

Interdisciplinary Unit Plan

Grade: 8th Grade

Topic: Summer Olympics

Time Required: 1 Day

1) Main Purpose of Unit

The purpose of this unit is for the students to gain an understanding of the Summer Olympics through the skills of multiple subjects. Students will apply their newly acquired knowledge to gain a deeper understanding of the Olympics and its historical impact.

2) Standards

English:

RI.1: Read closely to comprehend text

- a. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly.
- b. Cite the textual evidence that most strongly supports inferences drawn from the text.
- c. Provide an objective summary of the text.

(Textual evidence may include graphs, charts, diagrams, maps, pictures as well as text.)

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Mathematics

8.SP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

8.SP.3: Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept(s).

Physical Education

Standard 2: Applies knowledge of concepts, principles, strategies and tactics related to movement and performance.

Standard 4: Exhibits responsible personal and social behavior that respects self and others.

Science:

Standard 3: Students understand the basic concepts and principles of physical science

Social Studies

7.2.2 Describe events and issues affecting the world today.

8.1.2 Use various primary and secondary resources to analyze, and interpret information.

3) Performance Objectives

English: Students will read closely to comprehend a text in order to cite textual evidence. The textual evidence will support an analysis of what the text says, as well as support inferences they draw from the text. Further, they will be able to provide a summary of the text they read. They will first read a news article and then a poem to examine their understanding of fiction versus nonfiction.

Mathematics: TLW interpret data from different Olympics and use this information to construct scatter plots. TLW describe patterns formed in the scatter plots and use this information to say if times are getting faster or slower. TLW summarize slope from a linear equation to say whether athletes are getting better or worse times throughout history.

Physical Education: TLW will apply the knowledge and skill to participate in the following olympic sport activities: long jump, triple jump, shot put, hammer throw, and 50 yard sprint. TLW exhibit etiquette by following the rules of the game and will show respect for others through teamwork.

Science: TLW explain how all objects exert gravitational force and this force is affected by the distance between the masses of the objects.

Social Studies: TLW discover and identify information surrounding an olympic country, applying research skills to develop a creative presentation of the nation and its olympic history. TLW use primary and secondary sources to analyze the historical impact of the olympics on the researched country.

4) Learning Activities

English: Students will first read through the article written in 2012 in the *Boston Globe*, "The Poem that Won Olympic Gold." They will divide into groups of 3-4 and discuss with their peers what the text says explicitly and draw any inferences they can from the text. They will complete a paragraph as a group to explain their understanding. As a class we will read through *An Ode to Sport* and, using the Socratic seminar, we will discuss what the text explicitly says and any inferences that can be drawn from it. I will use a "web" format where I connect a line to each student that says something. Each student must participate to show their understanding.

Mathematics: There will be a couple different activities. The first activity will include giving the students a chart of years and times for the winners in certain sports. Students will plot these points to form a scatter plot. They will then examine this information to see how much difference there is between winners throughout time. They will then be asked to describe any patterns they find. Another activity will be for the students to create a graph of this same information. They will trace along the results and say if times are getting faster or slower throughout time. For both activities, students will be given four different sports to calculate scatter plots and graphs.

Physical Education: I will have previously placed students into competitive groups representing a specific country. Students will have chosen a country and researched its colors and Olympic medal history count. Each team (country) will pick one person responsible for the task sheet and marking the distances and places.

The first place team receives 4 points for their country, second place receives 2 points, and third place receives 1 point.

Each team has 5 minutes at each station. If a team is finished before the given 5 minutes then they are encouraged to cheer for their fellow "countrymen". Each student has 2 chances at each skill/activity and the poly spots are used to mark the distances. I will use music as the signal for changing stations. At the end of the competition, the students will tally the points and then I will calculate the points for each country and determine who are the gold, silver and bronze winners.

Science: I would first have them assemble a marshmallow shooter, by cutting the bottom out of a paper cup and covering it with a balloon. Then I would have them try to hit a target across the room with a marshmallow. After we attempted to hit the target, we would discuss how the marshmallow would have exerted force on the target similar to how an arrow would exert force onto its target. Finally I would have them answer the following question: How many Newtons of force would an Olympic arrow have if it had a mass of 0.00183kg and an acceleration of 251.5m/s²? $F_{net} = m \cdot a = 0.460N$

Social Studies: Students will research one country from a list of countries participating in the Summer Olympics. If a student has a particular heritage he/she can certainly present

on that country. The students will develop a creative presentation detailing their findings from research. The creative presentation can take a variety of forms, which will be the student's choice. Students should focus on the country's historical involvement with the Olympics (i.e. when it joined, has it hosted the games, etc.), what the national sports or competitions are, what the country excels at during the games, and the country's overall olympic success. Furthermore, students will research the flags, emblems, national anthems, and other important cultural aspects of their chosen country, emphasizing the unique cultural diversity of each country. Geography, political structures, economic situation, and other historical data can be presented as well. Finally, the student will end the presentation by commenting on how participating in the olympics has affected the researched country, financially, socially, or politically.

The class time will be used by going to the library or computer lab (if the classroom does not have technology); this way the students will have time and resources to begin researching. Students must have at least one primary source and at least two secondary sources, which they will use to interpret and support their position. If the class needs a second day for research that can be allotted, otherwise the creation of the project will be the homework for that week. Presentations will happen at the end of the week.

5) Instructional Resources

English:

Katz, Amanda. "The Poem that Won Olympic Gold." *Boston Globe*, Boston, 4 Aug. 2012.

Published: Boston Globe. Web. Retrieved from:

<https://www.bostonglobe.com/ideas/2012/08/04/poem/3rxNFbSZI7q9MI18W3eszK/story.html>

Hohrod, George and M. Eschbach. "An Ode to Sport." *Olympic Information Center Library, Art and Sport*, 1912. Retrieved from:

<http://library.la84.org/OlympicInformationCenter/OlympicReview/2000/OREXXVI32/OREXXVI32x.pdf>

Mathematics: SMART Board with PowerPoint, graphing calculators, graph paper, ruler or some sort of straight edge, charts with different winners and their times from 1908-2008 in four different sports

Physical Education: One long jump mat with distances marked or a starting line and measuring tape, tape for all the starting lines, approximately 30 cones, 20 poly spots or something similar for marking distances, pencils and task sheets.

Science: paper cups, balloons, scissors, paper target, tape, marshmallows

Social Studies: Technology (computers, iPads, Chromebooks, etc.) will be needed for the students to help their research.

6) Assessment

English: At the end of class, each group will turn in their paragraph they completed together to show their understanding. I will expect each student to have established a way to show their participation in the paragraph (e.g., different color highlighter for participants idea, each student write their own idea in the paragraph with their initial). Using the web, I will be able to see who participated in the class discussion in order to give students credit for the poem and their understanding.

Mathematics: At the end of class, each student will be asked to write a brief summary of the pattern they found for each sport (whether times have become faster, slower, or no change). Students will be asked to include what the interpretation of the data exactly means in relation to graphing, etc. I will then use this information to judge how well students understand the information.

Physical Education: Following previously done research outside of class, each team (country) will be responsible for telling me their country's total number of gold, silver, and bronze medals won in the summer olympics.

Science: Before my students can leave the classroom, they will have to show me the work that they did completing the problem that I asked them to solve at the end of the lesson.

Social Studies: The presentations will be assessed based on creativity, depth of content, usage of primary and secondary sources, and general understanding of olympic history.