

Pedagogy for Poets: Guided-Inquiry for Groups in a Course of Mathematics for the Liberal Arts

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Description of the Course to Be Taught

Catalog Description:

MTH 101 Topics in Mathematics. Topics selected from various areas of mathematics such as discrete mathematics, logic, number systems, geometry, probability, and graph theory. *The course is designed to give the student an appreciation of mathematics as an integral part of our culture as well as applications to various other disciplines.*

Text book: *For All Practical Purposes* by COMAP.

The Student Population

Distribution of Majors (self-reported 20 of 23 students):

Major	Frequency
Media & Communication	6
Theatre	5
History	4
Dance	1
English	1
French	1
(Undecided)	1

Student Thoughts

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Notable Student Answers (beyond “to fulfill requirement” and “an A”):

“In high school I felt that I was mostly memorizing information, but now I hope to really learn the information.”

“A better understanding of practical math and how I can use it.”

“I hope to be more comfortable talking about and using math in everyday life.”

“My requirement and a better understanding of math in order to teach it.”

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- 1 See that mathematics applies to their world,
- 2 Understand the difference between arithmetic and mathematical reasoning, and
- 3 Think and reason in the style of a mathematician.

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Solution: A hybrid approach centered around guided-inquiry worksheets for group work.

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- I circulate among the groups, looking for progress and answering questions.
- Periodically I brought the class back together to form consensus reasoning and answers to the questions on the worksheet.

Worksheet Design

- 1 Relate novel problem with previously discussed material.
- 2 Introduce the new material with straight-forward and leading questions leading to a new concept.
- 3 Consolidate the new concept with a similar question without the leading questions.
- 4 Apply the new concept with a new problem or problems, perhaps leading to another new concept.

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Here is an example worksheet.

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(Also, one student said “Not as much group work in class please!!” but only one student.)

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Verdict: I would use these worksheets again!

Thanks!

Any questions?