

“I think it’s much more interesting to live not knowing than to have answers which might be wrong.”
-Richard P. Feynman





Image credit: ANOVA Science Education

Inquiry-Based Learning

- Reflects practices of scientists
- Students construct new knowledge through discovery

(Cobern et al., 2010, p.82)

Inquiry involves learners:

- tackling real-world questions, issues and controversies
- developing questioning, research and communication skills
- solving problems or creating solutions
- collaborating within and beyond the classroom
- developing deep understanding of content knowledge
- participating in the public creation and improvement of ideas and knowledge

Example (from math)

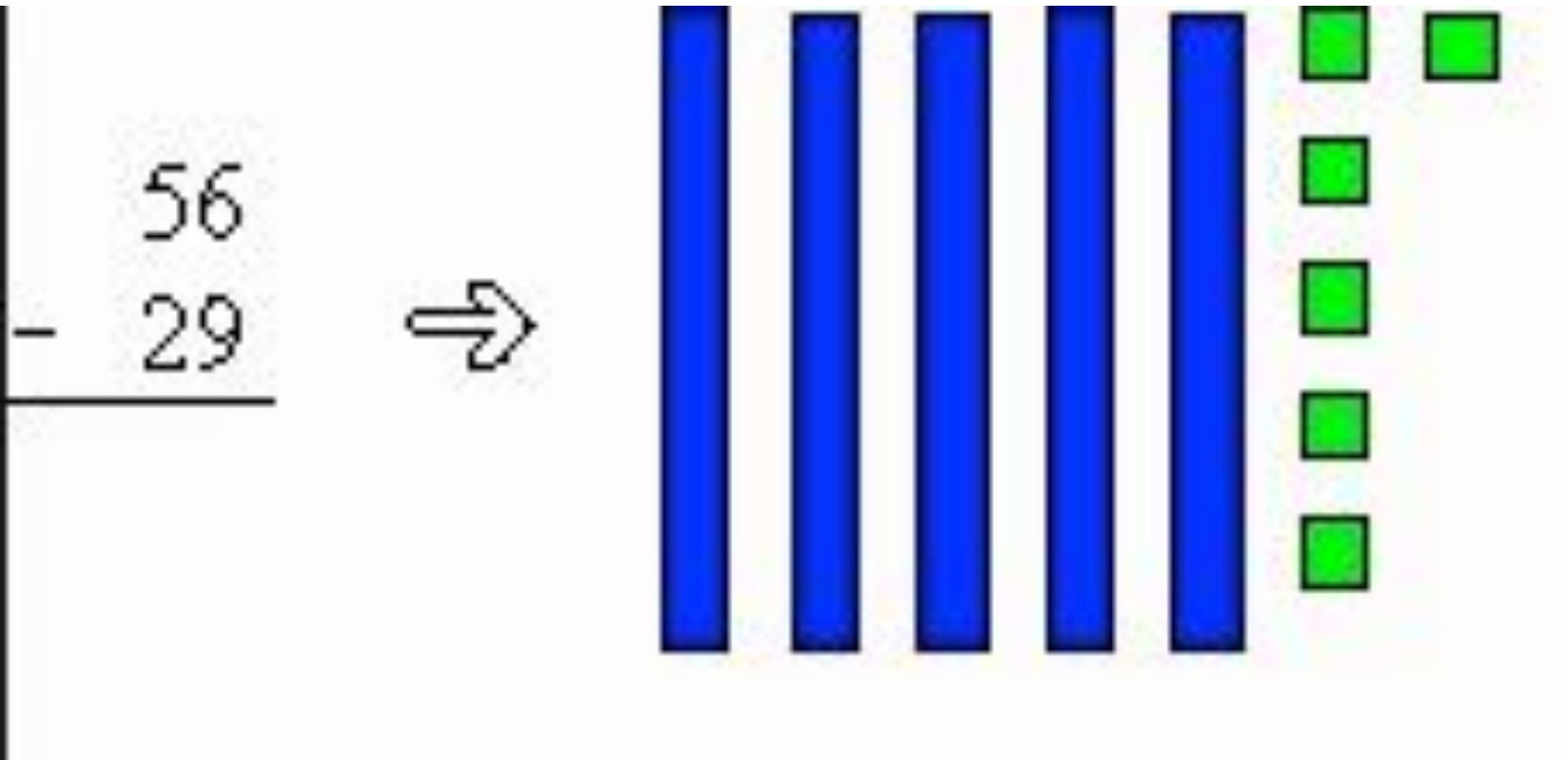


Image Credit: Margo Lynn Mankus

Inquiry-based learning

Pros

Models aspects of scientific inquiry

Increases curiosity and interest

Potential for better understanding and retention

Cons

Can be too open ended

Potential for misconceptions

Not always properly understood by teachers

Inquiry- Based Learning *is not just.....*

- Doing projects
- Conducting experiments
- Simply “hands on”
- Working in groups
- Researching literature

Inquiry- based learning includes a component in which the learner is constructing new self-knowledge on his/her own.

- IBL is very effective and creates those “ah ha” moments that every teacher wants to see
- It can be time consuming and can therefore be very challenging in the “real world”.
- “Some things just have to be taught”

“However, as far as science conceptual development is concerned, our conclusion is that expertly designed instructional units, sound active-engagement lessons, and good teaching are as important as whether lessons are cast as inquiry or direct.” (Cobern et al., 2010, p.93)

References

Cobern, W., Schuster, D., Adams, B., Applegate, B., Skjold, B., Undreiu, A., et al. (2010). Experimental Comparison Of Inquiry And Direct Instruction In Science. *Research in Science & Technological Education*, 28(1), 81-96.























