

HEAP Task 516 (Original)

Prevention of Sports and Exercise Injuries

Preventable injuries often occur in sports and other physical activities. A safe sport or physical activity is better for its participants. Safety may also affect other factors, such as insurance costs, rule changes, and equipment modifications.

Your task is to study the kinds of injuries that are involved in a sport (e.g., football, hockey, track, etc.) or physical activity (e.g., jogging, skating, skiing, etc.) of your choice. You will then write a report based on your research. The report should (1) describe the common injuries associated with the sport or activity, (2) describe the effects of injury on the health of participants, and (3) provide recommendations on how to reduce the risk of injury.

Research:

Once you have selected the sport or activity, you will need to do some research on the types of injury, such as strains, sprains, scrapes, cuts, concussion, etc., that are common to the sport or activity. To collect this information, you may need to visit your school/public library, go to the Internet, and talk with coaches, athletes, or people who engage in the activity you selected. Once you have completed your research, you will need to organize your information in a way that is easy for a reader to review.

Preparation of Report:

Your report should include the following:

- An introduction
- A discussion of the common injuries associated with the sport or physical activity
- A discussion of the effects of injury on one's health
- Specific recommendations on how to reduce the risk of injury in the sport or physical activity
- An explanation of why each of your recommendations would likely reduce the risk of injury

Answers will be scored on the following:

1. How completely and correctly you demonstrate an understanding of health concepts.
2. How well you describe ways to reduce the risk of injury.

Task 516 - Revised

Prevention of Sports Injuries - A sustained research project

Preventable injuries often occur in sports and other physical activities. A safe sport or physical activity is better for its participants. Safety may also affect other factors, such as insurance costs, rule changes, and equipment modifications. It is estimated that approximately 30 million U.S. children and teens participate in some form of organized sports. Research shows that these athletes experience more than 3.5 million injuries each year that cause them to discontinue participation, either for a short or long period of time. (Source:

<http://www.urmc.rochester.edu/Encyclopedia/Content.aspx?ContentTypeID=90&ContentID=P01650>)

Your task is conduct a sustained research project to determine the types of injuries that occur in sports played at your high school and to make recommendations on how to reduce the risk of injury. To collect this information, you may need to visit your school/public library, go to the Internet, and talk with coaches, athletes, and other valid sources of information about athletic injuries. Once you have completed your research, you will need to organize your information in a way that is easy for the reader to understand.

To complete your assignment, apply the steps of the scientific method that we practiced in class.

PHASE 1

The Question: Write a research question about types of sports injuries that are the most common in high school athletics.

Background Research: Gather valid information from multiple authoritative sources, including human, print and digital sources to compare and contrast the most common kinds of injuries that are sustained in high school sports. Then, narrow your topic by selecting one type of injury that you will explore further.

Hypothesis: Using your background research and current knowledge, hypothesize which sport in your high school has the highest incidence of the injury. If the sport is played by both girls and boys, you may choose to make an educated guess about which athletes experience the greatest number of injuries.

Experiment: Create a step by step procedure and conduct an experiment that tests your hypothesis.

Data: Collect data and record the progress of your experiment. Document your results with detailed measurements, descriptions and observations in the form of notes, journal entries, photos, charts and/or graphs.

Observations: Describe the observations you made during your experiment. Include information that could have affected your results such as errors, environmental factors and unexpected surprises.

Conclusions: Analyze the data you collected and summarize your results in written and visual form. Use your analysis to answer your original question. Do the results of your experiment support or oppose your hypothesis?

PHASE 2

Purpose: Create a list of recommendations for reducing the risk of injury to athletes in your sport.

Background Research: Gather additional valid information from digital, print and human resources about equipment athletes can use and guidelines they can follow that will help to reduce their risk of injury.

Data Analysis: Use criteria to evaluate the validity of the health information you obtained, including claims made by the companies that make the sporting equipment.

Conclusions: Draw conclusions from your evidence so that you can justify your recommendations.

PHASE 3

Communication: Present your findings and recommendations in a final report that you could submit to the coach, players, parents and school board.

Preparation of Report:

Your report should include the following:

Part 1:

- An introduction
- Brief review of the literature about injuries in high school sports
- Hypothesis
- Methods used to gather the data and test your hypothesis
- Results - using verbal and visual text, including a graph or figure
- Conclusions – did your findings support or refute your hypothesis?

Part 2:

- Purpose statement
- Explanation of criteria used to determine validity of sources
- Conclusion about sources deemed most valid
- Specific recommendations on how to reduce the risk of injury in the sport
- An explanation of why each of your recommendations would likely reduce the risk of injury

Scoring Rubric**Score Point 1 Criteria**

Basic - Limited evidence that student can apply the scientific method of inquiry (HE12.2.5; WHST9-10.7). Student uses limited evidence to support judgment/conclusion and rationale for judgment/conclusion may be faulty (HE12.1.3).

Score Point 2 Criteria

Proficient - Some evidence that student can apply the scientific method of inquiry (HE12.2.5; WHST9-10.7). Student uses evidence is used to support judgment and rationale for conclusion is sound, but more evidence could strengthen argument/conclusion (HE12.1.3).

Score Point 3 Criteria

Advanced - Considerable evidence that student can apply the scientific method of inquiry. (HE12.2.5; WHST9-10.7) Student uses considerable evidence to support judgment and provides a defensible rationale to support conclusions (HE12.1.3).

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WY Health Content/Perf. Stds.

PS/DM --> 9-12 --> HE12.2.5 Apply a systematic process to evaluate the evidence, claims, beliefs and health related issues or problems.

Health Skill: Problem Solving

Health Topic: Injury Prevention and Safety

Grade Level: 3. High School