Mystery Class for Math

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Don Bosco High School

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## Mystery Class for Math

Submitted by: David Sundstedt
School and District: Don Bosco High School

<table>
<thead>
<tr>
<th>Grade Level (Req.)</th>
<th>Content Area (Req.)</th>
<th>Unit (Opt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ninth</td>
<td>Pre-Algebra</td>
<td></td>
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</tbody>
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### Connections to Other Disciplines (Opt.):
- Geography
- 
- 

### Time Frame (Req.): 1/14-5/14: 15 minutes/week

### Goal (Req.):
Students will learn how to subtract times, and pattern recognition.

### Objective (Req.):
Using Mystery Class (website), students will calculate photoperiods and analyze data.

### Materials Needed (Req.):
- Computer access on Fridays
- 
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### New Vocabulary (Opt.):
- Photoperiod
- Longitude
- Latitude
- Greenwich mean time
- 

### Anticipatory Set/Introduction [Inquiry Question is required] (Req.):
Why do seasons change? What difference does it make? Do seasons change the same throughout the world?

### Instructional Sequence/Procedure (Req.):
1. Ask inquiry question.
3. Students will have a weekly discussion and graphing of data.
4. Have pairs of students state their case to the class for their choice of Mystery Cities.
5. 
6. 
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17.
20.

<table>
<thead>
<tr>
<th>Formative Evaluation (Req.): Check photoperiod evaluation weekly.</th>
<th>Assessment (Req.): Include photoperiod evaluation problems on regular tests.</th>
</tr>
</thead>
</table>

**Iowa Core Curriculum Standards Used (Req.):**
- GE 1., Grades 9-12: Understand the use of geographic tools to locate and analyze information about people, places, and environments.
- GE 2., Grades 9-12L Understand how physical and human characteristics create and define regions.
- GE 4., Grades 9-12: Understand how physical and human processes shape the Earth's surface and major ecosystems.

**Common Core Curriculum Standards Used (Opt.):**
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...

**NGS Standards Used (Req.):**
- 1. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.
- 2. How to use mental maps to organize information about people, places, and environments in a spatial context.
- 3. How to analyze the spatial organization of people, places, and environments on Earth's surface.
- 4. The physical and human characteristics of places.
- 5. That people create regions to interpret Earth's complexity.
- 7. The physical processes that shape the patterns of Earth's surface.
- 8. The characteristics and spatial distribution of ecosystems on Earth's surface.

**Five Themes of Geography Used (Req.):**
- Location
- Place
- Region

**School District Standards and Benchmarks (Opt.):**
- ...
- ...
### 21st Century Universal Constructs (Opt.):

### Other Disciplinary Standards (Opt.):
- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
- Compute fluently and make reasonable estimates.
- Use mathematical models to represent and understand quantitative relationships.
- Analyze change in various contexts.
- Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

### Other Essential Information (Opt.):

### Other Resources (Opt.):
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