



Maryland State Department of Education
Service-Learning Project
Reducing Heroin Use & Overdoses

Primary Subject: Health

Grade Level: 8th, 9th/HS

Additional Subject Area Connections:

Social Studies, English/Language Arts, Math, Science, Instructional Technology

Unit Title: Reducing Heroin Use and Overdoses

Type(s) of Service: Advocacy, Indirect, Direct

Project Description: Students will develop and implement a service-learning experience around the issue of substance abuse, heroin use, addiction treatment, and how to reduce deaths caused from heroin overdoses.

Potential Service-Learning Action Experiences Include:

- Create a public service announcement (PSA) and air it in the school, community and/or online (*advocacy*);
- Create and carry out a campaign/social media campaign about the dangers of drug use which includes information about heroin (*advocacy*);
- Develop an effective method for distributing and publicizing information about drug treatment options in the local community (*advocacy*);
- Create encouraging and inspiring artwork, or other comfort items, for local/state drug treatment facilities (*indirect*);
- Advocate for funding for drug/heroin prevention and treatment (*advocacy*);
- Partner with an organization that offers unwanted prescription drug collection and disposal services and advertise those opportunities (*indirect/advocacy*);

Maryland Curriculum Standards Met

Health:

2.0 in the Maryland Comprehensive Health Education document:

Standard 2.0 Alcohol, Tobacco, and Other Drugs: Students will demonstrate the ability to use drug knowledge, decision-making skills, and health enhancing strategies to address, the use, non-use, and abuse of medications, alcohol, tobacco, and other drugs.

Topic A. Medicine, Indicator 1. Identify safe practices for using prescription and OTC drugs.

Objective a. Distinguish between prescription and OTC drugs.

Topic E. Drugs 1. Classify a variety of psychoactive drugs and identify the consequences of their use and abuse.

(additional standards which could be met in other content areas are listed at end of this document)

Additional Interdisciplinary Connections



- **Social Studies** – Research the problem, existing government and non-profit sources of support, and potential solutions.
- **English/Language Arts** – Read and annotate articles, stories, and books related to the topic.
- **Mathematics** – Use statistics to gather, analyze, and display data on the issue.
- **Instructional Technology** – Create a public service announcement (audio or video) and use technology to help advocate and educate on the issue.

- Advocate for maintaining reasonable and affordable costs for prescription medications used to treat heroin addiction and overdoses (*advocacy*);
- Collect money, materials, resources needed for those impacted by this issue or working on this issue (*indirect*);
- Partner with an organization to provide childcare while adults attend drug treatment appointments, Al-Anon, Narconon, etc. (*direct*);
- Any other project that students develop to address the issue that meets the Seven Best Practices of Service-Learning.

** This list provides service-learning action ideas regarding potential projects but is not exhaustive or an endorsement of any particular approach to addressing the issue. As with all high quality service-learning, teachers, students, and the community should work together to determine the project that best meets a real need and then design an experience that is developmentally appropriate for students' age and ability levels and can be safely and effectively implemented.*

Alignment with Maryland's Best Practices of Service-Learning: *Reducing Heroin Use & Overdoses*

1. Meet a recognized community need

The use of heroin, and deaths related to heroin overdoses, has been on the rise in Maryland. Students will learn about this issue and devise and implement ways to combat the growing problem.

2. Achieve curricular objectives through service-learning

As part of health classes (or other content areas), students will explore drug and alcohol addiction and refusal strategies. This service-learning project could have many cross-curricular ties with students using math, science, social studies, and language arts skills to research the topic and evaluate the impact of drug/heroin and alcohol use on the body and the ramifications addiction and treatment have on the individual, family, community, and economy. This sample project idea generator tool provides potential interdisciplinary connections and standards that could be met through related projects (see box inserts).

3. Reflect throughout the service-learning experience

Students will reflect at several points throughout the Reducing Heroin Use and Overdoses Project in a variety of ways which could include reading and viewing material related to the topic and holding discussions, journaling, creating reflective music or artwork, photographing or recording the project as it develops and editing that material into a presentation to be shared with the school and school community (poster board, video production, PowerPoint, school website, etc.).



4. Develop student responsibility (Students have opportunities to make decisions about the service-learning project.)

After learning about the issue, students can identify potential community partners and possible projects to help address the problem. Potential sources for identifying partners are listed in the following *Procedures and Resources* section. Students can select the project they want to develop and fully carry it out. They should be given opportunities to serve as leaders in researching, selecting, planning, designing, and implementing the project(s).

5. Establish community partnerships

Identify local, state, or national partners to work with on the Reducing Heroin Use and Overdoses Project (see resources in the *Procedures and Resources* section). By working with an existing organization, students can help further the partner’s mission and goals.

6. Plan ahead for service-learning

The teacher should identify the initial timeline for the project, where it would best align with existing course content, and resources/activities/assignments s/he would like to use explore not only the issue of heroin use, but also to explore service-learning and civic responsibility (see *Procedures and Resources* section).

7. Equip students with knowledge and skills needed for service

Students will study the issue of drug and alcohol abuse and its dangers. They will learn about the increasing problem of heroin use and overdoses in Maryland. As service-learning is a method that can be used to help address this issue and work toward alleviating this problem, students will engage in activities to explore the importance of being active citizens and working to support and strengthen local, state, national, and international communities. Activities will be carried out to learn more about the dangers of heroin use and create and carry out a project to address the problem.

Procedures with Resources: *Reducing Heroin Use & Overdoses*

These procedures represent an example of a service-learning lesson on this specific topic but can be changed to meet individual classroom interests or varying community needs. The teacher is encouraged to adapt this project to fit his/her unique classroom and community and to solicit student input in planning and decision making.

1. Introduce the service-learning project by discussing service-learning and citizenship with students and engaging in activities to explore these themes. A resource to support this topic can be found at <https://youtu.be/o2-eoEi6FCo>
2. Explore the issue of the growing problem of heroin addiction, overdoses, and death in Maryland by reviewing current media coverage and existing data, as well as reading non-fiction articles/stories/books and fiction materials related to the topic of drug addiction and treatment and heroin use. Students should conduct research into this issue online. Some teacher resources for information include:
 - http://www.washingtonpost.com/local/heroin-deaths-spike-in-maryland/2014/06/27/5a0dd2ce-fe18-11e3-8176-f2c941cf35f1_story.html
 - <http://apps.washingtonpost.com/g/page/local/maryland-heroin-overdoses/1130/>
 - http://www.washingtonpost.com/local/5-ways-to-help-heroin-addicts/2014/04/23/18a3bbdc-cb1e-11e3-93eb-6c0037dde2ad_story.html
 - http://www.friendsofnarconon.org/drug_distribution_in_the_united_states/maryland_drug_facts/maryland_factsheet/
 - <http://baltimore.cbslocal.com/2015/02/02/md-heroin-addicts-may-not-be-what-you-picture/>
 - http://www.washingtonpost.com/local/md-politics/overdose-deaths-from-heroin-galvanizing-leaders-in-maryland-and-virginia/2015/01/24/ef0c19fc-a305-11e4-9f89-561284a573f8_story.html
 - http://www.washingtonpost.com/local/md-politics/in-maryland-hogan-says-he-will-declare-heroin-emergency-once-sworn-in-as-governor/2014/12/06/5f2ce320-7cc7-11e4-84d4-7c896b90abdc_story.html
 - http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/SitePages/Home.aspx
 - <http://bha.dhmh.maryland.gov/SitePages/Home.aspx>
 - <http://www.drugabuse.gov/publications/drugfacts/heroin>
 - <http://theimpactsociety.weebly.com/>
 - <http://www.narconon.org/drug-prevention/>
 - <https://www.childwelfare.gov/topics/systemwide/substance/prevention/?hasBeenRedirected=1>
 - <http://www.mikegimbelassociates.com/about-us-1.html>

In **English/Language Arts**, student could read and conduct research in order to generate text dependent questions for the following articles:

High School

- Dying To Be Free: http://www.huffingtonpost.com/2015/01/28/dying-to-be-free-heroin-treatment_n_6565738.html
- Heroin in Suburbia: New Face of Addiction:
<http://abcnews.go.com/TheLaw/story?id=5494972>

High School & Middle School

- The US is experiencing a 'dramatic rise' in heroin-related deaths, CDC says: <http://www.theverge.com/2015/7/7/8908073/heroin-abuse-deaths-united-states-cdc>

Middle School

- <http://www.dare.org/theres-a-problem/>
- <https://teens.drugabuse.gov/drug-facts/heroin>

In **social studies**, student could conduct research and review government and private resources and policies that impact the issue of substance abuse and treatment and review resources such as:

- http://www.cicad.oas.org/drogas/elinforme/informeDrogas2013/laEconomicaNarcotrafico_ENG.pdf
- <http://www.pbs.org/wgbh/pages/frontline/shows/heroin/>
- <http://www.usatoday.com/story/news/nation-now/2014/06/12/sophisticated-smuggling-rings-supply-heroin-surge/9713909/>
- http://www.huffingtonpost.com/2014/10/22/america-drug-use-maps_n_5974592.html
- http://wfcourier.com/app/special/us_heroin/
- <http://www.unodc.org/afghanistan/en/media/maps.html>
- <http://f.edgesuite.net/data/www.drugfreeworld.org/files/the-truth-about-drugs-educators-guide-english.pdf>

In **science**, students can learn about how chemicals/drugs impact the human body and about the science of addiction. They also could research or review the research that has been done on the best way to treat heroin addiction (disciplinary literacy CC standards for research -RST1-RST9 or WHST7-WHST10,) or how the drug Naloxone works to prevent overdoses.

Relationship between genetics and addiction or science of addiction:

- <http://learn.genetics.utah.edu/content/addiction>

- <http://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/preface>
- <http://www.drugabuse.gov/related-topics/addiction-science>

Biological response to drugs:

- http://thebrain.mcgill.ca/flash/i/i_03/i_03_m/i_03_m_par/i_03_m_par_heroine.html#drogues
- <http://learn.genetics.utah.edu/content/addiction/mouse/>
- <https://science.education.nih.gov/supplements/nih2/addiction/guide/lesson3-1.html>

CSI aspect of determining if a substance is a drug (appropriate for some chemistry courses or forensic science courses):

- [https://sites.google.com/site/inquiryforensicdrugs/home/lesson-plans-\(basic-white-power-lab\)](https://sites.google.com/site/inquiryforensicdrugs/home/lesson-plans-(basic-white-power-lab))

In **mathematics**, student could apply math skills using data related to heroin use:

- http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/Documents/Appendix%20D-%20Heroin%20ED%20brief_updated.pdf
- [http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/Documents/StatewideOverdoseDeathTrendFactsheetFINAL%20\(5\).pdf](http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/Documents/StatewideOverdoseDeathTrendFactsheetFINAL%20(5).pdf)
- <http://features.dbknews.com/2015/05/08/marylands-hidden-epidemic/>
- <http://www.delmarvanow.com/story/news/local/maryland/2015/02/09/heroin-wicomico-drugs/23109039/>

- Partner with a local, state, or national organization working to address this issue to develop a project. For example, reach out to the Maryland Strategic Prevention Framework, <http://bha.dhmh.maryland.gov/mspf/SitePages/Home.aspx> and other community organizations working on this issue such as:
 - <http://www.madd.org/local-offices/md/>
 - <http://www.sadd.org/states/maryland.htm>
 - <http://www.jeremysrun.com/>
 - [Weber Sober Homes http://www.freewebs.com/timweber/](http://www.freewebs.com/timweber/)
- Reflect and evaluate the effectiveness of the project throughout the service-learning experience. Consider what is working/worked well and what could be changed to make the project better. This contemplation and evaluation should be ongoing at multi-points during the project and not just at the end of the experience.

Examples: Respond to guided questions in a journal; have a classroom discussion; prepare a piece of artwork or skit about the service experience; videotape the project and review/discuss it afterwards, etc.

For more reflection activities visit:

- [Firestarter Youth Empowerment Program](#)
- [Multiple Intelligence Reflection Activities](#)
- [Facilitating Reflection: Activities](#)

At the conclusion of the project, reflect and evaluate the impact of the project by completing the *Rubric for Assessing the Use of the Maryland's Seven Best Practices of Service-Learning* which can be found at

http://www.marylandpublicschools.org/MSDE/programs/servicelearning/docs/best_practices.htm.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

**English/Language Arts – Middle School
Standards:**

CCSS.ELA-LITERACY.RI.8.8

Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.

CCSS.ELA-LITERACY.SL.8.1.A

Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.

CCSS.ELA-LITERACY.W.8.6

Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

**English/Language Arts – High School
Standards:**

CCSS.ELA-LITERACY.RI.9-10.8

Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

CCSS.ELA-LITERACY.SL.9-10.1.A

Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.

CCSS.ELA-LITERACY.W.9-10.6

Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Next Generation Science Standards:

4-LS1 From Molecules to Organisms:
Structures and Processes

4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

5-PS1 Matter and Its Interactions

5-PS1-3. Make observations and measurements to identify materials based on their properties.

5-ESS3 Earth and Human Activity

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

3-5-ETS1 Engineering Design

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

MS-PS1 Matter and its Interactions

MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

MS-LS1 From Molecules to Organisms:
Structures and Processes

MS-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Next Generation Science Standards:

MS-ESS3 Earth and Human Activity

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-ETS1 Engineering Design

MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

HS-LS1 From Molecules to Organisms:
Structures and Processes

HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.

HS-ESS3 Earth and Human Activity

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

HS-ETS1 Engineering Design

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Next Generation Science Standards:

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

MS-LS3-2. Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.

HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Mathematics:

6.SP.2

Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

6.SP.4

Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

6.SP.5

Summarize numerical data sets in relation to their context, such as by:

- a. Reporting the number of observations.
- b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
- c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data was gathered.
- d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data was gathered

7.SP.1: Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Mathematics:

7.SP.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.

7.SP.3: Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.

7.SP.4: Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.

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.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

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.

8.SP.4: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Social Studies – Government

1.1.3a: Describe how executive departments and agencies enforce governmental policies that address public issues, such as the Center for Disease Control (CDC), Federal Bureau of Investigation (FBI), Environmental Protection Agency (EPA), Drug Enforcement Agency (DEA)

1.1.3b: Analyze significant issues in domestic policy and how they reflect the national interest, values and principles, such as healthcare, high level of security awareness, environmental concerns

1.1.3f: Define public health and health care issues and evaluate existing government policy, such as smoking in public places, Medicare and Medicaid

4.1.2e: Evaluate how the principles of economic costs, benefits, and opportunity cost are used to address public policy issues, such as environmental and healthcare concerns (Unit 6)

Social Studies – Government

Skills and Processes (6.0)

Dimension 1

A. Constructing Compelling Questions

1. Identify a disciplinary topic that reflects an enduring issue in the field
2. Identify possible questions for inquiry into the enduring issue
3. Analyze key disciplinary concepts and ideas associated with the compelling questions

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Social Studies – Government

Skills and Processes (6.0)

Dimension 4

A. Communicating Conclusions

1. Construct arguments using precise and knowledgeable claims, with evidence from multiple sources, while acknowledging counterclaims and evidentiary weaknesses.
2. Construct explanations using sound reasoning, correct sequence (linear or non-linear), examples, and details with significant and pertinent information and data, while acknowledging the strengths and weaknesses of the explanation given its purpose (e.g., cause and effect, chronological, procedural, and technical)
3. Present adaptations of arguments and explanations that feature evocative ideas and perspectives on issues and topics to reach a range of audiences and venues outside the classroom using print and oral technologies (e.g., Internet, social media, and digital documentary)

Dimension 4

C. Taking Informed Action

1. Use disciplinary and interdisciplinary lenses to understand the characteristics and causes of local, region, and global problem; instances of such problems in multiple contexts, and challenges and opportunities faced by those trying to address these problems over time and place.
2. Assess options for individual and collective action to address local, regional, and global problems by engaging in self-reflection, strategy identification, and complex causal reasoning
3. Apply a range of deliberative and democratic strategies and procedures to make decisions and take action in their classrooms, schools, and out-of-school civic contexts

**Potential Additional
Maryland Curriculum
Standards Which Could Be Met**

Created: July 2015

Social Studies – 8th Grade
Skills and Processes (6.0)

Dimension 1

A. Constructing Compelling Questions

1. Identify a disciplinary topic that reflects a key idea in the field
2. Identify possible questions for inquiry into the key idea
3. Analyze key disciplinary concepts and ideas associated with the compelling questions

Dimension 4

A. Communicating Conclusions

1. Construct arguments using claims and evidence from multiple sources, while acknowledging the counterclaims strength and limitations of the arguments
2. Construct explanations using reasoning, correct sequence, examples and details with relevant information and data, while acknowledging the strengths and weaknesses of the explanations.
3. Present adaptations of arguments and explanations on topics of interest to others to reach audiences and venues outside the classroom using print and oral technologies (e.g., posters, essays, letters, debates, speeches, reports, and maps)

Dimension 4

C. Taking Informed Action

1. Draw on multiple lenses to analyze how a specific problem can manifest itself at local, regional, and global levels over time, identifying its characteristics and cause, and the challenges and opportunities faced by those trying to address the problem.
2. Assess their individual and collective capacities to take action to address local, regional, and global problems, taking into account a range of possible strategies and potential outcomes
3. Apply a range of deliberative and democratic procedures to make decisions and take action in their classrooms and schools, and in out-of-school civic contexts



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