CREATE YOUR OWN DICHOLOGOUS KEY
In your group choose a group of non-scientific items that interest you. **Example:** Candy, Shoes, Cars etc.

Select **10 different species** from this group. Draw pictures of each one.
Divide the items into two groups. Think of identifying characteristics such as shape, size, position, color, texture, etc. One characteristic must be defined and used to decide which items are placed in which group. The groups created must be opposites of each other.
- Record what factor was used to make the division and note which members of the original group belonged to each resulting group.
- After two groups (A and B) have been created, divide the first group (A) into two more groups based again on one criterion (C and D). For example, if group A were the short tailed cats, group C might be short tailed cats with a plain colored coat. Group D would then be short tailed cats with a patterned coat.
- Do the same with Group B.
Continue to divide the groups until each item is by itself. Keep careful records of the groups that were created and the dividing criteria.

Looking at your records and the divisions you made, create a dichotomous key that would lead someone else to make the same distinctions you did. Begin your key by recalling the first factor you used to divide into two groups.
Looking at your records and the divisions you made, create a dichotomous key that help someone create the same distinctions you made.

Begin your key by recalling the first factor you used to divide into two groups.
1a. The cat has a short tail………………………………………………………………………………go to Step 2
1b. The cat has a long tail………………………………………………………………………………go to Step 3

2a. The cat is speckled with long ear black-tipped ear tufts and long, beard-like cheek ruff…………………………………………………………………………………………it is a lynx, Felis lynx
2b. The cat has indistinct spots, short ear tufts, white spots on its ears, and a broad cheek ruff………………………………………………………………………………………………it is a bobcat, Felis rufus

3a. The cat has a plainly colored body……………………………………go to Step 4
3b. The cat has a patterned body……………………………………go to Step 7

4a. The cat has a distinct mane around its neck (males only)…………………………………………………………………………………………………………………………it is a lion, Panthera leo
4b. The cat has no mane around its neck…………………………………………………………………………………………………………………………………………………………………go to Step 5

5a. The cat is mostly tan to brown in color……………………………………………………………go to Step 6
5b. The cat is black in color………………………………………………………………………………it is a black leopard, Panther pardus
6a. The cat is tan above with white to buff below.............it is a mtn. lion, *Felis concolor*
6b. The cat is brown all over the body.............................it is a jaguarondi, *Felis yagouarundi*

7a. The cat has an orange colored body with noticeable black stripes..............................................................it is a Bengal tiger, *Panthera tigris*
7b. The cat has a pattern on its body other than stripes..................go to Step 8

8a. The cat is clearly larger than a house cat........................go to Step 9
8b. The cat is about the same size as a house cat.............it is a margay, *Felis wiedii*

9a. The cat has black-bordered brown spots, tending to form lines on the body...............................................................it is an ocelot, *Felis pardalis*
9b. The cat is large, spotted with black rosettes or rings in horizontal rows.................................................................it is a jaguar, *Panthera onca*
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>A.</strong></td>
<td>Mountain lion, <em>Felis concolor</em></td>
</tr>
<tr>
<td><strong>B.</strong></td>
<td>Bobcat, <em>Felis rufus</em></td>
</tr>
<tr>
<td><strong>C.</strong></td>
<td>Lynx, <em>Felis lynx</em></td>
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<tr>
<td><strong>D.</strong></td>
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<td><strong>J.</strong></td>
<td>Black leopard, <em>Panthera pardus</em></td>
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</table>
Include a page with the 10 illustrations you selected. They should be identified ONLY by the letters A-J. DO NOT INCLUDE THE NAMES ON THIS PAGE!!!

Provide an answer key as the last page of your project. Use both the common name and the scientific name (create one with the correct format if it does not exist)