ELECTRICITY USE PROJECT

As we have learned over the past few weeks, energy use, and the use of electricity in particular, does not come without costs – financial, environmental, and political. Through this project, you’ll examine your use of electricity in the home and the use of electricity in the school.

PROJECT OBJECTIVES:

Students will be able to:

- Analyze the financial impact of home and school electricity use
- Reflect on their personal use of electricity in the context of a global society
- Understand technological advances that reduce electricity consumption
- Calculate energy use on the home/school (E=pt)
- Predict future energy use by extrapolating previous energy use, through graphs
- Propose pathway for reducing school electricity use

PART 1 – HOME USE

- Students will inventory their homes, noting electrical usage in particular.
- Students will examine their home electricity bills and develop a plan to decrease usage.
- Students who can verify a marked decrease in electricity use in their home over the next 2 months will receive....

PART 2 – SCHOOL USE

- Working in teams of 3, students will inventory assigned areas of the school and will contact appropriate teachers and staff members to complete their usage inventory
- Teams will collate all school data
- Teams will develop proposals to decrease electricity use within their defined areas. Students must collaborate with teachers and staff members on this proposal
- Final proposals will be submitted to Mr. Brown, who will choose the winner from each area
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>WORK DAY</td>
<td>WORK DAY</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WORK DAY</td>
<td>Reducing Electricity Use</td>
<td>Part 2: School Use Inventory</td>
<td>COMMUNITY DAY – NO CLASS</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>VACATION</td>
<td>VACATION</td>
<td>VACATION</td>
<td>VACATION</td>
<td>VACATION</td>
<td>VACATION</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>School Use Inventory</td>
<td>WORK DAY</td>
<td>CL: Compiling School Data</td>
<td>Looking at School’s bill</td>
<td>CL: Technology Research, Proposal Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>WORK DAY</td>
<td>CL: Calculations, Proposal Development</td>
<td>CL: Proposal Write-Up</td>
<td>WORK DAY</td>
<td>Proposals Due</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART 1 – HOME USE

Home Inventory
Using the enclosed Home Inventory Worksheet, complete a detailed inventory of the use of energy in your home.

- You will need to speak with your parent/guardian and others living in your household to get an accurate accounting of the use of some of the items (for example, lighting in bedrooms, # hours of TV use, etc.)
- Specific things to ask:
  - What type of heating do we have? (Oil, Gas, Electric)
  - What is the approximate square footage of the home?
  - Are the windows single, double, or triple pane? If they are old, they are likely single-pane.
  - Are any of the appliances Energy Star certified? Look for this sticker:
- Focus on one room at a time and inventory it thoroughly

Data Input
Using your completed home inventory as a guide, use Dropoly to create your home, and input your energy use.

1. Go to https://dropoly.com/play and create an account.
2. Enter the specifics about your home.
3. Click on the House icon on the top left
4. Begin to create rooms, and add devices.

Analysis of Home Electricity Bill
Students must bring in their home electricity bill by Monday April 13th at the latest. We will be using this bill to analyze our consumption of electricity and develop a plan to reduce consumption.