The six oranges puzzle[1]

This activity can help us look at how we solve problems and how we get past any blocks we might meet.

▷ **Do**   You're about to be presented with a problem. Try to solve it in whatever way works for you, and also try to *notice what happens to your thinking* as you try.

① There are six oranges in this bag:

How can you give these six children an orange each and still have one left in the bag?

If you think you have arrived at solution, *don't tell anyone for the moment*, but try to remember the process you went through to get it. [3-5 minutes]

② In groups, anyone who feels they have a solution should explain it and find out whether their colleagues accept it. [3 minutes]

③ On your own, note down the thoughts which went through your mind as you tried to solve the puzzle - whether you came up with an answer or not. [3 minutes]

▷ **Review**   How did anyone who found a solution manage to do it?
What thinking did they use? and why did it work?
How did anyone who did not find a solution manage not to?
What thinking did they use? and why did it not work? [10 minutes]

▷ **Learn**   Some people who got a solution might have "broken the rules" in other people's terms. They bought another orange, they gave the last child the orange in a bag, they gave an orange and then took it back, and so on (there are lots of solutions once you start this!).
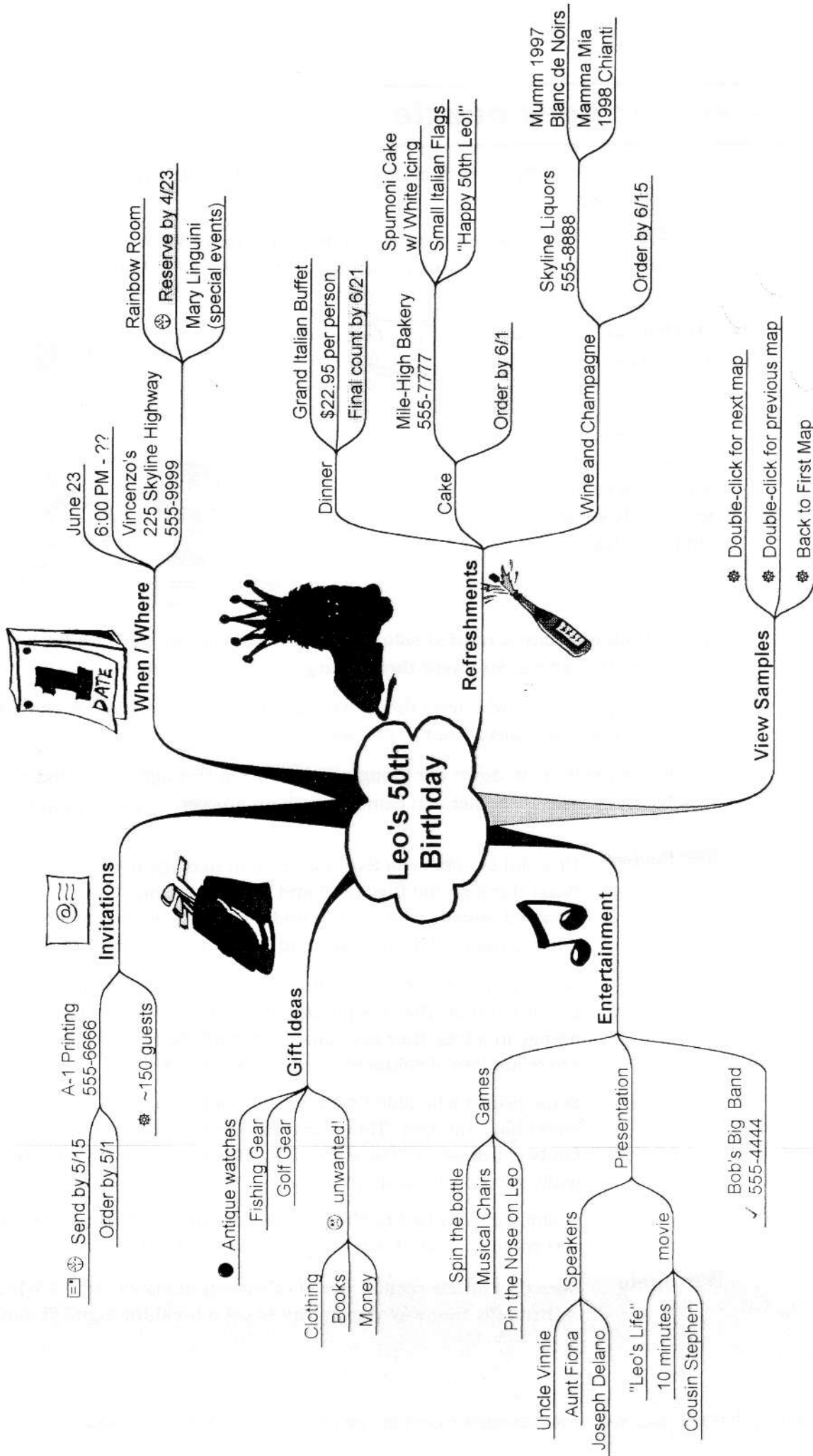
Some people who didn't get a solution might have "had a block". They might have thought "This is maths - I'm no good at it" or "I hate these kinds of things" or "There's a trick being played on me" or "This hasn't really got an answer at all".

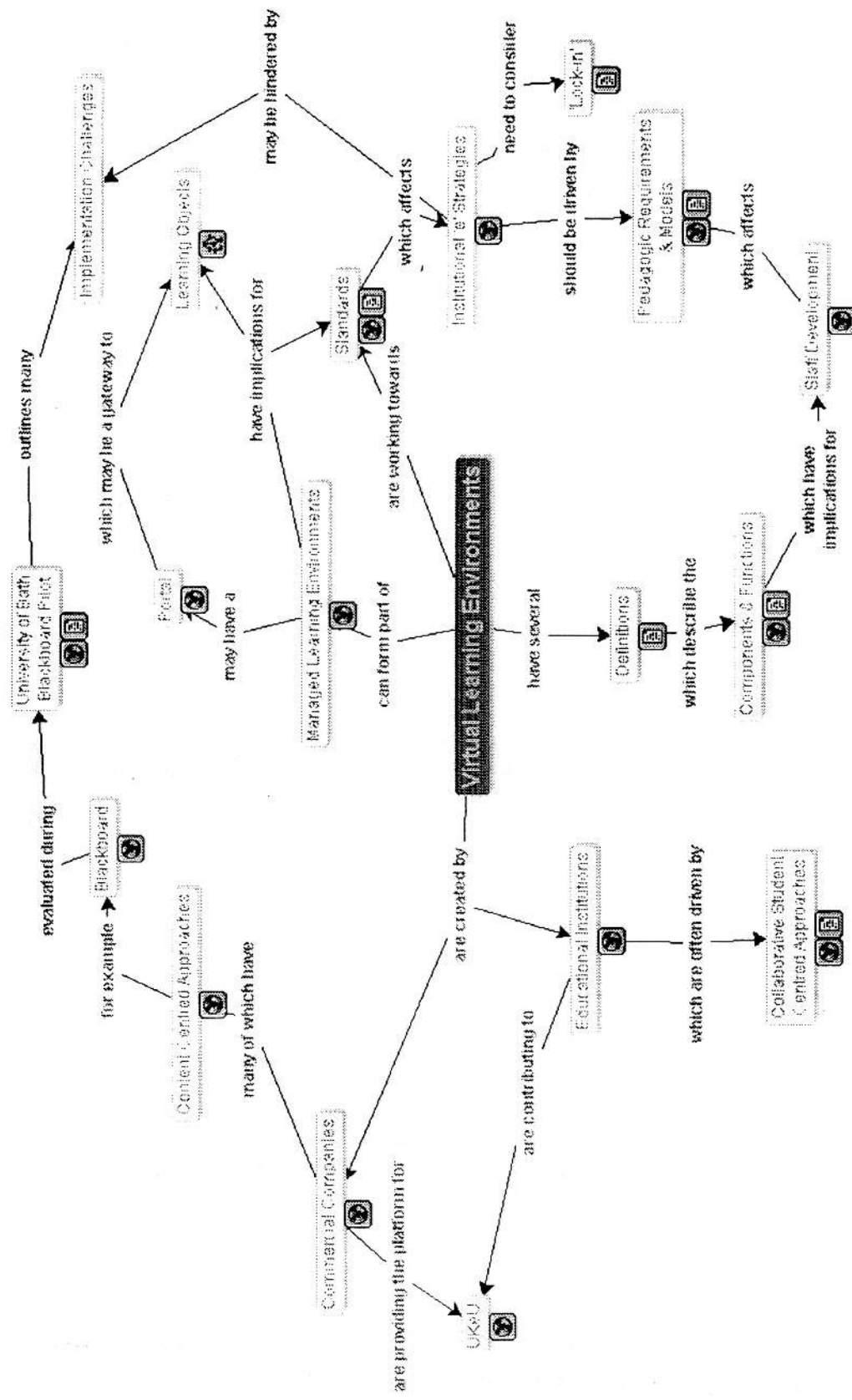In small groups find further examples of the "Breakthroughs and Blocks", and try to spot what you have to do to break through. [10 minutes]

▷ **Apply**   Does this puzzle remind you of other situations you're in? Which ones?
Is there any new way you can try to get a breakthrough? [5 minutes]

---

[1] Watkins C (1989), *Your New School: Tutorial Resources for Year One*, Harlow, Longman 0-582-20685-5

Leo's 50th Birthday

When / Where
- June 23
- 6:00 PM - ??
- Vincenzo's
  - 225 Skyline Highway
  - 555-9999
- Rainbow Room
- ✷ Reserve by 4/23
- Mary Linguini (special events)

Invitations
- A-1 Printing
  - 555-6666
- ✉ ✷ Send by 5/15
- Order by 5/1
- ✷ ~150 guests

Gift Ideas
- ● Antique watches
- Fishing Gear
- Golf Gear
- Clothing
- Books
- Money
- ☹ unwanted!

Entertainment
- Games
  - Spin the bottle
  - Musical Chairs
  - Pin the Nose on Leo
- Presentation
  - Speakers
    - Uncle Vinnie
    - Aunt Fiona
    - Joseph Delano
  - "Leo's Life"
  - 10 minutes
  - movie
  - Cousin Stephen
- Bob's Big Band
  - ♪ 555-4444

Refreshments
- Dinner
  - Grand Italian Buffet
  - $22.95 per person
  - Final count by 6/21
- Cake
  - Spumoni Cake w/ White icing
  - Small Italian Flags
  - "Happy 50th Leo!"
  - Mile-High Bakery
  - 555-7777
  - Order by 6/1
- Wine and Champagne
  - Mumm 1997 Blanc de Noirs
  - Mamma Mia 1998 Chianti
  - Skyline Liquors
  - 555-8888
  - Order by 6/15

View Samples
- ✷ Double-click for next map
- ✷ Double-click for previous map
- ✷ Back to First Map

VLEs Concept Map

Implementation challenges

outlines many

may be hindered by

Learning Objects

which may be a gateway to

University of Bath Blackboard Pilot

evaluated during

Blackboard

for example

Content Centred Approaches

many of which have

Commercial Companies

are providing the platform for

UK&U

are contributing to

Educational Institutions

are created by

which are often driven by

Collaborative Student Centred Approaches

have implications for

Standards

are working towards

which affects

Institutional e' Strategies

need to consider

'Lock-in'

should be driven by

Pedagogic Requirements & Models

which affects

Staff Development

which have implications for

Components & Functions

which describe the

Definitions

have several

Virtual Learning Environments

can form part of

Managed Learning Environments

may have a

Portal

Roles

IHMC Concept Map Software

Each 'Thinking Hat' is a different style of thinking. These are explained below:

- White Hat:
  With this thinking hat you focus on the data available. Look at the information you have, and see what you can learn from it. Look for gaps in your knowledge, and either try to fill them or take account of them. This is where you analyze past trends, and try to extrapolate from historical data.

- Red Hat:
  'Wearing' the red hat, you look at problems using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally. Try to understand the responses of people who do not fully know your reasoning.

- Black Hat:
  Using black hat thinking, look at all the bad points of the decision. Look at it cautiously and defensively. Try to see why it might not work. This is important because it highlights the weak points in a plan. It allows you to eliminate them, alter them, or prepare contingency plans to counter them. Black Hat thinking helps to make your plans 'tougher' and more resilient. It can also help you to spot fatal flaws and risks before you embark on a course of action. Black Hat thinking is one of the real benefits of this technique, as many successful people get so used to thinking positively that often they cannot see problems in advance. This leaves them under-prepared for difficulties.

- Yellow Hat:
  The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it. Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.

- Green Hat:
  The Green Hat stands for creativity. This is where you can develop creative solutions to a problem. It is a freewheeling way of thinking, in which there is little criticism of ideas. A whole range of creativity tools can help you here.

- Blue Hat:
  The Blue Hat stands for process control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into Green Hat thinking. When contingency plans are needed, they will ask for Black Hat thinking, etc.