

Schoolyard Habitat

GRÜN
macht
Schule 

Our children need
quality schoolyards

- ▶ Suggestions
- ▶ Tips
- ▶ Examples
- ▶ Reasons



Contents

A young person spends on average roughly 20,000 hours at school, a large part of them in the schoolyard. So it's definitely worth the effort to transform bleak yards into vital habitats that are not only ideal sites for education on ecology, but are also sustainable, inclusive and prepared for climate change.

The educational advice centre "Grün macht Schule" has 35 years of experience in redesigning schoolyards. This card set is designed to give an overview of the most important criteria for an attractive and popular schoolyard.

Swinging and jumping | A good schoolyard encourages exercise

Nature instead of concrete | A good schoolyard is green and sustainable

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Fresh air is good for you! | A good schoolyard promotes health

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Ready for climate change | A good schoolyard helps protect the climate

Sport for everyone! | A good schoolyard provides for all types of sport, not only physical education

We have a plan! | A good schoolyard is created with the active participation of the pupils

Form follows function | A good schoolyard needs differentiated spaces

Diverse and barrier-free | A good schoolyard is attractive for children with or without disabilities

Planting recommendations | A good schoolyard is biologically diverse

Quality standards in practice | A good schoolyard is multifunctional

Quality standards in equipment | A good schoolyard has a lot to offer

Swinging and jumping



A good schoolyard encourages **exercise**



- ▶ Children need the opportunity to develop their essential motor skills
- ▶ Training for balance and coordination
- ▶ Exercise enhances the ability to concentrate
- ▶ A mix of near-natural terrain and playground equipment

Children need an opportunity to move about and exercise

Children need **exercise**. Exercise not only provides an effective counter-balance to long periods of sitting in the classroom, it also promotes **concentration**. It is essential to offer a wide variety of exercise opportunities in the schoolyard so that children can develop their **body awareness** and basic motor skills — not only during physical education but also during breaks.

Children need to practice natural movement, **coordination, sense of balance** and **speed of reaction**. The development of **courage** and **self-confidence** as well as **complex forms of perception** are playfully developed through free movement.

Children have a natural urge to move and need an opportunity to exercise it. For children with **sensory or motor deficits**, encouragements to exercise are particularly important. Therefore, above all the schoolyard should foster the joy of movement.



Natural movement is a prerequisite for sport

Both school sport and competitive sport are important. Natural movement is a prerequisite for all sport. It is learned in free play in a varied and stimulating environment and not primarily using sports equipment.

A mix of near-natural terrain and playground equipment

A good school playground offers a well-thought-out range of games and exercise opportunities. Flexibility is important so as to allow for a variety of uses. This way the children can freely decide and develop their own game ideas. Exercise opportunities with varying levels of difficulty serve to meet the needs of the different age-groups at a school.

These criteria are best met by a mix of near-natural terrain, terrain remodelling and play equipment. Hills, slopes, different surface materials, passages to crawl through and opportunities to jump from different heights offer natural movement incentives.

Some excellent playground equipment:

- ▶ Balancing beams
- ▶ Horizontal bars
- ▶ Hexagonal swings
- ▶ Slides and slide bars
- ▶ Space-nets and low ropes
- ▶ Facilities for ball games

Nature instead of concrete



A good schoolyard
is **green** and **sustainable**



- ▶ Unsealed instead of sealed
- ▶ Trees and shrubs provide shade, filter dust and absorb noise
- ▶ Nature has a calming and relaxing effect
- ▶ Nature inspires discovery
- ▶ Nature prepares for climate change

Nature is relaxing and stimulating

A green schoolyard fulfils several important functions:

A vibrant and natural environment improves **well-being** in the schoolyard and promotes **relaxation** during breaks.

Natural terrain features offer many opportunities for **exercise** and **play**.

Bushes and hedges provide space for private **retreat**.

There are many things to **discover**, to feel, to smell, and to use.

Nature in the schoolyard and its related topics offer a variety of **ideas and material for the classroom**.

Their positive influence will help mould pupils and teach them to respect and conserve nature.

The **atmosphere** under trees is more pleasant than under awnings.

Involving children in the care of plants conveys important **knowledge** and strengthens their **personal responsibility**.



Shade and oxygen

A free-standing beech tree with a crown diameter of 14 metres provides shade for a ground area of roughly 150 square metres. From May to September, it supplies enough oxygen to create breathing air for ten people. Such a tree also removes up to a ton of dust from the air every year.



A positive effect for the whole city

Biodiversity

A schoolyard that is nature-friendly will host various types of trees, shrubs, useful plants and flowers, providing habitats for small animals.

Infiltration of rainwater

Concrete and asphalt prevent rainwater from seeping into the ground. Stone paving and grass paver blocks are practical alternatives.

Microclimate

Plants and green spaces break down climate-damaging CO₂ and, with their evaporation, contribute to cooling and counteract the formation of heat islands.

Dust reduction

A green schoolyard helps reduce and bind dust.

A Green Oasis

In addition to its primary function, a green schoolyard is an important green oasis in the city. Taken in total, schoolyards and daycare spaces are of great importance for urban ecology.

Discover and create



A good school playground encourages **creative play**



- ▶ Flexible activities and stimulating materials inspire the imagination
- ▶ Individual play options catering for different age-groups support the development process
- ▶ A wide range of exercise opportunities provides a positive stimulus
- ▶ Free play strengthens the development of social skills

Free play sets creativity free

Children need to play. It is their opportunity to discover both themselves and their world by trying things out. This helps them develop **basic skills** and learn to interact with other children.

To accomplish this, children need spaces that are flexible and stimulating. Such spaces are becoming increasingly rare in the city. For many children, their play is now confined to their own rooms – and usually in front of a screen. So it is all the more important that school playgrounds become places for creative and dynamic play opportunities.

Free play is especially important. It needs to be voluntary and stem from the children's own initiative – invented by themselves according to their own rules, and with partners of their own choosing. Playing outdoors offers many opportunities to independently develop social skills.

For children, **open play opportunities**, a stimulating environment and flexible materials that do not pre-determine the nature of the game are



essential. **Natural materials** stimulate the imagination and should be available on the school premises. Building materials can be provided in the form of construction play sites that encourage exercise.

Various movement challenges are very popular and also extremely important.

Each age-group needs **age-appropriate play options**.

Children need their own space

- ▶ Play is active appropriation of the environment and gives children orientation for independence in their lives.
- ▶ Play is a fundamental and indispensable element for development.
- ▶ Games promote tolerance and behavioural competence.
- ▶ Play is fun and brings joy to life.

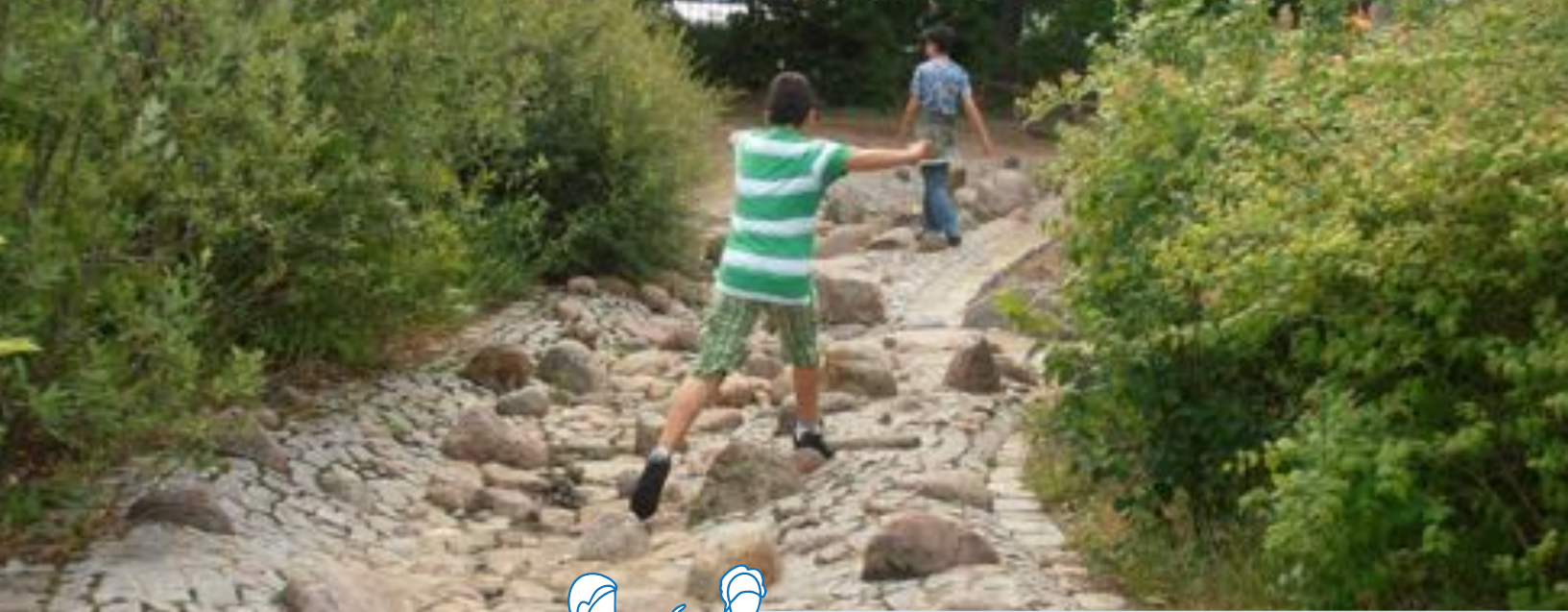


The right to play

“States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child (...)”

Article 31, UN Convention on the Rights of the Child

Fresh air is good for you!



A good schoolyard
promotes **health**



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- ▶ Air, sun and wind strengthen the immune system
- ▶ Energetic play helps prevent obesity
- ▶ Exercise enhances the ability to concentrate
- ▶ Fresh air stimulates all the senses
- ▶ Movement skills are learned and trained
- ▶ Playing outdoors, children can be loud and unruly and release aggression

Good for the body's immune system, stimulating growth and appetite

Playing outdoors is exciting and relaxing, stimulating and interesting. But above all, it's healthy.

When children play outside whatever the weather — with weather-appropriate clothing — they are strengthening their **immune system**. Colds are more likely to affect children who spend their time mainly indoors and are therefore less resistant.

Muscle formation, bone growth, organ blood flow and sense of balance all benefit from uninhibited movement.



Plenty of energetic play prevents **obesity** with all its consequences such as cardiovascular diseases, diabetes and **posture problems**.

Exercise in the fresh air regulates **appetite** and promotes a good night's **sleep**.

Active children are less **tense** and **aggressive**.

Various types of exercise such as running backwards and forwards, crawling, balancing, creeping, and walking on tiptoe promote the branching of nerve cells in the brain and thus improve **mental performance**.

Healthy and well-balanced

Years of experience in outdoor education have shown: Children who play a lot outdoors are

- ▶ more sure-footed
- ▶ more focused
- ▶ more even-tempered
- ▶ healthier



Outdoor games

You can find suggestions for outdoor games for children on the Internet, for example at:

- ▶ www.internationalschoolgrounds.org
- ▶ www.internationalschoolgrounds.org/isgm

The wonder of growing



Every good schoolyard
needs a **school garden**

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- ▶ Nature can be experienced with all the senses
- ▶ A critical perspective on eating habits
- ▶ Knowledge about the climate and food production
- ▶ Opportunities for inter-disciplinary education
- ▶ Fruit and vegetables in all seasons



A school garden has many important functions

More and more schools in Berlin have returned to cultivating a school garden – fortunately so, because gardening makes you smart!

Really?

In a garden you can experience how different plants and fruits grow by examining, smelling, tasting and being amazed – and there are also animals to be discovered.



Strawberries in January?

From sowing to harvesting, the change of the seasons can be vividly experienced. The children learn what regional and seasonal means and how close success and failure are to one another. When working with the plants in the garden, climatic change can be experienced directly.

Pride in caring and tending

From joint planning to continuous work in the school garden, pupils take responsibility for their garden project and for the sustainable use of their nature education resources.



A healthy diet

Vitamins, carbohydrates, fats: children can experience what healthy food tastes like – and how much work goes into growing food.

Climate protection and fair trade

A school garden provides plenty of visual material for the classroom and offers many opportunities for interdisciplinary and action-oriented education.

Fruit without chemicals

Berries, apples and carrots: the snack garden is a great place to experience new things and also promotes a healthy diet.

No risk is itself a risk



A good schoolyard is **as safe as necessary**, not as safe as possible



- ▶ There can be no development without some danger
- ▶ You can only learn to fall by falling
- ▶ Good supervision places emphasis on personal responsibility
- ▶ Avoid hidden dangers, create calculable risks

Children need danger as a challenge to help them develop

More and more pupils lack the physical and mental ability to assess risks and to safely face everyday dangers.

Taking manageable risks enables children to learn important things about themselves and their world. These things cannot be taught, but only learned — through personal experience.

Caution, resilience, courage and the realistic assessment of one's own abilities and limits can only be learned through self-determined activity.

Since the world is full of dangers, people have to learn how to recognize and face up to them.

The target of "safe, harmless and risk-free" is unnatural and leads to accidents in the face of hidden and unpredictable dangers.

Continuous risk minimization can harm children more than it benefits them.

Extract from the Education Act

"Supervision is part of the school's educational mandate. It should help to educate pupils about independence and responsibility in a manner appropriate to their age."

From the implementing provisions on the exercise of supervision in schools of the Senate Department for Education, Youth and Sport, 2006 (Translated from original German)



Learning courage and self-confidence through risk is a prerequisite for personal responsibility. This in turn promotes a sense of responsibility for others and improves social skills.

Completely low-risk playgrounds quickly become boring

Children need the opportunity to take risks and overcome their fears.

There are six categories to be considered: exploring height, experiencing high speed, handling dangerous objects, the proximity of dangerous events (fire, water), wild play (tussling) and independently leaving adult supervision.

It is best to confront children with these challenges at the earliest stage possible. This gives them the opportunity to master increasingly dangerous situations step by step.

Good supervision gives pupils space for themselves free from supervision in order to strengthen their self-confidence. Nothing encourages a person more than trust in their abilities. Completely controlled environments quickly become boring and can even inhibit emotional development.

Design, plan and build



A good schoolyard encourages
participation



- ▶ Users know their own needs best
- ▶ Strengthening initiative and a sense of responsibility
- ▶ Acquiring practical skills
- ▶ Practising democracy
- ▶ Building a sense of identity and community spirit

Initiative, responsibility and democracy

The best way to design a schoolyard is to include as many of those involved as possible, from the experts to the teaching staff and the parents. It is particularly important that the pupils have a say and an opportunity to participate. After all, they need to feel comfortable in their own schoolyard. Adolescents can learn a lot in a practical manner in each phase, whether in planning, in design work, or in care and maintenance.

The participation of children and teenagers

- harnesses their creative potential,
- promotes initiative and social skills,
- strengthens their sense of responsibility for others and for the natural environment,
- enables the acquisition of practical skills,
- strengthens the sense of community at school,



- creates self-confidence and pride in what has been achieved,
- is a practical example of how to peacefully resolve conflicts and achieve aims that reflect the interests of the majority, that is, to exercise democracy.

Involved at every stage of the project

The involvement of the pupils begins at the preparation stage: there is a review of the current status of the project, ideas are collected, and excursions to other schools provide valuable inspiration.

This is followed by the planning phase with a planning workshop, model building, internal school discussions and approval procedures.

It is important that everyone involved in the process takes the needs and suggestions of the pupils seriously and strives to incorporate them in the final result.

Pupils can be an effective aid in the process of acquiring donations.

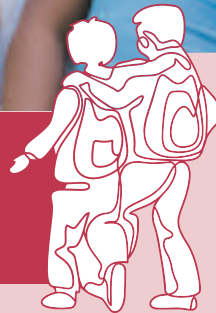
To help forge a sense of identity and community, simple jobs can be done together during school project and parental involvement days.

The conservation and maintenance of the new facilities offer the pupils an opportunity to assume responsibility.

No place for aggression



A good schoolyard is where
the pupils take on
responsibility



- ▶ Violence prevention through social cohesion
- ▶ Joy instead of boredom
- ▶ Identification by means of involvement and participation
- ▶ Pupils take on responsibility

Participation promotes social cohesion

Every child should help to clean up their own room. This is part of the learning process required to develop a sense of responsibility and a value system.

It should be the same for the schoolyard. Here too, it is important to involve the children and adolescents in the maintenance of the facilities: raking foliage, watering plants, sweeping sand, caring for plant beds, collecting rubbish, helping the caretaker with small repairs — all of these activities set standards for life.

If, on the other hand, all care and maintenance is left to other hands, the pupils take these things for granted and won't respect them.

Activities such as spring cleaning or hedge trimming, with the participation of the whole school community, promote social cohesion. Satisfaction, fun and togetherness should be the central focus. Ideally, such events always end with a party.



Joyfulness instead of boredom, play instead of aggression

Children and adolescents don't need a uniform schoolyard or an expensive, prefabricated design. A near-natural facility with scope for individual creativity stimulates the imagination and is rarely boring.

A schoolyard that meets the developmental psychological needs of the pupils arouses curiosity, creates zest for life and promotes social cohesion.

On the other hand, a lack of space for stimulating play, movement and communication creates potential for aggression and conflict.

If the pupils identify with their school and their schoolyard, they develop a greater sense of responsibility and learn to appreciate their school community and environment.

Having a say and helping shape the project lets them feel they are being taken seriously and will encourage them to commit themselves to the project. Identification is the best way to prevent vandalism.

With brush and hammer



A good schoolyard provides room for **artistic creation**

- ▶ Art creates atmosphere, forges identity and fosters individuality
- ▶ Pupils can get involved and realize their potential
- ▶ Art transcends classrooms and corridors
- ▶ Outdoor space inspires and expands thinking

Individuality and identity with a strong external impact

The schoolyard is predestined for art. Works of art create an individual atmosphere and forge a special identity. An artistic design leads to a greater appreciation of the schoolyard.

Pupils are given the chance to experiment and find ways to express themselves. Outdoor art is visible beyond the classrooms and corridors — for classmates as well as for parents, friends and passers-by. Creatively designed entrance areas, facades and fences are also particularly visible to people beyond the school community.

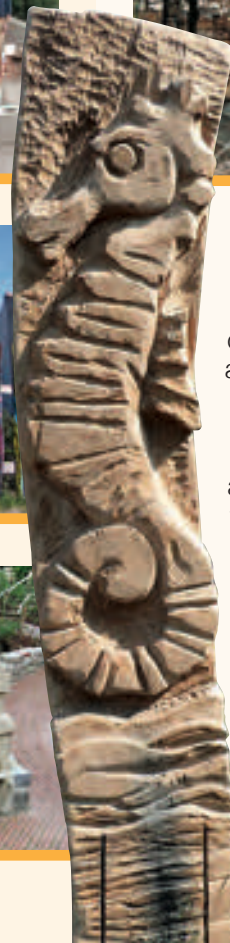
Artistic activity outdoors is also extremely stimulating. Nature combined with plenty of space is a source of inspiration. You can quickly make connections to the elements (for example, wind chimes). Those involved learn to think more broadly, to work in other dimensions, and are encouraged to develop the greatest possible external impact.



Active subjects

“Art education provides opportunities and creates openings for individual aesthetic experience, insights and modes of behaviour. Through it, pupils learn to get involved as acting individuals, where the tension between subject and object becomes an aesthetic experience. They perceive themselves as active and reactive subjects and develop trust in their own abilities.”

Quoted from the Berlin Framework Curriculum for Art (Translated from original German)



Places to chill out



A good schoolyard offers
places for retreat and
places to interact

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- ▶ Small-scale instead of large-scale
- ▶ Alcoves and niches instead of uniformity
- ▶ Meeting places for small groups
- ▶ Individual retreat options
- ▶ Shelter from the rain
- ▶ Nature promotes relaxation

Places for interaction and quiet corners

The schoolyard is a meeting place. Here is where the pupils spend their breaks — playing and hiding, getting to know each other, falling in love, scheming and arguing. There are outdoor lessons and celebrations.

Communication takes place in very different ways in the schoolyard. Children and adolescents shout, laugh, play, talk loudly and in whispers; they see and are seen — watch and are watched; they spend time alone, in pairs, and in groups.

A varied and versatile schoolyard meets all these needs. Pupils feel comfortable and less conflicts arise when they have the opportunity not only to meet each other but also to avoid each other.

► What about seating?

In the classroom, pupils have to sit on chairs. Outside, they can evolve their own stance: lounge around, lie, squat, relax and lean back, sit on a pole, and much more — let's encourage them!



► Places to retreat as meeting places

Peer groups need their own space. During breaks, they have their own places where they like to meet. A wind-protected spot, preferably green and shielded from the eyes of others, creates a sense of privacy and well-being.

► Outdoor spaces

To create an environment suitable for recreation and interaction, hedges, terrain remodelling, plant island beds, low stone walls or a combination of all these features, supplemented by comfortable seating or reclining facilities, can be implemented.

► The qualities of a tree

Sitting under a tree with its natural shade and pleasant microclimate is noticeably more comfortable than sitting under an awning. A tree offers the perfect opportunity to intensely experience the seasons with all your senses — from the blossoms to the density of leaves, from the colour of the fallen autumn leaves to the shape of the tree in winter.

Ready for climate change



A good schoolyard aids
climate protection



- ▶ A practical contribution to climate protection
- ▶ Setting a good example for children and adolescents
- ▶ Shaded areas through schoolyard greening
- ▶ Use of sustainable materials
- ▶ Tangible contribution to urban ecology through rich biodiversity

Leading by good example in climate protection

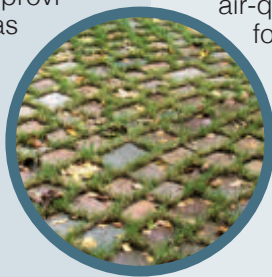
The schoolyard is linked with a central theme of the present and the near future – climate change – in three respects:

Firstly, sensibly designed schoolyards can contribute in a limited, but very concrete and effective way, to mitigating the harmful climatic greenhouse effect.

Secondly, playgrounds have an important educational function — providing a behavioural model as well as a medium for engaging with the subject.

Thirdly, a sustainable schoolyard should be prepared for the foreseeable consequences of climate change. For example, as the summers get hotter, it is essential to provide shaded areas that are as extensive as possible.

Rainwater can seep through the grass joints of large paving stones.



Wood chipping is a good protection against injury; it is ecological, climate-effective – and wheelchair accessible.

What should a climate-friendly schoolyard look like?

Greening: the greener, the better. Plants bind carbon dioxide, create a pleasant climate and provide shade. But they also bind dust and reduce noise, protect privacy, improve air-quality, and provide a habitat for insects and small animals.

It's not only possible to green large areas of the outdoor facilities, but also roofs and facades.

Unsealing: the less area that is sealed with asphalt,



Many native shrubs and bushes promote a healthy climate and rich biodiversity.

plastic, concrete and pavement, the more rainwater can seep away and evaporate. This will help maintain the water table. The majority of the schoolyard driveways and walkways should therefore be paved with water-permeable coverings.

Suitable here are pave-ways with lawn joints, lawn clinkers, lawn stones and gravel turf. Water-bound surfacing, on the other hand, is **unsuitable** as it requires too much maintenance.

Sustainable materials: When choosing materials, important considerations include how ecological they are in production, as well as how they can one day be disposed of.

Sport for everyone!



A good school playground offers a variety of **sports** opportunities



- ▶ Provision for outdoor exercise
- ▶ Natural facilities make exercise attractive
- ▶ Multiple use makes sense
- ▶ Allow space for creative incentives to exercise
- ▶ Opportunities for informal sports – not only sports lessons

Sports opportunities for every child and for a range of motivations

It's not just about grades and medals. It all starts with the fun of exercise. A lack of exercise, on the other hand, is often the cause of obesity and bad moods.

Let's go outdoors!

A nature-friendly schoolyard with a variety of resources encourages pupils to become active. It encourages them to be outdoors – to walk, run, jump and play around. These natural movements form the basis for all sport – school sport as well as competitive sport.

Here, the role that nature plays is very important. Studies show that pupils in schools with green surroundings spend more time outside.

Suitable sports facilities

Physical education usually takes place in the gym while competitive sports facilities are often available. A good schoolyard also provides additional running, jumping and ball game facilities. Cleverly integrated and coordinated within the availab-



le space, these facilities are suitable for both informal sporting activities as well as for physical education. Sometimes it makes sense to forego competitive sports standard measurements. With a large number of pupils, two separate small playing fields may make more sense than one large competition-sized field.

Street-ball and skating

There should also be opportunities for informal sports. Street-ball, bouldering, jogging, beach volleyball



*Top left: Triple use as jump pit, running track and basketball
Bottom left: Beach volleyball court incorporated into the landscape
Above right: Natural football field with wood chipping, bordered by Robinia tree trunks*

and skating complement physical education and can whet the appetite for competitions.

Sport for everyone!

The most important thing, however, is to encourage every child and adolescent to spend time outdoors and to exercise. In particular, informal sport opportunities outside of physical education also motivate pupils with poorer sports grades or who don't enjoy competitive sport.

We have a plan!



A good schoolyard is created with the active **participation** of the pupils



- ▶ Starting point is the as-constructed plan
- ▶ Workshops generate a wide range of ideas
- ▶ There is an analysis of routes and appraisal of the various spaces
- ▶ Usage of the areas is determined
- ▶ A good concept utilizes every corner

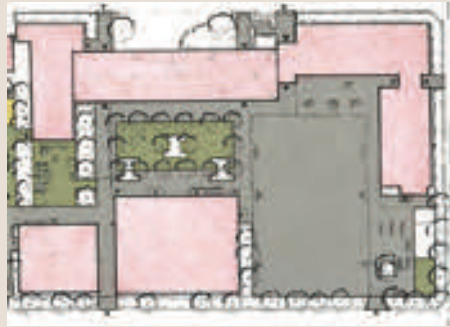
Pupils can contribute a lot during the planning phase

As with any building project, the redesign of a schoolyard needs to be well planned. But you cannot design a schoolyard that makes pupils feel comfortable and caters to their different needs from a remote architect's office.

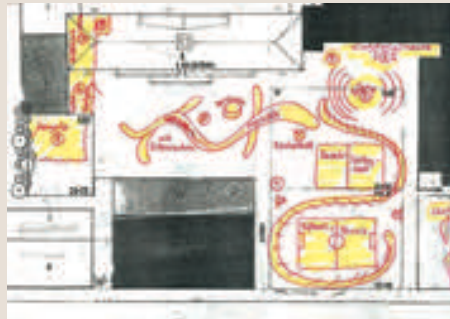
Experience shows that it is very helpful to involve the children and adolescents in as many details as possible during the planning phase.

It usually becomes very clear that young people prefer an organic design language. To make the best possible use of spaces designed for different uses, a number of steps are necessary: an initial assessment, an inventory of possible uses, a route analysis, and a determination of the various areas.

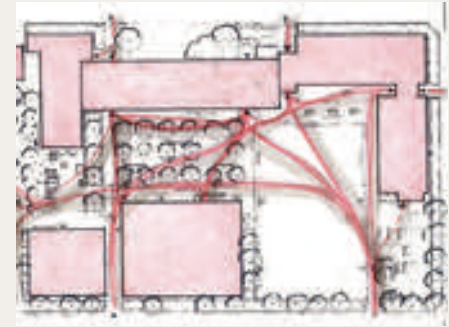
The examples show the work process at the B. Traven Community School in Berlin-Spandau.



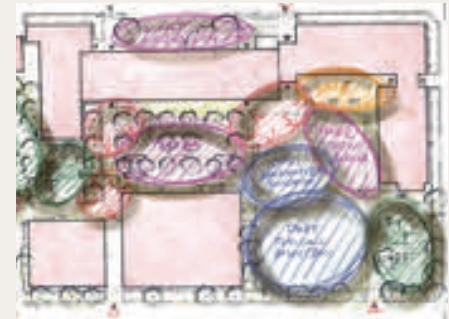
1. As-constructed plan: square, practical, conventional. Large areas sealed with concrete and asphalt generally prove uninviting. They seem dreary and boring!



2. The workshop results illustrate the variety of possible uses. Pupils prefer an organic design language in place of the initial plan.



3. The route analysis shows which routes are needed. The paths run right across the schoolyard, connecting buildings and entrances with one another.



4. Determination of individual areas for their later use: the requirements for sport, recreation, exercise, interaction and private retreat dictate the structure.

Form follows function



A good schoolyard needs
differentiated spaces



- ▶ Naturally designed areas can be used in many ways
- ▶ Organic forms promote well-being
- ▶ The choice of materials defines the atmosphere
- ▶ Transitions are better than boundaries
- ▶ Forgotten corners come to life

Organic shapes and natural transitions

Just a few decades ago, schoolyards were as uniform as possible. Large, sealed and lifeless open spaces followed an abstract, mostly rectangular order.

Numerous studies, however, have shown that such an architecture does not adequately meet pupils' needs for relaxation, communication, exercise and privacy.

Children and adolescents prefer organic, curved forms. A natural, diverse spatial structure usually ensures that the facilities are utilized to their full extent.

The boundaries and transition zones between different functional areas deserve special attention. The motto here is: connect instead of separate.

Hedging and shrubs as well as terrain remodelling can both screen and connect. Curved natural stone walls and irregular stone paving are a good alternative to uniform concrete border blocks. Wooden boundaries can make attractive



seating as well as providing opportunities for balancing and climbing.

No area should be forgotten: areas in front of the classrooms, blind spots, and areas fronting streets should be planted with a rich variety of plant species.

Form follows function

"It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function."

Louis Sullivan, Architect, USA



Diverse and barrier-free



A good schoolyard is attractive for children with and without **disabilities**



- ▶ Integration instead of exclusion
- ▶ Children with disabilities also want to play, climb, balance and explore the terrain
- ▶ Barrier-free, but not too smooth
- ▶ Woodchip is suitable for wheelchair use

Integrate and stimulate instead of overprotecting

Experiencing nature, exercise, and above all playing freely with people of the same age – all these are important for children with disabilities. Usually these children also want to do whatever the other children are doing. This is why it is essential to give such children barrier-free access to each area.

The schoolyard should not seek to create an illusory world only concerned with aspects of safety and ensuring the smoothest driving conditions for wheelchair users. Children with disabilities will also want to explore and experience this environment. For example, uneven ground can be exciting for wheelchair users, encouraging them to move more. Fall protection surface made from wood chips, for example, is easy to drive on.

A good school playground should

- ▶ offer a wide range of play options for children with and without disabilities,
- ▶ allow nature to be experienced with all the senses – by everyone.



Low, easily accessible play equipment for children with and without disabilities

In the special needs school “Schule am Pappelhof”, a balancing landscape was created as part of an art project. With very low entry, the installation offers pupils with restricted mobility a wide range of options and various levels of challenge. Children in wheelchairs use the channels in the horizontal tree trunks as a marble run. Featuring a ramp, there are also light strips to serve as orientation for the visually impaired.

Planting recommendations



A good school playground
is **biologically diverse**



- ▶ Many native species are very suitable
- ▶ Ornamental shrubs provide little food for animals
- ▶ The school garden has space for a variety of herbs
- ▶ Laburnum and cedar are not suitable

Native, robust, biologically diverse, insect-friendly

Many shrubs are suitable for planting in schoolyards. Depending on requirements, we recommend some of them below. Willow and dogwood have proven their worth in areas of particularly heavy use. Ornamental shrubs, on the other hand, provide little food for animals so they should only be planted sporadically. Prickly trees such as wild roses, hawthorn or sloe can serve as protective plantings. The aim should be a high degree of biodiversity.

Protective plantings on streets, facades and along fencing

Native trees up to four meters high and large-leaved species, e.g. wild roses, hardwood trees and various dogwood species

Defining a space, replanting play areas

Creeping willows, native trees up to four meters high, e.g. rosemary willow, white dogwood, cornelian cherry



Open areas in front of classrooms

Creeping willows, low roses for greenery, low native woody plants up to 1.5 meters, e.g. purple willow, woolly willow, finger shrub

Representative green areas

Ornamental trees, ground cover, perennials, grasses, e.g. wild roses, evergreens, weigela

Ball-catching fences and facade greening

The statics of fencing and plant climbing supports should be adequate for greening with climbing plants. Examples of suitable plants: wild vine, clematis, wisteria, hops, windlass.

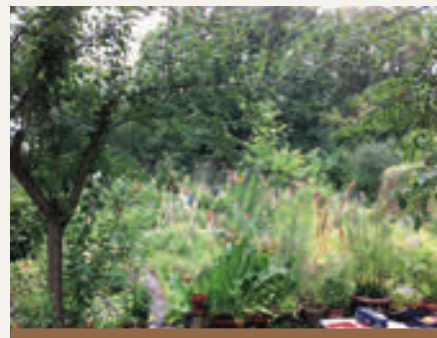
For the school garden

These plants are particularly suitable: strawberry, marigold, lily, agrimony, mugwort, catnip

Shrubs: blackberry, currant, quince, elderberry

Trees: apple, pear, plum, apricot, cherry

Herbs: sage, thyme, tarragon, savory, lemon balm, lovage, oregano, angelica, stonecrop, chives, curry herb, comfrey, lavender, mint, garlic, yarrow, mullein



Unsuitable shrubs

The following shrubs should not be planted in schoolyards: spindle, daphne, laburnum, holly, cedar

Quality standards in practice



A good schoolyard is
multifunctional



- ▶ Exercise stimulation and private retreat
- ▶ Sheltered areas for sociability
- ▶ Areas for creative, free play
- ▶ Shelter from the cold and rain

The needs of the users come first

The school outdoor area has many uses. It is somewhere to relax and learn, a world to experience, a space for sociability, play and exercise – a diverse, healthy living space for pupils in the city.

The outdoor facilities also provide an important showcase for schools.

For all of these reasons, it is important to achieve high standards of quality when planning and designing. In addition to the quantitative standards, individual needs of the users must also be taken into account when planning and realizing the open spaces, e.g. for relaxation, identification, warmth, security and a friendly atmosphere.

To identify these needs, a participation process involving the school community is needed.



The open spaces should accommodate the following uses:

- ▶ Resources that encourage exercise located on specially prepared areas
- ▶ Retreats for relaxation
- ▶ Sheltered social communication areas, especially for small and medium-sized groups
- ▶ Areas for creative, self-determined play and exploration

- ▶ Areas that can be adapted and changed
- ▶ Areas where you can experience nature (in the grounds / in the school garden)
- ▶ Areas for art and craft activities
- ▶ Shelter from the cold and rain
- ▶ Measures to improve the immediate environment (reduction of dust, heat and noise)

You can find more information at www.gruen-macht-schule.de

Quality standards in equipment



A good schoolyard offers
a wide variety of resources



- ▶ Equipment for climbing and gymnastics
- ▶ Space for ball games
- ▶ Fitness equipment for the older children
- ▶ Well structured spaces

Good facilities create good opportunities

To adequately meet the needs of the children and adolescents and to ensure they feel comfortable in their schoolyard, a range of quality standards must be met.

There are a variety of resources required to guarantee quality and sustainability. These include spaces for social interaction, relaxation and retreat in a green setting, natural areas with shrubbery, woodland-like areas, and carefully selected natural materials.

Younger students in particular need exercise, they want to play ball and let off steam. Play and exercise areas should be equipped with fixed playground and sports equipment, pavilions, rain shelters and barbecue areas. The areas should be well-structured and bordered, ideally with greenery.

Primary and secondary school students naturally have different needs. Here are some examples of facilities and equipment suitable for the different types of school:



All levels of schools

- ▶ Platforms for sitting and reclining, seating walls, mobile seating
- ▶ Outdoor furniture for a school dining terrace, meeting points and work areas
- ▶ Outdoor classroom (e.g. amphitheatre)
- ▶ Stage with forecourt area
- ▶ Table tennis in variants (standard and round table)
- ▶ Meeting points, e.g. pavilion, barbecue area, construction trailer, rain shelter
- ▶ Drinking fountain at or near the building
- ▶ Rubbish bin

You can find more information at www.gruen-macht-schule.de

Primary schools

- ▶ Play equipment for climbing (e.g. rope pyramid, climbing rock or climbing boulder, equipment combinations)
- ▶ Nature exploration area (bushy area with tree trunks, boulders and hiding places)
- ▶ Themed play equipment with tunnel or cave (e.g. ship, UFO etc.)
- ▶ Water and mud area (water pump, watercourse, mud pit)
- ▶ Small areas of sand for digging
- ▶ Swing (at least three-seat, preferably six-seat swings)
- ▶ Hill-slide combined with a landscaped hill
- ▶ Horizontal bars
- ▶ In-ground trampolines
- ▶ Balancing logs and beams (also in combination with ropes)
- ▶ Play equipment storehouse (at least 15 m²)

Secondary and vocational schools

- ▶ Sports equipment (e.g. outdoor fitness equipment)
- ▶ Beach volleyball
- ▶ Street-ball
- ▶ Furniture for chilling out and lounging around (e.g. hammocks, seating and reclining platforms)

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Contact/Distribution

"Grün macht Schule" – Freilandlabor Britz e.V.
Bernhard-Weiß-Str. 6, 10178 Berlin
Telefon: 49(0)30 - 90227 6704
E-Mail: GruenmachtSchule@senbjf.berlin.de
Website: www.gruen-macht-schule.de

Freilandlabor Britz e.V.
Sangerhauser Weg 1
12349 Berlin
dialog@freilandlabor-britz.de
Website: www.freilandlabor-britz.de

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