Students Will Be Able to…

**English:**

SWBAT: Read silently and in groups and work together to summarize what they have read.

SWBAT: Student will be able to make connections with dimensions and their text.

SWBAT: Students will be able to use their knowledge of personification to develop a poem.

**Art:**

SWBAT - Draw inspiration from other subjects and artists to create their art works.

SWBAT - Create art work exploring 2D and 3D works using dimensions and the illusion of space.

**Physical Education:**

SWBAT: connect dimensions to sports

SWBAT: see how dimensions are used in sports and how to apply them.

SWBAT: connect movie with reading material in class

**Math:**

SWBAT: Understand the properties of figures

SWBAT: Make connection between figures of different dimensions
<table>
<thead>
<tr>
<th>Day</th>
<th>English</th>
<th>Physical Education</th>
<th>Art</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Flatland and Author</td>
<td>Watch a video (dimensions)</td>
<td>Create abstract relief sculpture to create a sense of dimension and depth.</td>
<td>15 minutes of reading</td>
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<tr>
<td>Day 1</td>
<td>Begin Reading Flatland</td>
<td>Talk about dimensions in sports.</td>
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<td>Refresher of perimeter and area</td>
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<tr>
<td>Day 2</td>
<td>Finish Reading Flatland (Reading in groups)</td>
<td>Show how dimensions are used in sports.</td>
<td>Learn the history and the math behind the art of origami and create 3D objects.</td>
<td>15 minutes of reading</td>
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<tr>
<td></td>
<td></td>
<td>Watch video of dimensions being used in sports</td>
<td></td>
<td>Introduction to surface area and volume</td>
</tr>
<tr>
<td>Day 3</td>
<td>Discussion of Novel</td>
<td>Watch Flatland The Movie</td>
<td>Use Flatland movie as inspiration to students to create their own map of Flatland.</td>
<td>15 minutes of reading</td>
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<tr>
<td></td>
<td>Students will write a poem dealing with the personification of objects.</td>
<td></td>
<td></td>
<td>Connection to real life scenarios</td>
</tr>
</tbody>
</table>
English Resources

- **Flatland: A Romance of Many Dimensions**

- **Personification**
  - [https://owl.english.purdue.edu/owl/resource/745/1/](https://owl.english.purdue.edu/owl/resource/745/1/)

- **Personification Examples**
  - [http://literarydevices.net/personification/](http://literarydevices.net/personification/)

- **Teaching Channel-Poetry**
  - [https://www.teachingchannel.org/videos/teaching-poetic-elements](https://www.teachingchannel.org/videos/teaching-poetic-elements)

- **Poetry 180**
  - [http://www.loc.gov/poetry/180/](http://www.loc.gov/poetry/180/)

- **Personification and Poetry**
  - [http://www.funny-poems-for-free.com/personification-poems.html](http://www.funny-poems-for-free.com/personification-poems.html)

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**Title:** *Flatland: A Romance of Many Dimensions*

**Author:** Edwin A. Abbott

**Pages:** 158 pages
(5) Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

(A) analyze isolated scenes and their contribution to the success of the plot as a whole in a variety of works of fiction;

(B) analyze differences in the characters' moral dilemmas in works of fiction across different countries or cultures;
ELPS:

(4) Cross-curricular second language acquisition/reading

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H) read silently with increasing ease and comprehension for longer periods;

CCRS:II. Foundational Skills

A. Reading across the curriculum

(3) Identify the intended purpose and audience of the text.

(4) Identify the key information and supporting details.
Physical Education Resources

- Flatland: The Movie- Official Trailer
  - [http://www.youtube.com/watch?v=C8oiwnNlyE4](http://www.youtube.com/watch?v=C8oiwnNlyE4)

- How physical education can improve Math
  - [http://www.youtube.com/watch?v=67Q_kN1uTY4](http://www.youtube.com/watch?v=67Q_kN1uTY4)

- Basketball court Dimensions
  - [http://www.youtube.com/watch?v=tmKnAvShmll](http://www.youtube.com/watch?v=tmKnAvShmll)

- Basketball Court Layout and Installation Instructions
  - [http://www.youtube.com/watch?v=kM7BO7mMC8w](http://www.youtube.com/watch?v=kM7BO7mMC8w)

- Sports KnowHow.com
  - [http://www.sportsknowhow.com/dimensions](http://www.sportsknowhow.com/dimensions)
Art Resources

- Students use this website to explore their options for a limited palette for their piece so that they can create depth using color.
  - www.colorlovers.com/

- Frank Stella is an artist who uses color to create depth, so I wanted students to explore his work and discuss how color plays a role in creating depth.
  - https://www.youtube.com/watch?v=lgaPuHDV8v0

- This website serves in telling the history of origami, and the math behind origami. The students would also use this website to find instructions on how to make their 3-D shapes.
  - http://www.mathigon.org/origami/

- This website is about an artist who works in origami. Students would use his website to explore how he creatively uses math to create his works.
  - http://www.langorigami.com/

- This is the trailer for the Flatland movie that students would use to explore how artists translate literature into an animated movie.
  - https://www.youtube.com/watch?v=C8oiwnNlyE4
Mathematical Resources

- Perimeter

- Area
  - http://www.mathsisfun.com/geometry/area.html

- Surface Area
  - http://www.math.com/tables/geometry/surfareas.htm

- Volume
  - http://www.math.com/tables/geometry/volumes.htm

- Geometry Overview
  - http://www.ixl.com/math/geometry
Use of Technology In our Interdisciplinary Unit

- Allows students to evaluate the validity of resources under teacher instruction.
- Students can consult with teacher and classmates how resource can be used to its full potential.
- Technology in the classroom gives students a break from traditional research methods.
Interdisciplinary Unit Connections

- Multiple learning techniques allowing for students to grasp the topic (dimensions)
- Allows for delayed gratification (movie)
- Gives students a chance to connect what they are learning to the real world