Pathogen WANTED Poster

**WebQuest Description:** In this WebQuest, students research a pathogen and the immune system's response to it. They use the information they've learned to create a WANTED poster summarizing key characteristics of the pathogen.

**Grade Level:** 9-12

**Curriculum:** Science

**Keywords:** biology, pathogen, immune system, germ, vaccine

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Introduction

They're more dangerous than the most evil terrorist. They've taken more lives than any nuclear bomb. Their very name means "birth of suffering." They are the world's MOST WANTED criminals - PATHOGENS. YOU could be their next victim...

Fight back against these evil doers! Research to learn more about a pathogen. Create an old-Western style WANTED poster about the things you've learned. In your notebook or on your computer, create a table to organize your notes.

1. **Title**
   - Ex: Wanted: "Listeria" - &nbsp;Scientific Name (Ex.: listeria monocytogenes)
2. **Mug Shot**
   - Draw or insert a microscopic picture of the pathogen. Add a picture of the pathogen in action (victim under attack) if possible.
3. **Victims**
   - Who is most at risk (Ex: certain age groups or specific geographic areas)
4. **Hideout**
   - Where it can be found - where would a person come in contact with the pathogen (Ex: food, airborne, contaminated water, etc.)
5. **Defense**
   - Prevention (Ex: immunization, hand washing, etc.)
6. **Weapons**
   - Treatments (Ex: antibiotics, surgery, etc.)
7. **Other details**
   - Make sure your poster is logically organized and sections are titled.

**Steps for Success:**

1. Select a pathogen that you are interested in studying for this project. Some examples include: Anthrax, Botulism, Brucellosis, Campylobacteriosis, Cholera, E. coli, Salmonella, Shigellosis, Typhoid fever, Group A streptococcus, Group B streptococcus, Pneumonia, Hepatitis A, Norovirus, Rotavirus, HIV/AIDS, Malaria, Influenza, Meningitis, HPV, Tetanus, Ebola, Polio, Bubonic plague, - Yersinia pestis, Smallpox, Tuberculosis, etc.
2. Conduct research to learn more about the pathogen. Some useful sites to use as a starting point are listed below:
   - CDC: Centers for Disease Control - Use the search feature or explore the letter tabs to find your pathogen.
   - Home Health Handbook - Use the search bar on this website to narrow your search.
   - Medicine Net - Try typing your pathogen into the search bar and scroll through the information.
   - Pathogen Profile Dictionary - Somewhat technical style of writing, but detailed information.
   - Virtual Museum of Bacteria - A useful site if your pathogen is a bacterium.
3. Prepare your WANTED poster. You may draw your poster by hand or use your computer to design your poster.

**Evaluation**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>1 - Beginning</th>
<th>2 - Developing</th>
<th>3 - Proficient</th>
<th>4 - Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Unable to determine name of pathogen</td>
<td>Only common or scientific name given or grossly misspelled</td>
<td>Common and scientific name given and spelled correctly</td>
<td> </td>
</tr>
<tr>
<td>Mug Shot</td>
<td>No picture or less 25% complete</td>
<td>Pathogen pictured is inaccurate or messy</td>
<td>Accurate picture of pathogen, but may not be neat</td>
<td>Neat, accurate picture of pathogen</td>
</tr>
<tr>
<td>Victims</td>
<td>Missing or unable to determine organism affected</td>
<td>Attempts to identify victims but does not include examples</td>
<td>Identifies victims, but examples are unclear</td>
<td>Clear identity and examples of victims</td>
</tr>
<tr>
<td>Crime</td>
<td>Description of damage is confusing or not attempted</td>
<td>Attempts to describe symptoms or damage to the</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
With the completion of your project, justice has been served. &nbsp;You and those around you will now know more about pathogens that affect the lives of people around the world every day. &nbsp;How will you use this knowledge? &nbsp;What choices will you make as a result of what you've learned? &nbsp;What things do we, as humans, still need to learn about pathogens in order to "win the war?"