Sports Hall

Sustainable and Active Space for All

Keywords:

sports, construction, creativity, physical education, architecture, design, sustainability

Target group:

primary school pupils (ages 6-11)

Objectives:

This activity invites pupils to design and build their own ideal sports hall — a space that supports physical activity, cooperation, and sustainable design. Pupils will explore the role of sports facilities in a healthy and active community, develop teamwork and spatial imagination, and apply basic principles of architecture and environmentally friendly construction. Through the creative process, they will think critically about accessibility, inclusion, and the environmental impact of buildings, while learning to present their ideas using both physical models and storytelling.

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 of various types and colours (including base plates, mini-figures, transparent bricks for windows, and roof elements)
- Paper, pencils, markers, rulers, and erasers for sketching and planning
- Recycled materials such as cardboard, bottle caps, paper rolls, or plastic packaging
- Natural materials for decoration (optional): twigs, moss, pebbles
- Photos or videos of real sports halls, especially those with sustainable features (optional)

Note: Encourage pupils to repurpose available materials creatively. If LEGO bricks are not available, pupils may use craft supplies to build models from paper, cardboard, and reused household items.

Introduction:

Begin with a discussion about what a sports hall is and why it matters in a community. Ask pupils: “What kinds of sports and activities can happen in a sports hall? Who uses it? What makes a sports hall feel exciting, welcoming, or fun?”
Show images or short videos of various sports halls from around the world — some small and local, others large and multifunctional. Highlight features like indoor courts, changing rooms, climbing walls, or rest zones.
Then shift the perspective: “Can a sports hall be designed in a way that respects nature? What if it used solar panels or rainwater? Could it be a safe and inclusive place for everyone, including children with disabilities?”

Procedure:

Preparation

Divide pupils into small groups and give them time to brainstorm ideas for their ideal sports hall. Each group discusses the purpose of their building: What types of sports and movement activities will happen there? Who will use it? What atmosphere do they want to create?

Ask them to think beyond just one big room. A good sports hall may include: Changing rooms, Equipment storage, Spectator zones or seating, Climbing walls or indoor playgrounds, Rest zones or a refreshment area, Outdoor access or green elements...

They should also consider sustainability: How can energy be saved? Can natural light be used? Is there space for recycling bins, rainwater collectors, or a green roof?

Construction
Using LEGO bricks, recycled materials, or natural elements, each group builds a 3D model of their sports hall. The model should include clearly defined zones for different functions. Each group should also integrate at least one sustainability feature into their model — for example, solar panels, rainwater barrels, plant-covered roofs, or reused materials in construction.

Details
Once the main structure is complete, pupils focus on the small elements that bring their sports hall to life and show care for users and the environment. They may add:

- Clear entrances with signs, logos, or symbols
- Colourful floor markings for sports courts
- Spectator benches or folding seats
- Recycling stations and water fountains
- Plants, skylights, or windows for daylight
- Accessibility features such as tactile paths or elevator buttons
- Friendly details like posters, mascots, or welcome corners

Throughout the building process, guide the pupils with questions such as: “How do people feel when they enter this building?” or “What small touch makes this place feel kind and lively?”

Stories
Invite each group to create a short story about someone using their sports hall. This could be a child joining a gymnastics class for the first time, a basketball team celebrating a victory, a parent watching from the stands, or a wheelchair user easily accessing the climbing wall thanks to inclusive design.

Presentation
Each group presents their sports hall model to the rest of the class, explaining its layout, key functions, and special features. Encourage classmates to ask questions and give positive feedback. Consider setting up a mini exhibition or “sports hall fair,” where groups walk around and view the different models. Pupils can leave short notes of appreciation or suggestions at each display.

Tips:

Remind pupils that sports halls are more than just buildings — they are places where people move, connect, learn, and grow. A great design supports both physical performance and emotional safety.

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:

- Invite a local architect, engineer, or physical education teacher to discuss how real sports halls are designed and used.
- Visit a local sports facility and compare it with the pupils' ideas — what would they add, remove, or improve?
- Link the activity to Physical Education: let pupils invent new movement games based on their designed spaces.

Curriculum Connections:

This activity integrates:

Physical Education *(reflecting on the role of movement and inclusive access)*

Science and Mathematics *(basic engineering principles, spatial awareness, proportion)*

Art *(creative design, visual expression, model-making)*

Language *(storytelling, discussion, presentation skills)*

Civic Education *(teamwork, inclusion, shared spaces in the community)*

SDG Connections:

- **SDG 3:** Good Health and Well-being – Pupils design spaces that promote physical activity, inclusion, and emotional well-being
- **SDG 9:** Industry, Innovation and Infrastructure – Pupils apply creative thinking to develop functional and sustainable infrastructure
- **SDG 11:** Sustainable Cities and Communities – Pupils imagine public buildings that serve diverse users and respect the environment
- **SDG 12:** Responsible Consumption and Production – Pupils use and reuse materials with care, reflecting on building waste and design choices
- **SDG 13:** Climate Action – Pupils propose energy-saving features and nature-based solutions for indoor spaces

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