Why Is Our Corn Changing?

**Lesson Routine**

**L1**
Anchoring phenomena

**L2**
Investigation

**L3**
Investigation

**L4**
Problematizing

**Questions**

**Phenomena / Problems**

**What we figured out**

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L1

**Anchor phenomena**

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L2

**Investigation**

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L3

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L4

**Problematizing**

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Putting pieces together

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L1

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**Why Is Our Corn Changing?**

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**2nd Grade**

LS2 Interdependent Relationships in Ecosystems

Storyline Skeleton

[1.0 field trial version - Fall 2016]

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**These materials were developed with support from a MSP grant from the Connecticut Department of Education, the Connecticut Science Center, the Michigan Department of Education, the Gordon and Betty Moore Foundation, and the NGSS Project at Clark University, Tidemark Institute, and Northwestern University.**

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Why Is Our Corn Changing?

2nd Grade
LS2 Interdependent Relationships in Ecosystems
Storyline Skeleton

[1.0 field trial version - Fall 2016]

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Lesson Routine | Questions | Phenomena / Problems | What we figured out
--- | --- | --- | ---
Investigation | Does the seed have something inside of it that is helping the plant grow? | Wet seeds, not dry ones, have a small structure inside them that is similar to the roots we’ve seen on other plants. We wondered whether we would find similar structures in wet seeds from other plants. |
Investigation | Do wet seeds from other plants have similar structures inside of them? | Wet seeds from other plants also have similar structures in them. We decided that these structures are the start of what is going to sprout into a baby plant. |
Investigation | How much did the wet harvest corn change since last time? | The white and green parts looked like they had grown a lot. In order to figure out how much it had grown, we decided we needed to measure these parts and compare our measurements over time. |
Problematizing | Why are different parts growing in different directions? | The green parts looked like leaves and they bent toward the light. We wondered if corn needs light and water to grow, and if leaves help it get light and roots help it get water. |
Investigation | Does corn need light in order to keep growing? | We put some plants in their own container with water in the dark and kept some others in the light. |
Putting pieces together | What did we figure out by putting some in the light vs. the dark? | The plants in the dark shriveled and turned yellow and brown, but the plants in the light did not. The plants in the dark eventually stopped growing but the ones in the light did not. We decided plants need light to keep growing, and their leaves help them get light. |
Putting pieces together | What have we noticed and what are we wondering so far? | Lots of growth and change took place in the leaves, roots, and stems of our plants. We kept adding water to the bin. We wondered if the plants would keep growing. |
## Lesson Routine

### L8
**Problematizing**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Phenomena / Problems</th>
<th>What we figured out</th>
</tr>
</thead>
<tbody>
<tr>
<td>How did the harvest corn change?</td>
<td>The water that our corn was sitting in got stinky, cloudy, and gray. We thought something might be wrong in the water, and it might affect plant growth, but we weren’t sure, so we decided to test this.</td>
<td></td>
</tr>
<tr>
<td>Where does the plant grow best?</td>
<td>Same as start of L7 above</td>
<td>We put some plants in their own container with the dirty water, some with fresh water, some in dirt and water, and some in dirt with no water.</td>
</tr>
<tr>
<td>What did we figure out by putting the plant in different places?</td>
<td>Plants can only grow in places where there is water that their roots can reach. Plants grow more upright when their roots are in soil, but don’t need soil to keep growing.</td>
<td></td>
</tr>
</tbody>
</table>

### Investigation

### Putting pieces together

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<tr>
<td>What else do plants need to grow?</td>
<td>Previous phenomena L1 through L7</td>
<td>Our class had lots of questions we still wanted to investigate. Each group chose one to pursue. We created our own investigation plans and set up the investigations.</td>
</tr>
<tr>
<td>How much did my plants grow?</td>
<td>We carried out our investigations, collecting data over the next couple weeks. We wrote up summaries of our discoveries and prepared to share them with others.</td>
<td></td>
</tr>
<tr>
<td>What has our class figured out from all of our investigations?</td>
<td>Plants need light and water to grow. The leaves and roots of the plant help it get these things. When given water, seeds develop structures inside them that eventually can grow into parts of a plant. There are lots of other things in the surroundings around the plant that also affect the growth of plants.</td>
<td></td>
</tr>
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