

Botanical Garden

Influences on Urban Development
Role-Playing Botanical Garden Advocacy

Keywords:

Botanical Gardens, Urban Development, Lobbying, Environmental Conservation, Biodiversity

Target group:

Students aged 10,
Science Class

Objectives:

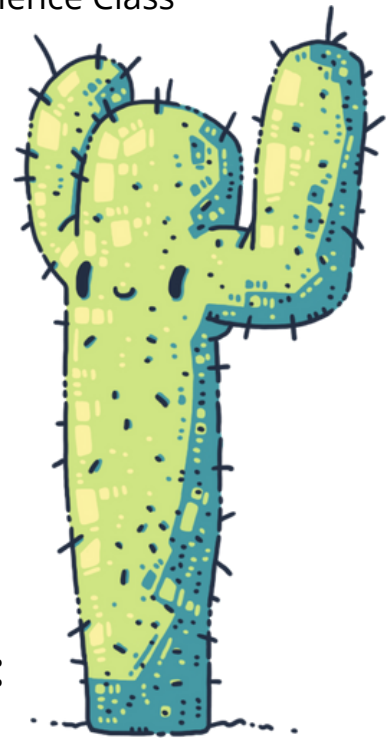
This activity introduces students to urban development dynamics. Through interactive scenarios, participants will develop critical thinking and negotiation skills while examining the balance between conservation, urban growth, and community needs. The exercise fosters teamwork and empathy as students advocate for different perspectives, blending civic education with real-world decision-making processes in an engaging format.

General Guideline on Time Allocation:

The duration needed to carry out this activity may vary depending on the specific group of children. Teachers are encouraged to adapt the implementation according to the needs, interests, and dynamics of the group.

In the preparatory phase, teachers may use a variety of activities to introduce and contextualize the chosen topic. These can include discussions, videos, drawings, storytelling, or even a field trip, depending on the age and background knowledge of the children.

The main construction phase, during which children plan and build their urban element using LEGO bricks, should typically not exceed 45 to 60 minutes. However, this phase often stimulates further curiosity and questions among the children, potentially leading to extended engagement or follow-up activities. For more detailed instructions and pedagogical support on how to implement activities of INNO-kids project, please download the Teacher's Methodological Guide.





Materials and Resources Needed:

- LEGO: Baseplates (green/gray), botanical elements (trees/plants), city pieces (buildings/roads), minifigures (stakeholders), custom accessories (signs/tokens)
- Supplementary: Role cards, Post-it Notes for labeling, timer for debates

Introduction:

Urban development decisions are influenced by various stakeholders, including lobbyists advocating for different interests. In this activity, students will engage in a role-playing exercise to understand how lobbying efforts can impact decisions related to the establishment and preservation of botanical gardens in urban areas.

Procedure:

Preparation and Role Assignment

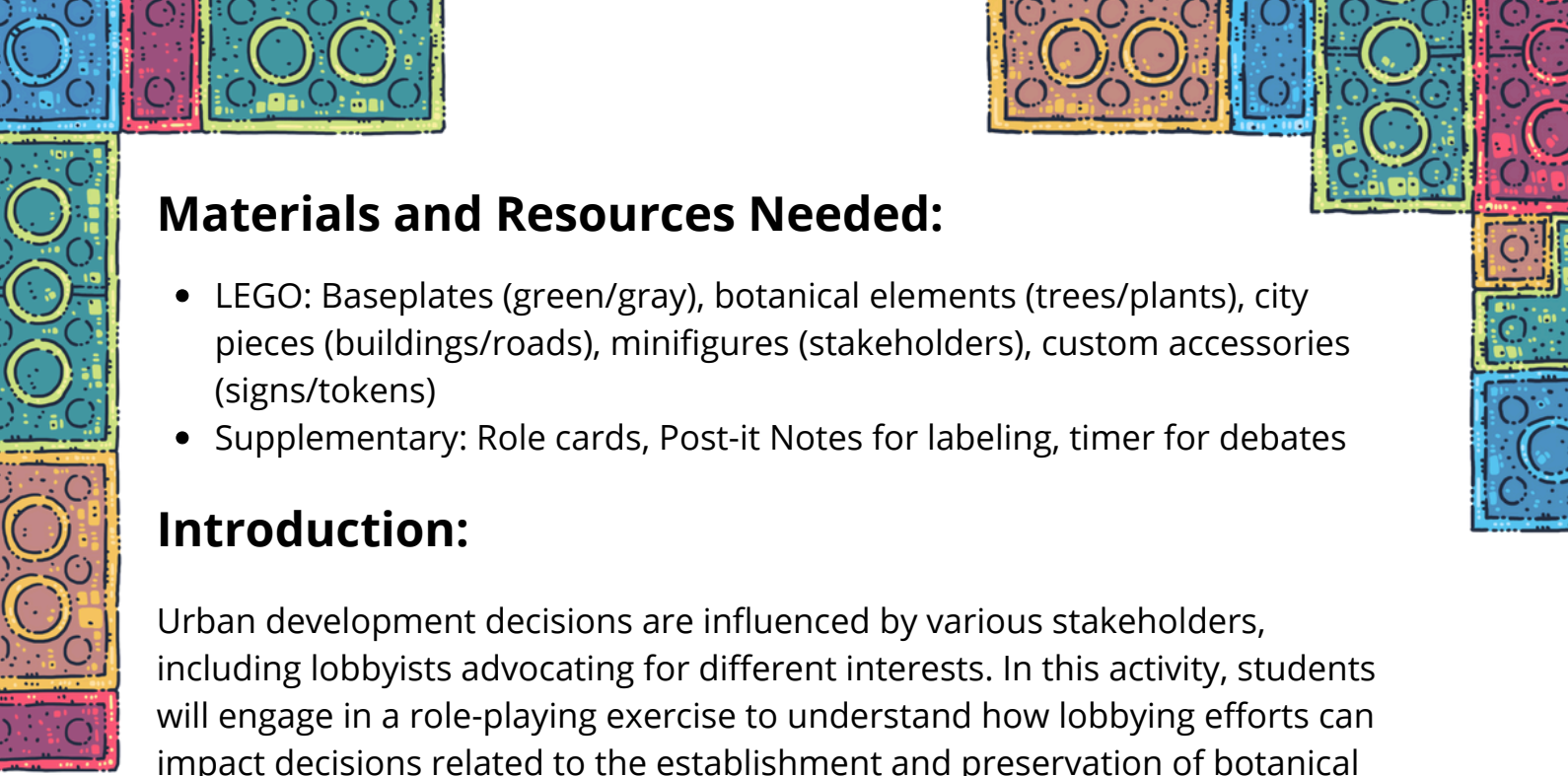
Provide each student with a "Role-Playing Identity" card specifying their role as a lobbyist advocating for or against the establishment of botanical gardens in a particular city.

Role-Playing Lobbying Session

Students will assume the roles of lobbyists representing various interests, such as environmental conservation groups, real estate developers, tourism boards, and local government officials.

Each group of lobbyists will present arguments to the "Congress" (classmates) about the importance or drawbacks of establishing botanical gardens in the city.

Lobbyists will use factual information, statistics, and persuasive techniques to influence the voting decisions of the "Congress" members.

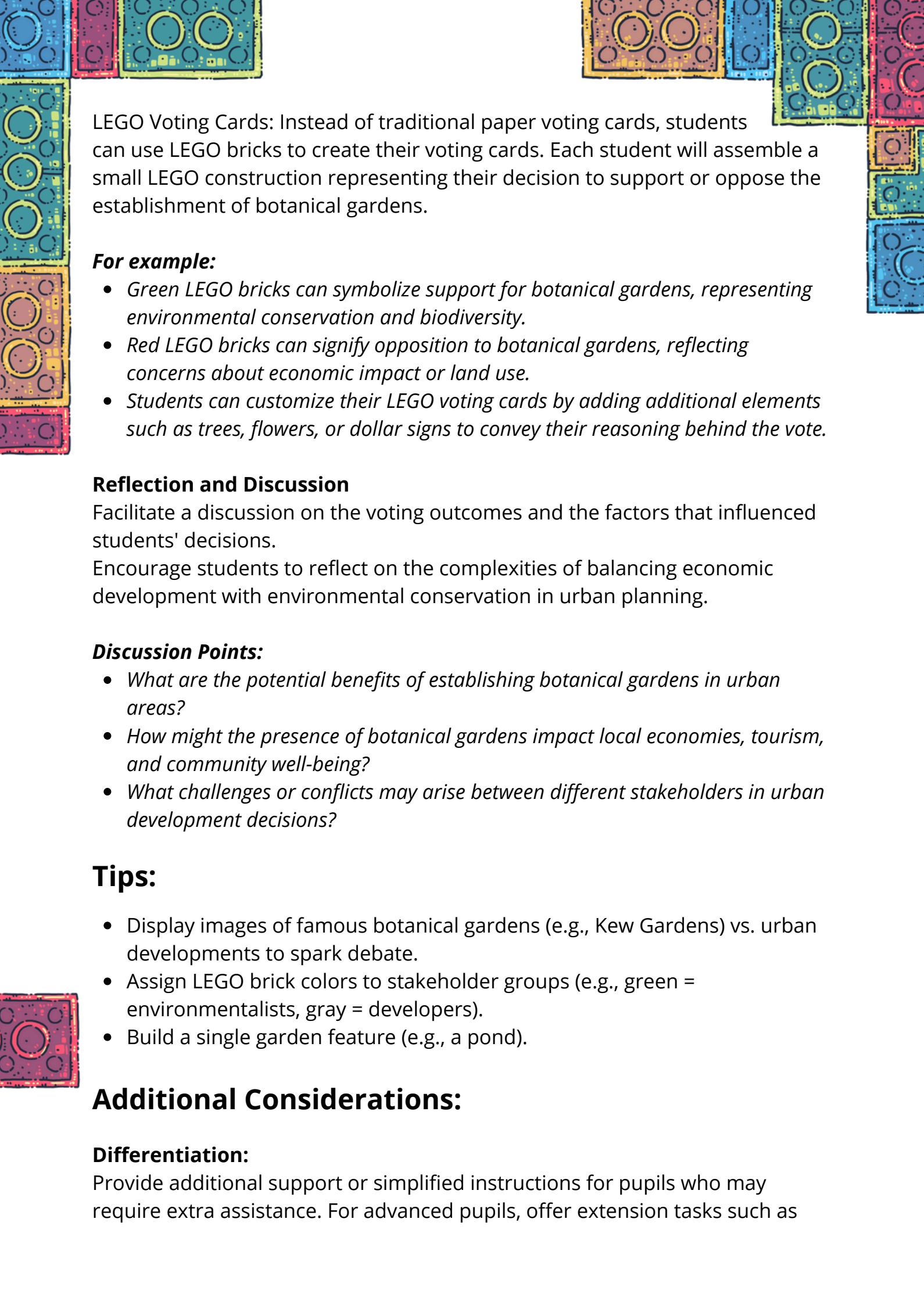


Congressional Voting and Decision-Making

After hearing from all lobbyist groups, each student representing a Congress member will vote on whether to support or oppose the establishment of botanical gardens.

Underline the importance of the vote and the personal opinion which must not be influenced by the personal relationship with the candidate.

Students will mark their intentions on a "Voting Card" handout, considering factors such as economic impact, environmental benefits, and constituent interests.



LEGO Voting Cards: Instead of traditional paper voting cards, students can use LEGO bricks to create their voting cards. Each student will assemble a small LEGO construction representing their decision to support or oppose the establishment of botanical gardens.

For example:

- *Green LEGO bricks can symbolize support for botanical gardens, representing environmental conservation and biodiversity.*
- *Red LEGO bricks can signify opposition to botanical gardens, reflecting concerns about economic impact or land use.*
- *Students can customize their LEGO voting cards by adding additional elements such as trees, flowers, or dollar signs to convey their reasoning behind the vote.*

Reflection and Discussion

Facilitate a discussion on the voting outcomes and the factors that influenced students' decisions.

Encourage students to reflect on the complexities of balancing economic development with environmental conservation in urban planning.

Discussion Points:

- *What are the potential benefits of establishing botanical gardens in urban areas?*
- *How might the presence of botanical gardens impact local economies, tourism, and community well-being?*
- *What challenges or conflicts may arise between different stakeholders in urban development decisions?*

Tips:

- Display images of famous botanical gardens (e.g., Kew Gardens) vs. urban developments to spark debate.
- Assign LEGO brick colors to stakeholder groups (e.g., green = environmentalists, gray = developers).
- Build a single garden feature (e.g., a pond).

Additional Considerations:

Differentiation:

Provide additional support or simplified instructions for pupils who may require extra assistance. For advanced pupils, offer extension tasks such as



researching further sustainable practices or designing more complex models.

Assessment:

Assess pupils based on their participation and engagement during discussions and hands-on activities. Evaluate the creativity, effort, collaboration, depth of understanding demonstrated in their models, critical thinking, ability to provide constructive feedback and presentation skills.

Curriculum Connections:

This activity integrates:

Environmental Studies (*urban development, green spaces, biodiversity, the role of botanical gardens, environmental balance*)

Citizenship Education (*civic awareness, empathy, participation in democratic processes, the role of different stakeholders in community decision-making*)

Social Skills (*teamwork, collaboration, negotiation and respectful dialogue in group activities*)

SDG Connections:

- **SDG 11:** Sustainable Cities and Communities – Students debate urban development trade-offs, designing LEGO botanical gardens that balance green spaces with community needs (housing, tourism, etc.).
- **SDG 15:** Life on Land – Through LEGO models, pupils demonstrate how botanical gardens protect biodiversity (e.g., native plants, wildlife habitats) against urban expansion.

Note: See the support material Environmental Sciences, Daily Lessons at the link - <https://catalystlearningcurricula.com/wp-content/uploads/2018/04/APES-Daily-Lesson-Plans-samples-color.pdf>



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