Pasture Connections
5th & 6th Grade
Duration: 30 min.

Students will name the elements found in a pasture ecosystem. Students will draw connections between all the elements in a pasture ecosystem.

Lesson Objectives:
- Students can name at least 3 elements in a pasture ecosystem
- Students correctly identify relationships among pasture elements
- Students compare and contrast different pasture management strategies

What You Need

<table>
<thead>
<tr>
<th>What You Need</th>
<th>What to do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set of laminated cards with pasture elements printed on them</td>
<td><strong>Anticipatory Set:</strong> Gather students and ask them why a farmer would locate a mobile chicken coop in a pasture.</td>
</tr>
<tr>
<td>Wiki-sticks</td>
<td><strong>Lesson:</strong> Have the students name elements that they observe in the pasture (chicken, grass, etc.). As they name things they observe, lay down the corresponding laminated card. Ask students to think about how these elements they’ve brainstormed are connected. Ask, for example, “How is this manure connected to the soil?” Use the blank card for any element that is observed but not pre-printed.</td>
</tr>
<tr>
<td>A stick to poke manure pats with</td>
<td>Have the students take turns using wiki-sticks to make physical connections between the elements. If you’re teaching older students have them use a specific color to represent different feedback loops (soil health, chicken health and mammal health).</td>
</tr>
</tbody>
</table>

Feedback Loops –
Living systems are made up of circular processes that create either stability (balancing loop) or imbalance (reinforcing loop).
Ask the students to point out where waste from one system is food for another system. Ask the students what would push the healthy pasture system they have just modeled out of balance. For example, what if herbicides were used to control weeds in the pasture? What if the chickens were kept in cages or stationary chicken coops? As you discuss ways that the connections between elements could be disrupted, manually break the wiki-stick connection on the model.

Wrap-up and check for understanding:
As a living example, find a cow manure pat that has had some time to decompose. Observe the differences between a fresh manure pat and the decomposed one. Look for insect activity on both types of manure pat. Also travel to a place that a mobile chicken coop has just been. Observe the soil surface there and also in a place that hasn’t had the mobile chicken coop on it. Compare and contrast.

Extension
Farm Web of Life:
Give each student a picture of an element of the pasture (chicken, bug, cow, grass, soil, people, manure, eggs etc.) and play the web of life game. Sit in a circle. Starting with one element, ask the student to hold the end of the ball of string and to name another in the circle with which that interacts (i.e. eaten by, depend on). Pass the ball to the second student. Ask the student to name another element with which his/her organisms interacts. This continues until each organism is linked in the pasture, and the ball is returned to the first student.

Now, have students slide back until the string is taut. Tell students to keep still, but if they feel a tug, they should tug in response. When everyone is still have the student that started to gently begin tugging and if students feel it, they should continue to tug back. The vibration will spread through the food web until the whole web is shaking.

Ask students how the tugging demonstration might illustrate what happens when one of the links in a pasture is damaged through natural or human-made stress (the rest of the ecosystem feels the effects).