Lesson 3 – Pre-Visit
The Athlete's Body at Risk:
Performance Enhancing Substances

Objective: Students will be able to:
- Consider how substance use/doping may adversely affect an athlete’s overall health, his or her team and teammates, as well as his or her life outside of sports.
- Determine that being healthy and having a positive attitude towards sports is the most important achievement for an athlete.

Time Required: 1-2 class periods

Advance Preparation:
- Select a variety of articles related to performance-enhancing substances (see below).
- Schedule a session for your class in your school library or media center.

Materials Needed:
- Internet access for student research
- Printed copies of "The Athlete's Body at Risk" worksheet for small groups of 3-4 students (included)
- Printed copies of the "Pure Performance" worksheet for small groups of 3-4 students (included)

Suggested Sources for Lesson & Activity:
- Are Steroids Worth the Risk?  
  http://kidshealth.org/teen/food_fitness/sports/steroids.html
- The Mayo Clinic – Performance-Enhancing Drugs: Know the Risks  
- U.S. Anti-Doping Agency – USADA  
  www.usada.org
- National Institute on Drug Abuse for Teens – The Science Behind Drug Abuse  
Vocabulary:

**Performance-enhancing substances (PESs):** This term covers a variety of substances that attempt to improve an athlete's strength and muscle mass.

Applicable Common Core State Standards:

**CCSS.ELA-Literacy.SL.6.1, SL.7.1, SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade-appropriate topics, texts, and issues, building on others’ ideas and expressing their own clearly.

**CCSS.ELA-Literacy.W.6.4, W.7.4, W.8.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**CCSS.ELA-Literacy.W.6.7** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

**CCSS.ELA-Literacy.W.6.8** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

**CCSS.ELA-Literacy.W.7.7** Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

**CCSS.ELA-Literacy.W.7.8** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

**CCSS.ELA-Literacy.W.8.7** Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

**CCSS.ELA-Literacy.W.8.8** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
Additional Relevant National Learning Standards:
(Based on Mid-continent Research for Education and Learning)

Health. Standard 1. Knows the availability and effective use of health services, products, and information

Health. Standard 7. Knows how to maintain and promote personal health

1. Open the lesson by explaining that sports are a major part of almost everybody's life, whether we are actively involved, occasional spectators, or have family members who are involved. As spectators or participants, we want sporting events to be fair and equal for all athletes, teams, and sports organizations.

2. Explain that when athletes use performance-enhancing substances (often referred to as "doping"), they make sporting events unfair and unequal for competitors. For this reason, governing bodies of many sports have strong rules against doping and have serious consequences for athletes who are caught using PESs.

3. Hold a classroom discussion about athletes that students have heard of who have been accused of doping. Does the accusation of doping make students think differently about these athletes? If so, how?

4. Explain that not only is doping unethical and illegal, it can also seriously harm an athlete's health. Students will now work together to learn more about the health risks associated with doping.

5. Organize students into small groups of 3-4. Give each group a copy of "The Athlete's Body at Risk" worksheet. Explain that students are to use both library and internet resources to learn about different types of PESs, and the long-term health effects of each. You may direct students to the websites and sources above to aid their research. (Other sites may be of use as well, but be sure to discuss internet research strategies and how to find reliable sources before allowing students to search on their own.)

6. Discuss students' results. Now that students know the potential dangers associated with the use of certain types of PESs, ask students to consider why an athlete would take such a risk. How might an athlete's decision to use PESs affect other athletes?

7. Now give each group a copy of the "Pure Performance" worksheet. Have students list a variety of different sports, and use both library and internet resources to determine positive, legal and ethical ways in which an athlete could improve his or her performance in that sport.
8. Discuss students' results.

9. Pose the following questions/scenarios to the class. Give students a couple of minutes to discuss their response with a partner before sharing their ideas.
   - What would you do if you discovered one of your best friends on your team was using performance-enhancing substances?
   - How would this make you feel when you have sacrificed your time, effort and energy to perform to the best of your ability without cheating?
   - What would be likely to happen if anyone in the team was caught cheating?
   - Would you be able to continue competing if you knew athletes on your team were taking performance-enhancing substances? Why/why not?
   - What would you do if your teammates were taking performance-enhancing substances and they asked you to?

Conclusion:
To conclude this lesson, have students write a letter to a Major League Baseball player (or another athlete of their choice) persuading them not to use performance enhancing substances. Students should use the facts they have learned in this lesson to persuade the athletes to say "no" to doping.
## The Athlete's Body at Risk

Team Members:

_______________________  _______________________

_______________________  _______________________

### Performance Enhancing Substance | What It Does | Long-Term Effects of Using This Substance
---|---|---
Anabolic Steroids | | |
Androstenedione (Andro) | | |
Human Growth Hormone (hGH) | | |
Erythropoietin (EPO) | | |
<table>
<thead>
<tr>
<th>Performance Enhancing Substance</th>
<th>What It Does</th>
<th>Long-Term Effects of Using This Substance</th>
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<tbody>
<tr>
<td>Stimulants</td>
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<td>Diuretics</td>
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<td>Painkillers</td>
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Research and record as many positive ways as you can find in which an athlete can improve his or her performance. The first row has been completed as an example.

<table>
<thead>
<tr>
<th>Sport</th>
<th>Performance Aid</th>
<th>Effect</th>
</tr>
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<tbody>
<tr>
<td>Distance Running</td>
<td>Eating plenty of carbohydrates</td>
<td>Provides energy over a long period of time.</td>
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