## PROJECT OVERVIEW

<table>
<thead>
<tr>
<th>Name of Project:</th>
<th>Pumpkinpalooza</th>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>5 weeks</td>
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<tr>
<td>Subject/Course:</td>
<td>Science</td>
</tr>
<tr>
<td><strong>Teacher(s):</strong></td>
<td>Droste, Macheca, Rhodes</td>
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<tr>
<td><strong>Grade Level:</strong></td>
<td>4th</td>
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<tr>
<td>Other Subject Areas to Be Included:</td>
<td>Math, Writing</td>
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### Project Idea
**Summary of the issue, challenge, investigation, scenario, or problem:**

Students write an inquiry question about measurements of a pumpkin. Working in teams, they find mass, volume, equatorial circumference, polar circumference, height, seed count, wet seed mass, and dry seed mass. Using scatter plots, students will graph data related to their individual inquiry questions, draw a trend line, and write a summary paragraph about their results.

Students will also use the writing process to write obituaries about their pumpkins, detailing events in their lives.

### Driving Question

**How do we use questions to guide our investigations?**

### Content Standards to be taught and assessed:

- MA.M.1B.5 - Identify the equivalent weights and equivalent capacities within a system of measurement.
- MA.M.2E.5 - Convert from one unit to another within a system of linear measurement (customary and metric).
- MA.D.1A.5 - Evaluate data collection methods
- MA3 Data and Probability
  1.2 Conduct research to answer questions and evaluate information and ideas.
- MA.D.1C.5 - Describe methods to collect, organize, and represent categorical and numerical data.
- MA.D.3A.5 - Given a set of data, make and justify predictions.
- SC.IN.1.A.5.c - Conduct a fair test to answer a question.
- SC.IN.1.D.5.a - Communicate the procedures and results of investigations and explanations through: oral presentations, drawings and maps, data tables, graphs (bar, single line, and pictograph).
- SC.IN1.C.5.a - Use quantitative and qualitative data as support for reasonable explanations.
- W.5.3 - Write narratives to develop real or imagined experiences.

### 21st Century Skills to be taught and assessed:

- Collaboration | X |
- Communication (Oral Presentation) |
- Critical Thinking/Problem Solving | X |

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<tr>
<th>Other:</th>
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<tbody>
<tr>
<td>Major Products &amp; Performances</td>
<td>Group: Students work in pairs to estimate and collect quantitative data, as well as generate inquiry questions.</td>
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<tr>
<td>Individual:</td>
<td>Students individually plot and graph their data to answer inquiry questions. Individuals write an obituary about their pumpkin.</td>
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**Presentation Audience**
- Class
- School
- Community
- Experts
- Web
- Other:

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**Entry Event** to launch inquiry, engage students:
Students participating in unloading a truckload of pumpkins (approximately one thousand pumpkins), observing different physical characteristics of pumpkins and squash. Students also participate in distributing pumpkins school-wide. Then, as pairs, they choose a pumpkin to investigate, naming the pumpkin.

### Assessments

#### Formative Assessments (During Project)
- Quizzes/Tests
- Journal/Learning Log
- Preliminary Plans/Outlines/Prototypes
- Rough Drafts
- Online Tests/Exams

#### Summative Assessments (End of Project)
- Written Product(s), with rubric: obituary and data summary paragraph
- Oral Presentation, with rubric
- Multiple Choice/Short Answer Test
- Essay Test
- Practice Presentations
- Notes
- Checklists
- Concept Maps
- Other: Data collection
- Other Product(s) or Performance(s), with Rubric: final graph of data
- Peer Evaluation
- Self-Evaluation
- Other:

### Resources Needed

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<thead>
<tr>
<th>On-site people, facilities:</th>
<th>Custodian</th>
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<tbody>
<tr>
<td>Equipment:</td>
<td>Truck and driver, scales, buckets, catch pails, measuring cups with milliliters, tape measures, rulers</td>
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<tr>
<td>Reflection Methods</td>
<td>(Individual, Group, and/or Whole Class)</td>
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Materials: pumpkins
Community resources: Parent volunteers