5\textsuperscript{th} grade at Congdon Park Elementary School  
Friday, May 2nd

Pick up at SSB ground floor at 9:15 –Everybody except Morgan

Yes..also PLEASE tell the students they MUST check into the office and get a visitor's badge. Our secretary Jane will know they are coming. The office doors, off of Branch Street (one street below Superior Street), are the only doors that are unlocked during the day. When they leave they MUST check out of the office and return the visitor's badge. Jane will tell them how to get to the Science Lab. So the times and teachers are:

9:45-10:30 Lofstuen  
10:45 - 11:30 Sauer  
11:30 - 12:15 Miller

<table>
<thead>
<tr>
<th>Activity</th>
<th>9:45-10:30</th>
<th>10:45-10:50</th>
<th>11:30-11:35</th>
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</thead>
<tbody>
<tr>
<td>Introduce ourselves</td>
<td>9:45-10:30</td>
<td>10:45-10:50</td>
<td>11:30-11:35</td>
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<tr>
<td>Assessment Favorite animal and favorite number between 1-100</td>
<td>9:50-9:55</td>
<td>10:50-10:55</td>
<td>11:35-11:40</td>
</tr>
<tr>
<td>Station 1</td>
<td>9:55-10:02</td>
<td>10:55-11:02</td>
<td>11:40-11:47</td>
</tr>
<tr>
<td>Station 2</td>
<td>10:02-10:09</td>
<td>11:02-11:09</td>
<td>11:47-11:54</td>
</tr>
<tr>
<td>Station 3</td>
<td>10:09-10:16</td>
<td>11:09-11:16</td>
<td>11:54-12:01</td>
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<tr>
<td>Station 4</td>
<td>10:16-10:23</td>
<td>11:16-11:23</td>
<td>12:01-12:08</td>
</tr>
<tr>
<td>Assessment</td>
<td>10:23-10:30</td>
<td>11:23-11:30</td>
<td>12:08-12:15</td>
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</tbody>
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**Station 1 – Phenotype Ally and Alisa**  
Fish:  
Large tank of about 30 adult zebrafish with all different phenotypes (long fin, spots, Glofish with different colors, WT)

What does phenotype mean?  
- talk about the meaning of wildtype and have students draw a WT fish in their lab notebooks  
- have the students draw their favorite non-WT fish in their laboratory notebook

**Station 2 – Fluorescence Jayce**  
Fish:  
Many different colors of GloFish in about 3 tanks  
A tank of brainbow fish (note that these do not fluoresce with the black lights-too weak)

What is fluorescence?  
- talk about what fluorescence is and have students look at GloFish under blanket with a black light flashlight  
- explain how scientists use fluorescence using brainbow handout and GFP handouts
Station 3 – Inheritance Amelia
What is your hypothesis about which parents go with which progeny?
Fish:
Easy: Parents look exactly like the progeny-brainbow progeny that match parents, Medium: Red and Grey fish that give rise to red and grey progeny
Hard: Red and yellow fish give rise to orange, red, grey, yellow progeny
Describe what inheritance is?
-let the students come up with a definition
- tell students what inheritance means
Give and example (height)
- tall dad and short mom= I’m medium height
- ask them what other examples of inherited traits are
  - eye color, hair color, skin color, nose shape, diseases
Direct the students attention to the tanks (three on left are babies and three on right are parents of babies)
- Do matching game: parents to babies
- based on inherited traits ~ color, pattern, fin length
- DO together or let them do it with their group
- give answers
Point out
- brainbow fish
- redX yellow= orange

Station 4 – Hypothesis Dr. Liang and Craig and Mitch
Note: replaced genotype station because we had the *Manduca sexta* moths to use on this day. These are provided by a colleague, but they can also be purchased from suppliers like Carolina Biologicals. In addition, genotype was hard to do in such a short amount of time.
Animals:
*Manduca sexta* moths
Tobacco horned worm caterpillars at many stages of growth
Pupae
Eggs

What is a hypothesis?
- have students answer
- Show them the curved hook on the head of the pupae
- Have them generate hypotheses about what it is as they hold the caterpillar and moth
- End with the moth tongue trick (where you unroll the moth’s tongue with a mechanical pencil)
- talk about proboscis and what the moths eat-why do they have a long, straw-like proboscis (5th graders will often know the word proboscis and know that moths and butterflies eat nectar)