



Healing Through The Arts®

Where those who are healing find strength,
hope and inspiration through the arts.

Math, Lesson 3 – *The Connections between Math & Literature*

Lesson goal – To provide a forum for analysis of mathematics in literature

Target students – All levels

Learning Objective – Students will analyze several pieces of literature for mathematical characteristics

Outcome – Students will create a story or poem including their analysis

Standards – The following educational standards are addressed in this lesson:

- N/A

Materials / Resources – The following resources will be required for this lesson:

- A piece of literature; i.e., Flatland; The Annotated Alice; Innumeracy; etc.
- Discussion questions; both mathematical and literary
- Discussion medium; i.e., traditional classroom; online site, such as Wallwisher, Moodle, etc.
- Writing medium; i.e., pencil & paper, Word, Pages, etc.

Description of Lesson (recommended duration: 1-2 weeks)

1. Assigned reading should be chunked; i.e., chapters, stories, poems, etc.
2. Students should answer a few questions after each assignment, such as in Flatland:
 - Who is the narrator?
 - What is the setting?
 - What is Flatland?
 - What shape are the houses in Flatland?
3. As students read and analyze, they should be encouraged to start thinking about what they will write as the culmination of this assignment.

4. Allow students to use pencil and paper or software; i.e., Word, Pages, etc. to begin creating their writing piece, along with their mathematical and literary analysis.
5. At this point, students should feel completely free to express themselves.

Example Differentiation:

Below Grade

- Arrange the project so that students are more directed. For example, give students a short story or poem as a reading assignment. A good choice might be *The Man Who Counted* by Malba Tahan. Each chapter is a story in itself.
- Have students keep a journal, with daily entries with their questions and answers to reading prompts.
- Allow students to work in pairs.
- Have students write and perform Slam Poetry.

Above Grade

- Use a more challenging piece of literature, such as *The Annotated Alice*. The study of Lewis Carroll's logic is an excellent and fun choice for advanced students.
- Have students choose a few different types of literature to analyze; i.e., a piece of fiction, a piece of non-fiction; and a poem.
- Have students choose a few different types of literature to create; i.e., a piece of fiction, a piece of non-fiction; and a poem.
- Choose more in depth questions for literary analysis.
- Assign each student a chapter/story/poem and have them create the questions for the class.