Solutions That Take Root

Help your students harness the power of plants to create a plant-based solution for community issues.

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Objective

PART A Students will use defined environmental, social, and healthy ecosystems criteria to solve a challenge in their community.

PART B Students will research natural and environmental hazards using reputable sources like the U.S. Department of Agriculture to develop plant-based solutions to mitigate their effects.

Time

PART A 45 minutes

PART B 45 minutes

Materials

- <u>Create Community</u>
 Solutions activity sheet
- <u>Make Your Community</u> Bloom classroom poster
- Green Collar Careers student magazine
- Optional: <u>Planting Your</u>
 Solution Contest entry form
- Optional: Family Resource sheet

PART A

Display the <u>classroom poster</u> and introduce the concept of plant-based solutions. Discuss the roles that plants play in the community on the poster. Work with students to match the plant solutions with the community challenges. Answers: A3, B2, C4, D5, E1.

Discuss harmful ways that humans interact with ecosystems, whether on purpose, accidentally, or by being passive. Impacts are also caused by natural forces, which can seem harmful but have positive effects, like a naturally occurring fire that helps regenerate forests and stimulate growth.

Explain that there are many ways plants can help mitigate risks and sustain their community. Share a few statistics with your students, such as:

- A hurricane can expend as much energy as 10,000 nuclear bombs. A well-vegetated wetland system can absorb the impact, protecting humans and wildlife.
- Many plants can remove carbon dioxide from the air. Researchers have found that trees can also remove up to 97 percent of volatile organic compounds (chemicals that have high vapor pressure).

Distribute the <u>Create Community</u> <u>Solutions</u> activity sheet. Discuss the solutions as a class. Have students break

into small groups and identify which of the solutions could help their community.

PART B

Have students review the challenges they identified on the <u>Map Your</u> <u>Community's Challenges</u> activity sheet. Tell them they should choose one challenge to address with an innovative plant-based solution.

Provide time for students to sketch solutions to community challenges. Prompt them to use research and critical thinking to develop the best plant-based solution. Allow students to share their drawings with a partner and discuss improvements to strengthen their ideas.

Hand out the Planting Your Solution Contest entry form.

Have students develop a solution to an eco-challenge and enter the contest with a drawing and a description of their solution. For information on student and teacher prizes, how to enter, and official rules, visit scholastic.com/bloom/contest.

EXTENSION Distribute the Family Resource sheet. It encourages students to go on a scavenger hunt with their families and take pictures of plant-based solutions in their community. Encourage students to share the pictures with you and/or the rest of the class for extra credit.