Plan a Garden

Extension Activity:

In this activity, students will work collaboratively to make plans for a community garden. Ideally, students will implement their plans for an actual garden on school grounds. However, the activity can also be used to plan a paper-and-pencil garden if a community garden is not feasible.

Since this activity will take several weeks to complete, you might want to introduce it as soon as you begin the Reach for the Sun unit of study. Then, set aside some time during each class period for students to work on their garden plans, and several days for them to do the planting.

Depending on the geographical location of your school and when you begin the unit, the school year may end before the garden is in full bloom. If that is the case, students can schedule a time to visit the garden early in the next school year. If possible, keep them updated over the summer by sending a few emails and photographs of the plants, or even by posting updates on a class blog.

Procedure

1. Introduce the activity by telling students that they will be planning a garden for their school. If a garden space is available, visit the space briefly so students can sketch the layout. Have them bring a pencil, an 8 x 11 sheet of paper, and a clipboard. While you are there, discuss the sun exposure that the area receives during the day, and have students note this somewhere on their sketches. Bring the baggies and hand trowel so you can gather soil samples from different sections of the garden to bring back to the classroom. Students can use the samples to observe the general soil type found in the garden.

   If a garden space is not available, tell students they will be planning and sketching a garden for their school in the hope that one will be grown in the future.

2. Divide students into groups of four or five and distribute copies of the Plant Facts Sheet for each student. Review the facts about each plant, explaining that these are the plants they will be growing in Reach for the Sun and in their own garden. Discuss the following concepts:

   - Make copies of the Plant Facts Sheet and Plan a Garden Student Sheet from pages 38 and 39.
   - Purchase seeds or seedlings of plants that will grow in your hardness zone.
   - Obtain the necessary gardening supplies, depending on the condition of your current community garden (shovels, gloves, commercial gardening soil, soil test kit, hand trowels, etc.).
   - Before starting the activity, decide who will be responsible for maintaining the garden once it is planted, and how to work maintenance time into the school day.
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- **Annual plants:** plants that complete a life cycle, from germination to seed production and death, within one growing season.
- **Perennial plants:** plants that live for more than two years. They typically go through a cycle of germination and seed production, go dormant for a period of time, and then repeat the cycle again and again.
- **Hardiness zone:** a geographic area in which a particular group of plants is able to grow. The zone is based on the plants’ tolerance of minimum temperatures in the area.

3. Have students work in their groups to look up a plant hardiness zone map on the Internet and determine the zone in which the school is located. Will this affect the plants they decide to use in the garden? Why or why not?

4. Come together as a class and discuss different factors that will affect the plants they choose for their gardens. Be sure to discuss hardiness zones, soil type, and sun exposure, and why each of these factors is important. Since you are just starting the Reach for the Sun unit, you can refer back to these factors as students spend more time playing the game and planning their gardens. During the unit lessons, tie in the game with the garden plans as much as possible. For example, when students learn more about the importance of photosynthesis in Reach for the Sun, relate this to the importance of sun exposure in the garden. Ask which upgrades from the game would be most important in their own garden, and why.

5. Distribute the Plan a Garden Student Sheet and instruct students to complete the sheet with their group members. Discuss their responses as a class.

6. Allow students to work in their groups to continue planning their gardens as needed. They can use their Plant Facts Sheet, Plan a Garden Student Sheet, soil samples, soil pH values (if applicable), and sketches of the garden area layout. Completing the plans may take several class periods, so you may want to give student groups a set amount of time to work at the beginning or end of each class period. Once all groups have completed their plans, conduct a class-wide discussion and review of the plans and decide as a class on an overall garden plan to implement.

7. Schedule at least two or three class periods to plant the garden, and have fun! If you have a class blog or website, take photographs of the students working in the garden. You may also want to take photographs of the plants when they are first planted, and then take more as the plants grow.

8. Wrap up the activity by having students create a brochure about the garden. Before they get started, distribute colored pencils and heavy card stock paper, and review the Garden Brochure Grading Rubric.
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Garden Brochure Scoring Rubric

Your task is to create an illustrated brochure to advertise your garden in order to sell the plants, and/or products made with the plants, you have grown. Creativity is encouraged, but the brochure must be scientifically accurate and should address the components listed in the rubric.

<table>
<thead>
<tr>
<th>Brochure Component</th>
<th>Scoring points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant Plant Facts</td>
<td>5 points per plant</td>
</tr>
<tr>
<td>Illustrations of Plants</td>
<td>2 points per plant</td>
</tr>
<tr>
<td>Designed for Appropriate Target Audience</td>
<td>10 points</td>
</tr>
<tr>
<td>Creative (Use of catchy one-liners, visually appealing, unique marketing approach)</td>
<td>10 points</td>
</tr>
</tbody>
</table>
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Plan a Garden Student Sheet

1. List the factors to consider when planning your garden:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. What maintenance will need to be done once the garden is planted?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

3. Are there suitable plants to grow in your area that can be harvested during the school year as opposed to during summer vacation?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

4. How do farmers decide which crops to grow?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. How would tending a personal garden differ from working a commercial cactus farm or sunflower farm?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________