planning and organising

Find optimum solution subject to constraints.

Product wars

Mix ingredients to obtain optimum nutritional value and taste

Mystery tours

Plan a tour to satisfy time/money/customers

Highway link design

Propose the optimum location of a by-pass using data used by the Highways agency.

Designing and making

Design an artifact or procedure and test it

Product wars

Package a drink and test it through market research

Modelling and explaining

Create notations and models and use them to explain phenomena or propose solutions

Water availability

Create a fair way to distribute water.

My music

Create a measure of tempo.

Keeping the pizza hot

Model the cooling of a pizza

Exploring and discovering relationships

Find relationships, estimate and predict results and test them.

Crash test

Exploring the effect of different variables when crash testing cars.

Speed cameras

Investigating the effects of different sites for speed cameras.

How risky is life?

Estimate risks and test them against real data.

Interpreting and estimating

Deduce information, from representations of data and present a reasoned argument.

Save a baby kangaroo

Devising an appropriate nutrition regime from tables of nutrient data. Present this regime.

Reducing road accidents

Exploring one town's accident database; use graphs, tables and charts to construct a case. Present the case.

You reckon?

Make reasoned estimates to test common assertions and facts.

Solving logic puzzles

Here the contexts are more 'fantasy' and embedded in computer games

Alien invasion

PointZero

Explorers