



# Innovative Strategy: Concept Cartoons

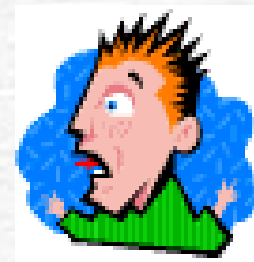
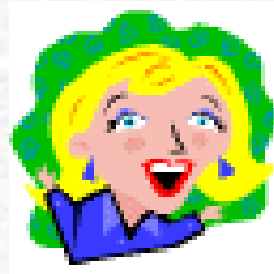
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ISD 613: Instructional and  
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# What Are Concept Cartoons?

- These are cartoon-style drawings of familiar situations with an element of science. Different cartoon characters put forth alternative viewpoints about the presented situation.



Below is an example from a poster found in London Underground train system.

Question: What will happen if we take the top off of a bottle of fizzy lemonade?  
Three different cartoon characters propose the following options about the bottle.

1. It will lose weight.
2. It get heavier.
3. It will stay the same.

(The actual example can be found on next slide)

# Example:



# Other Examples:

- ☛ The following example and others can be found at the following web site. Search for "Science on the Underground."
- ☛ <http://wwwsearch.mmu.ac.uk>.

# Criteria for Concept Cartoons

- ☛ Everyday problem with a scientific dimension (focus on probable situations rather than theory)
- ☛ Minimal amounts of text
- ☛ Common alternative viewpoints based on research put forth
- ☛ Alternatives appear of equal status (such as similar facial expressions and text size)

# Research

- The previous example and three others were placed in the London underground in march 1998 for the approximate 2.5 million passengers to view.
- Other posters have been placed in interactive science centers, schools, colleges, and dentists' waiting rooms.

# Research Findings

- ✓ Effective with learners of all ages and backgrounds
  - Highly motivating
  - Non-threatening
  - Intriguing new perspectives on familiar events



# Research Findings

- Parallels found between adults' learning and children's learning
  - Important for both to construct personal meaning
  - Same poorly formed scientific ideas held by both



# Strategy Pro's

- ✔ Useful in a variety of situations
  - Formal education to informal everyday settings such as the London underground trains
- ✔ Useful for a variety individuals
  - From children old enough to read to adults with little scientific awareness

# Strategy Pro's

- ✔ Used for a variety of topics other than science
  - Literacy promotion in schools
  - Teaching English as a second language
  - Teaching English as a foreign language

# Strategy Con's

- The depth of topic is limited because of the minimal text on concept cartoon posters.
- Strategy's purpose is only to engage interest and provoke thoughtfulness. It is not used to actually present information on a topic.

# Implications for Instructional Designers

Many educators believe that students should construct knowledge through inquiry rather than receiving it passively through textbooks or lectures.



# Implications for Instructional Designers

- ☛ This strategy is consistent with aspects of the ARCS model of motivation
  - Attention – humor, inquiry arousal
  - Relevance – experience
- ☛ Can be used in Gagne's Nine Events of Instruction
  - Gain attention
  - Stimulate recall of prior knowledge

# Implications for Instructional Designers

- ☛ Cartoons when used in this learning strategy and others have several proven effects:
  - Engage attention
  - Serve as entertainment
  - Present information in a non-threatening manner



# References

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- Klein, P. D. (1998). The role of children's theory of mind in science experimentation. Journal of Experimental Education, 66, 101-124.