

PLANNING SCHOOL REOPENINGS

Contributions from
research on the benefits
of nature in school
education



The suggestions in this document should be considered in a complementary fashion to the official recommendations issued by the World Health Organization (WHO) and national health and education authorities.

Photo: Rinaldo Martinucci | Children and Nature program collection

Nature for healthy and integral development



Even before the beginning of the quarantine caused by the COVID-19 pandemic, children were already experiencing a different type of physical and social confinement. With most of the Brazilian population now living in urban areas, the everyday life of many children has been restricted to closed spaces. On one side, a decreased sense of security in public spaces, with few and

hard-to-reach [green areas in cities](#). On the other, children's routines and activities have increasingly consolidated around closed spaces as technology became a ubiquitous staple of modern life. This reality was already in place before, creating an environment in which children had few opportunities to enjoy the outdoors, with significant impacts on their integral and healthy development.



According to [studies and research](#), depriving children and adolescents from experiencing open and natural spaces has consequences for their health and development. Obesity, physical inactivity, low motor skills (lack of balance, agility and physical ability) and even myopia are some of the effects of restricting circulation and movement in outdoor areas during childhood and adolescence.

At the same time, many surveys have emerged in recent years showing that living with nature during childhood and adolescence prevents chronic diseases such as diabetes, asthma, obesity and others, in addition to promoting neuropsychomotor development, fostering mental well-being, balancing vitamin D levels and reducing doctor visits.

Contact with nature also helps foster creativity, initiative, self-confidence and the ability to choose, make decisions and solve

problems, which in turn contributes to the improvement of psychomotor coordination and the development of multiple languages - not to mention the benefits associated with socio-emotional development, such as empathy, learning to care for oneself, others and the environment, a sense of belonging and interdependence.

The Children and Nature program believes that actions organized both by multiple sectors of civil society and public authorities are essential if we are to promote childhoods that are richer in nature. Families, schools, and education, health, social assistance, environment and urban planning departments can all contribute to bringing experiences closer to nature and promoting a healthier development for all children in cities.

How can open and natural spaces help children return to face-to-face classes?



Considering the [benefits that contact with nature](#) brings to the integral health of children and the health security measures adopted to face the pandemic – among which figures prominently the need to avoid agglomerations –, outdoor learning

experiences can be a valuable element of school reopening protocols. After a long period of restricted movement and countless individual and collective losses, it is paramount that the emotional welcoming process of students include opportunities for physical interaction (respecting safe distancing rules) and movement in open areas.

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Together with pedagogical aids and health measures, these activities can also provide immediate health benefits to students and educators, including increased vitamin D intake through exposure to the sun and a stronger immune system. Partnerships with parks and recreational clubs close to schools, for example, can help foster new spatial arrangements for classes, avoiding agglomerations and the overcrowding of indoor spaces.



Back to school: the challenges

Schools halted all activity following the arrival of the COVID-19 pandemic in Brazil, a social distancing measure meant to flatten the contagion curve, avoid a collapse of the healthcare system and protect the health of students, educators and employees. The measure also sought to avoid exposing the elderly and people with co-morbidities living with students to the virus.

In March, states and municipalities announced different measures to guarantee the right to education during this period. Some schools anticipated school recesses or holidays, while others continued studies through out-of-classroom teaching activities, some of which mediated by digital technologies. Different resources were adopted by the public and private school networks, including network TV channels and radio stations, WhatsApp groups, online platforms, printed materials and more.

Despite the efforts of school managers and educators to continue classes and maintain the educational bond, not all students had their right to education ensured. The already-fragile link between students and schools, inequality in access to and use of technology and more people living under vulnerable socioeconomic conditions, among other factors, all contributed to increased socio-educational inequality and renewed concerns with dropout rates.

The debate on when and how face-to-face classes will resume should also consider a systemic and articulated view of its socioeconomic, pedagogical, health and accessibility dimensions. Brazil's 26 states and Federal District, with more than 5,000 municipalities in different stages of contagion of the disease, will face widely varying demands, challenges and impacts as the school community gets back to work.

According to data from the National Union of Municipal Education Managers (Undime), school reopenings will affect 38.7 million students (children, youth, adults and the elderly) in the municipal public network and 9.1 million students in the private school network, in addition to 2.7 million teachers and about 2 million school workers. All these people will circulate on our streets again, requiring urban mobility services such as public transportation and, eventually, the more recurrent use of health services in the wake of new waves of COVID-19 infections.

In this context, and based on the experiences of other countries and different guidelines developed for planning the resumption of classes, such as those organized by Undime, THE NATIONAL COUNCIL OF EDUCATION SECRETARIES (CONSED), THE BRAZILIAN SOCIETY OF PEDIATRICS (SBP) AND CIVIL SOCIETY ORGANIZATIONS, SCHOOL NETWORKS ARE NOW EXPECTED TO BUILD THEIR OWN PROTOCOLS, WHICH MUST RESPECT THE GENERAL DIRECTIVES OF THE ABOVE INSTRUMENTS.

KEY RECOMMENDATIONS FOR THE CREATION OF PROTOCOLS

- Set up a multi-sector commission in the municipality or state, with the participation of local departments (e.g. health, social assistance, environment, transport and urban mobility, and works and infrastructure), to ensure plans for the reopening of schools take into account the different contexts and realities involved;
- With the decrease in municipal revenues, investments in education are under enormous pressure and risk. And yet, infrastructure works and adaptations with medium and long-term impact on schools that were already necessary are now even more paramount. The creation of outdoor spaces, such as playgrounds and open yards within schools, deserves priority in school budgets. As data from a UNESCO Report (2018) already showed, there are outdoor space asymmetries within the educational system itself. For example, in early childhood education, only 40% of preschool buildings have a playground, about 33% have an outdoor

yard and only 24% have green areas. This type of investment also converges with Goal 6 of the National Education Plan, which focuses on promoting comprehensive education, and especially with strategy 6.3, which establishes the National Program for the Expansion and Restructuring of Public Schools and emphasizes school infrastructure as an integral part of providing quality education;

- Develop a training and monitoring strategy for the return of education professionals to school, offering educational and emotional support for demands arising from the pandemic;
- The reopening process will require phased and continuous plans for how students will be consulted, welcomed and assessed so school can understand their different needs, levels of learning and social isolation impacts in different contexts;
- Create management plans for use of spaces (both those in each school and spaces shared by the whole network) as a measure of student reorganization, ensuring safer circulation of people and preventing crowds in school spaces;
- Network-wide and per-school time management plans (daily workload), with schedules accommodating a possible extension of the school year to 2021 so learning rights can be guaranteed;
- Adoption of hybrid education modalities with new arrangements between face-to-face and remote learning (mediated or not by digital technologies), ensuring all children have access to them;
- Gradual resumption of different teaching stages, with 15-day intervals between them, in order to allow time for adjustments, assessments and new sanitation measures. These include: 1 m (4 ft) distancing of desks and people; markings on the floor to direct circulation and positioning; staggered times for entry, exit, snacks and breaks; use of individual water containers; use of masks by students and Personal Protective Equipment (PPE) by employees; adoption of respiratory etiquette measures; hand hygiene (sinks with soap dispensers, paper towels and alcohol gel containers); rigorous cleaning and disinfection of environments.

Outdoor learning and educational territories as tools to aid school resumption protocols



To help implement the recommendations and measures already proposed for a safe return to school, protect people's health and increase schools' capacity to serve students, the Children and Nature program, relying on studies by health experts, historical references and international experiences, has prepared this material to offer suggestions for the use of green areas and open spaces inside and outside schools as classes resume.

These suggestions must be tailored to the challenges of each different context or reality. We are aware that it will not be possible to implement these measures as described in many situations and places

that do not have the conditions for it or cannot tap into free areas suitable for use. That does not impede, however, that steps be taken for their immediate adoption where they *are* possible, and that better conditions be sought where they aren't.

By developing networks within the different school districts affected, we believe that it is possible to plan reopenings in a way that prioritizes the safety of students, families and employees in the education system and offers alternatives to fulfill the right of children and adolescents to be free to enjoy outdoor experiences, all the while helping to better implement health protocols.

Photo: Rinaldo Martinucci | Children and Nature program collection



1. Expand the intersectionality of planning commissions to increase their capacity to serve students

We recommend the inclusion of representatives from urban planning, environment, sports and leisure departments in the state and municipal commissions tasked with planning and defining the school reopening protocols, taking into account the different contexts and realities involved. Outdoor classes carried out in partnership with public facilities and agencies or with organized

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civil society (parks, open yards, open courts, community spaces and public swimming/leisure areas), acting here as a complementary component of other educational plans, can help promote better health for students and increase service capacity in the school network. Outdoor classes are part of the recommendations published by the Brazilian Society of Pediatrics (SBP).

Photo: Rinaldo Martinucci | Children and Nature program collection



Photo: Rinaldo Martinucci | Children and Nature program collection



2. Temporary classrooms



We recommend establishing partnerships with municipal parks and leisure areas and the use of public squares around schools for classes (as stated above). These partnerships improve cost-benefit ratios and promote budgetary synergies between the different city/state departments involved in creating and enabling temporary classrooms in

these spaces. We suggest, for example, using the trimmings from pruned trees to build benches that can be arranged in a semicircular half-moon shape (with safe spacing between them) to function as temporary classrooms, or the use of picnic areas that already have tables and benches. Partnerships between schools and community facilities will require a mobility, accessibility and circulation plan for the school district that prioritizes short-distance travel as a means of avoiding the use of public transportation. Consideration should also be given to planning transport and access strategies for persons with disabilities. It is worth remembering that the routes between schools, students' homes and community reference spaces have educational potential.

Photo: Green Schoolyard America Collection



3.

Leverage schoolyards



We know that the school system has disparities and asymmetries in relation to outdoor spaces and contact with green areas. However, for those schools that do have spaces like open yards, for example, it is possible to organize desks around them to teach classes on days when it is not raining.

Since children feel compelled to play and socialize in these spaces, it is important to establish social distancing measures and other forms of prevention of COVID-19 infections.

Photo: Green Schoolyard America Collection

4.

Simple teaching and learning materials



Clipboards, portable whiteboards or flip-charts are all reliable study materials for use in these open areas.

These spaces can also be used for arts and physical education classes.

5.

Prioritize outdoor spaces to welcome children



Children have a need to play freely. Outdoor spaces can be prioritized to welcome early childhood education students, which brings the added bonus of increasing the capacity of physical spaces in schools (which can be re-purposed for older children and adolescents). The National Curricular Common Core (*Base*

Nacional Comum Curricular, or BNCC) establishes play and social interaction in fields of experience as a key concept for early childhood education, emphasizing an organization model that is not guided by discipline. As such, nature is clearly a very propitious field of experience for this moment of the educational journey.

Photo: Rinaldo Martinucci | Children and Nature program collection

6.

Trusting student self-regulation



Many people may find it difficult to teach in open spaces because they allow for more dispersion. Outdoor or semi-open-room learning experiences, such as those adopted by the Ágora School (an innovative private school in its choice of classroom

model), count on the self-regulation ability of students themselves and on everyone's collaboration in favor of the success of the return to school, both with regard to learning itself and the strict following of sanitary measures, with constant hand cleaning.

7. Efficient communication with families



One must be very careful when communicating with students' families. Providing them with the opportunity to participate in the planning for resumption of classes as a collective process is essential. Volunteer parents who are available to assist with (and even propose) some activities can be a great asset when working with smaller groups of students.

Photo: Rinaldo Martinucci | Children and Nature program collection



It is paramount to develop multi-sector actions that take seriously what the Federal Constitution points out in its Article 227: that it is the duty of the family, society and the State to ensure the rights of children and adolescents, and to think very carefully about the right moment to return to school, taking into account children's best interests, as guaranteed by the International Convention on the Rights of the Child.

Nature as a tool of welcoming for educators and students



Another aspect that has been discussed while planning the resumption of classes is the **need for a welcome period for everyone who arrives**. Studies have shown the emotional/psychic impact of confinement and social isolation in children. If, on the one hand, effects such as obesity, learning disorders and myopia were already well-known consequences of **the outdoor circulation restrictions to which children were exposed**, these are now added to other mental health effects: reduced physical activity, increased use of screens, severely depressed income, food insecurity, poor access to drinking water and domestic violence are a few of the factors that can worsen the integral health of students.

Experts believe that anxiety and depression are some of the symptoms that can extend over time as a result of toxic stress, as shown by a [study](#) that looked at the impacts of social isolation and its consequences on the mental health and development of

children. The [article](#), by Beatriz Portinari, brings up some of the factors that have worried psychiatrists and psychologists: *“The mental health problems come not just from fear of an invisible virus, but also from social distancing. Several preliminary studies point to a relationship between long quarantines and greater psychological distress, which can manifest as nightmares, night terrors, fear of leaving home or that the parents will return to work, irritability, emotional hypersensitivity, apathy, nervousness, difficulty concentrating and even a slight delay in the child's cognitive development.”* The article presents data from studies concluding that massive trauma, such as in major natural disasters, can unfold gradually and last over long periods of time.

Schools must **plan for moments that cater to the emotional, physical and social aspects of those returning to classes**. In addition to possible cognitive consequences,

schools should also consider rearranging curricula to include care-based education proposals. In fact, the **National Curricular Common Core (BNCC)** highlights essential learning about care among the general competences to be developed throughout the whole basic education cycle,.

NATIONAL CURRICULAR COMMON CORE

To know, appreciate and care for oneself, physically and emotionally, understanding oneself in human diversity and recognizing one's emotions and those of others, with self-criticism and the ability to deal with them.

Comprehensive education, a BNCC commitment, underlies the understanding of a teaching and learning process that takes into account all human dimensions, connecting to students' different lives and realities, and recognizes the need to go beyond proposals based on fragmented and disciplinary logics of knowledge.

NATIONAL CURRICULAR COMMON CORE

It recognizes that Basic Education should aim at education and global human development, which implies understanding the complexity and non-linearity of development, thus breaking with reductionist views that privilege either the intellectual (cognitive) dimension or the affective one. It also means undertaking a plural, individualized and integral vision of children, adolescents, youth and adults – considering them as subjects of learning – and promoting an education that is aimed at their acceptance, recognition and full development, with their singularities and diversities. In addition, the school, as a space for learning and inclusive democracy, must be strengthened by coercively practicing non-discrimination, non-prejudice and respect for differences and diversities.

We emphasize here that the planning for resumption of face-to-face classes must seek this balance by including activities aimed at emotional acceptance, body care

and cognitive development. Thus, it is important to realize that care and education must go hand in hand, and to understand that health measures must be associated with the quality of pedagogical proposals, taking into account the multidimensionality of ethnic-racial, socioeconomic and geographical inequalities that crisscross students' trajectories.

In this scenario, nature, open areas and territory are all important partners in school education. In addition to the benefits for integral health (as previously explained), we must focus on unwalling and conquering spaces beyond the school walls. All places are conducive to learning, not just classrooms: terrain, gardens, crops, nurseries, streams, beaches, dunes, open fields, and everything in the school surroundings: the neighborhood, the city, its geographical features, historic and picturesque spots, the mountains, the sea... In addition to acting as spaces for playing freely and relaxing, these places can also be explored as an environment for listening to stories, drawing and painting; learning spaces in which a diversity of knowledges can be explored.

The United Nations Convention on the Rights of the Child (UNCRC) also provides for the guarantee of the right to leisure and education so children can develop respect for the environment. Article 31 of the Convention specifically guarantees 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 and to participate freely in cultural life and the arts. Article 29, in turn, recognizes that education should be directed to “the development of **respect for the environment**”.

We highlight below some experiences, both from Brazil's history and those of other countries, that showcase how the use of open spaces for outdoor learning, combined with a complex set of health and pedagogical measures, can further qualify the planning for school reopenings.

School reopenings and outdoor schools



In 1904, during the tuberculosis outbreak, Berlin had its first [outdoor school](#) experience as a measure to reduce the risk of disease transmission. These practices were expanded after the Second World War in some European countries, such as England and France. Those experiences [are now being rediscovered](#) in the current pandemic, since, like tuberculosis, COVID-19 contagion occurs mainly via the airways and through contact with eyes and nose. Relying on open-air classes avoided the

concentration of people in closed places, curbing increases in transmission rates.

Studies by Erin S. Bromage, professor and immunologist at the University of Massachusetts Dartmouth College, corroborate this option. His [study](#) points out that the transmissibility of the coronavirus stems not only from one's distance in relation to perchigotes (the contaminated droplets of saliva that are propelled into the air by an infected person) in areas with agglomerations of people, but also to their time of exposure to the virus in closed environments. Although much research is underway to better understand the spread of COVID-19, the study indicates that the virus tends to dissipate very quickly outdoors. In an [interview](#) with BBC, he stated that, in open environments, "when a sick person sneezes, the germs dissipate very quickly". In addition, he adds that "wind and space dilute viral load, and sunlight, heat and humidity can also affect viral survival."

Photo: Archief National Collection



Some countries have relied on historical references of outdoor schools for their reopenings, literally thinking **outside the box**. Highlights include [Scotland](#) and [Denmark](#), where the measures being taken, especially for younger children, take into account **outdoor learning experiences** as a form of prevention associated with other health measures (such as constant hand washing). Another argument in favor of these spaces is that they make it easier to control social distancing by allowing for activities and snacks to happen in small groups.

Another movement, this time in the United States, has also raised this discussion through the [Green Schoolyards America](#) network. Simple ideas, like using picnic tables and benches, benches made from tree pruning trimmings, clipboards and mobile whiteboards all contribute to make learning outdoors possible.

Photo: Green Schoolyard America Collection



Children's Parks



In addition to international experiences, we also highlight the [Children's Parks](#) created by Mário de Andrade when he served in the city of São Paulo (1935-1938). These parks were part of a proposal for out-of-school education that saw a free childhood as a means to ensure the integral development of boys and girls. In practice, it represented a complete outdoor education experience, featuring even health services in these spaces.

As the recommendations prepared by [Undime](#) and [Consed](#) point out, the decision to resume face-to-face classes must be planned in partnership with multi-sector commissions that bring together different health and social assistance agencies and institutions. It is essential to include and establish dialogue

with the urban planning and environment areas to **allow for the use of outdoor spaces to welcome children during their return to school.**

Photo: Itaú Cultural Collection



Parks, many of which are also closed to the public, can (in a coordinated and planned manner) become valuable learning spaces in the process of reopening schools. Such efforts are strategic in reaching **target 6 of the National Education Plan (PNE)**, particularly the implementation of strategy 6.4 ("promoting the articulation of schools with different educational, cultural and sports spaces and public facilities such as community centers, libraries, squares, parks, museums, theaters, cinemas and planetariums").

Coordinated efforts for quality education



Finally, any coordinated efforts to resume classes must be in line with the need for quality education (Goal 7 of the PNE). The responsibility for the quality of education is shared between municipal, state and federal bodies, as recommended in PNE strategy 7.3 - a fact that only reinforces the need for cooperation between all stakeholders involved. It must be taken into account that these investments in infrastructure (such as yards, gardens, living spaces, tables and outdoor benches) will have lasting results for the improvement of teaching and learning conditions in schools, and also that these should seek to reduce disparities both in terms of infrastructure in school buildings and in terms of access to and improvement of conditions in open areas surrounding the schools.

Strategy 7.3 of the PNE:

to establish, in collaboration between the Federal Government, the states, the Federal District and the municipalities, a national set of institutional assessment indicators based on the profile of students and the body of education professionals, the infrastructure conditions of schools, pedagogical resources available, management characteristics and other relevant dimensions, considering the specificities of different teaching modalities.

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