In this activity, you'll figure out what inputs a computer (in this case, a smartphone) would need in order to solve various problems, and what processing should be done on the information.

**Ring Silencer App**

**Define**
This app solves the problem of the user's phone ringing in class. It figures out when the phone is at a school and turns off the ringer. It turns the ringer back on when the user leaves school.

What type of output should the app produce? ________________________________________________________

**Prepare**
Fill out the following table with information that the app needs and whether you will find the information from a phone sensor or the Internet. Decide whether you want to store the information for later.

<table>
<thead>
<tr>
<th>What type of information do you need?</th>
<th>Where will you find the information?</th>
<th>Store for later?</th>
</tr>
</thead>
<tbody>
<tr>
<td>My location</td>
<td>Phone Sensor (GPS)</td>
<td>No</td>
</tr>
</tbody>
</table>

How will you process the information to get the output?

Try
Use the method you created above to process the information on the Data Sheet.

What is the output? ____________________________________________________________

**Reflect**
This app turns off the ringer even when the user is not in class. An advanced version would only turn off the ringer at school when the user is quiet and not moving. If the user is moving around or making a lot of noise, it would assume that it is not class time and keep the ringer on.

Fill out the table below with the new inputs you will need for this advanced version.

<table>
<thead>
<tr>
<th>What do you need to know?</th>
<th>Where will you find the information?</th>
</tr>
</thead>
</table>
Movie Recommendation Challenge

Define
This app addresses the problem of not knowing what movies to watch. Look through the information available to you, and decide what will help to choose a movie for the user.

What type of output should the app produce? ___________________________________________________________

Prepare
Fill out the following table with information that the app needs and whether you will find the information from a phone sensor, the Internet, or user input. Decide whether you want to store the information for later.

<table>
<thead>
<tr>
<th>What type of information do you need?</th>
<th>Where will you find the information?</th>
<th>Store for later?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorite movies</td>
<td>User input</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How will you process the information to get the output?

<table>
<thead>
<tr>
<th>What is the output?</th>
</tr>
</thead>
</table>

Try
Use the method you created above to process the information on the Data Sheet.

What is the output? _____________________________________________________________

Reflect
Compare your method, and the inputs it needed, to another group’s method.

What is one advantage of the other group’s method?

___________________________________________________________________________

How might you combine your ideas to make a better app?

___________________________________________________________________________