Large Houses with Several Flats

Designing Sustainable and Inclusive Urban Living

Keywords:

architecture, community, shared space, urban housing, sustainability, flats, neighbourhood

Target group:

primary school pupils (ages 6-11)

Objectives:

This activity introduces pupils to the concept of multi-flat housing as a form of shared urban living. Through model building, they will explore how people live together in large houses and how good design can support community, accessibility, and sustainability.

Pupils will develop spatial imagination, architectural creativity, and social awareness by designing a building that serves various types of residents, from children to seniors, and includes common areas for daily life and connection.

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 bricks (optional – for walls, balconies, residents, shared spaces)
- Recycled materials: cardboard boxes, paper rolls, fabric scraps, bottle caps
- Cardboard base for layout and floor plan
- Markers, pencils, paper for sketching floor plans
- Scissors, glue, tape
- Pictures of real multi-flat buildings (from around the world or local examples)

Note: Encourage pupils to repurpose available materials creatively. If LEGO bricks are not available, pupils may use basic craft supplies to bring their ideas to life through drawings and handmade models.

Introduction:

Ask: "What is it like to live in a building with many other people?"
Discuss different types of homes, focusing on apartment buildings and large houses with multiple flats. Explore the advantages (shared costs, safety, neighbours) and the challenges (noise, rules, privacy).
Explain that pupils will design their own residential building that is:

- Safe and inclusive for all generations
- Well connected with nature and the city
- Equipped with shared areas such as gardens, meeting spaces, or play zones
- Built with sustainability in mind (green roofs, solar energy, recycling spaces)

Procedure:

Preparation
In groups, pupils:

- Sketch a layout of their building (number of floors, flats per floor, common areas)
- Decide what types of residents live there (families, elders, students, single adults...)
- Think about how the shared spaces work:
  - How do people meet?
  - Where can children play?
  - Where can neighbours grow herbs or park their bikes / cars?
- Choose materials and plan which sustainability features they want to include

Construction
Pupils build a 3D model of the building and its immediate surroundings using LEGO or other available materials.
Their model should include:

- A minimum of three flats, each slightly different (e.g. small vs. large, balcony vs. courtyard)
- At least one shared indoor space (e.g. entrance lobby, meeting room, laundry corner)
- At least one shared outdoor space (e.g. playground, picnic area)
- Sustainability elements (solar panels, recycling area, green roof, rainwater collection, green walls)

Details
Encourage pupils to focus on:

- Accessibility: Is there an elevator or ramp? Can everyone enter and move freely?
- Comfort and connection: Where do neighbours say hello, help each other, or celebrate?
- Safety: Are stairs safe? Is there light in shared spaces?
- Environmental care: How does the building reduce energy use or support biodiversity?

Details like flower boxes, bird feeders, compost bins, or notices on a community board show how small features can build relationships and promote sustainability.

Stories
Each group creates a short story involving one or more of their building's residents. Examples: A child visits a neighbour to borrow a book; Residents plant vegetables together; Someone uses the lift for the first time after it was made barrier-free; Two neighbours repaint the hallway after a discussion. Stories bring out the social dimension of urban living and reflect empathy, compromise, and cooperation.

Presentation
Each group presents their building: "How it was designed and who lives there" "How shared spaces are used" "What sustainability solutions are included"

Tips:

Ask pupils: "Would you feel at home here?" "How does this building support both privacy and community?" "What would make this building last for many years without harming nature?"

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.

Extension Activities:

- Host a friendly competition where groups vote on categories such as most innovative layout, most inclusive shared space, or most sustainable building.
- Invite a local architect or urban planner to talk about real-life examples of sustainable housing and shared living.
- Create a set of 5 house rules or community agreements that promote fairness, safety, and care for the building.

Curriculum Connections:

- **Civic Education** *(shared responsibility, diversity, green design)*
- **Mathematics** *(measurement, layout, proportion)*
- **Social Studies** *(community, sustainable living)*
- **Art** *(design, creativity, construction)*
- **Language** *(storytelling, discussion, presentation skills)*

SDG Connections:

- **SDG 4:** Quality Education – Pupils learn through collaborative, creative, real-world tasks.
- **SDG 9:** Industry, Innovation and Infrastructure – Pupils reflect on building better structures for real needs.
- **SDG 11:** Sustainable Cities and Communities – Pupils create inclusive, safe, and resilient urban housing.
- **SDG 12:** Responsible Consumption and Production – Pupils use and reuse materials responsibly.
- **SDG 13:** Climate Action – Pupils propose ways to reduce environmental impact through smart building design.

Co-funded by the European Union

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