### Operation Amputation Research

Before beginning an experiment, any good scientist will research to gain background knowledge about the topic they intend to investigate. Background research is important to make sure experiments are designed in a way that will work and will get useful results. Use this sheet to decide who will gather your background information about battlefield medicine in the Civil War and modern day for each of these six topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Who will compare Civil War and modern day for the topic</th>
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<tbody>
<tr>
<td>1.  Cleaning and sanitation</td>
<td>Record their name in the box</td>
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<tr>
<td>2.  Knowledge of infection and disease</td>
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<td>3.  Training of surgeons</td>
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<td>4.  Care and storage of surgical tools</td>
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<td>5.  Description of amputation surgery</td>
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<td>6.  Background Information on Amputation</td>
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Below are questions that you must answer for each of the topics. Take notes on the answers to these questions for both Civil War and Modern Day battlefield medicine in your science notebook.

**1. Cleaning and sanitation**
   a) How was/is human waste and dead bodies dealt with on battlefields during the Civil War and in modern day?
   b) What did/do surgeons wear when performing battlefield surgeries then and now?
   c) In the operating space, what things were/are cleaned and what was/is used to do the cleaning then and now?
2. **Knowledge of infection and disease**
   a) When was the germ theory proposed and when was it accepted by scientists? How does that relate to the timing of the Civil War?
   b) What did doctors think caused infectious diseases during the Civil War? What do doctors now know causes infectious diseases?
   c) List 2 common diseases of war camps for both modern day and Civil War times? What were/is the treatment for each of these?

3. **Training of surgeons**
   a) Describe the training that was/is required to be a battlefield surgeon during the Civil war and in modern day.
   b) How long were/are surgeons trained before they performed an operation then and now?
   c) Who was/is training battlefield surgeons then and now?

4. **Care and storage of surgical tools**
   a) What tools were/are used for battlefield amputations during the Civil War and in modern day?
   b) How are tools treated and handled before and after surgery for both time periods?
   c) Where and how are tools stored on the battlefield then and now?

5. **Description of Amputation Surgery**
   a) Describe the steps of an amputation surgery during the Civil War and in modern day.
   b) What sorts of anesthesia were/are used in the Civil War and modern day?
   c) What types of pain medications were given in both times?

6. **Background about amputations**
   a) What were/are common reasons for amputations on the battlefield during the Civil War and modern day?
   b) What is a Minnie ball bullet? When was it developed? What does it do to the body?
   c) What are/were the common body parts being amputated then and now?
   d)

7. **Extra questions if you finish early**
   a) What were the number of Union and Confederate deaths from wounds during the Civil War?
   b) During the Civil War what was calomel used for? What was in it and what problems did this cause?
   c) What was “soldiers disease” during the Civil War?