OUTDOOR LEARNING

Outdoor Learning

School Type: KMH

Functional Area Descriptions
Outdoor learning, bringing the outdoors in and the indoors out, making connections, all of these things are discussion points in 21st Century education. The options are endless and will vary based on location, site, and climate. Some examples include outdoor classrooms, outdoor amphitheaters or performance spaces, plazas, gathering and socializing spaces, gardens for cultivation and demonstration, walking, jogging, running paths, and nature areas. The purpose of these spaces is to connect and engage the learners with the natural environment, further their health and social skills, and increase awareness of natural resources.

Outdoor learning areas should be provided to the greatest extent possible. Every neighborhood should have access to an outdoor classroom. The design of this space will be coordinated with the local school, taking into account ongoing programs, local topography, and other site specific opportunities. Outdoor classrooms may be at grade, or could potentially take advantage of vegetated areas of the roof. Convenient connections to outdoor learning spaces should be made from the neighborhoods and the commons. All exterior spaces should have good sight lines and be easy to supervise.

Outdoor learning and gathering areas should provide some seating and areas for shade. Some possible solutions for seating could be built-in benches, picnic tables, or raised planting beds. Shade structures should be freestanding and should be considered as site amenities, rather than part of the primary facility. Provide a combination of green space and hardscape.

Gardens provide great learning opportunities for students. The origin of food, the care of plants, the lifecycle of growing things, and many other connections can be made with the curriculum. If a garden area is provided it should be located in an area conducive to the cultivation of plants. Connections with other outdoor learning areas will reinforce multiple educational opportunities. A storage area should be provided near the garden area for the secure storage of tools and materials.

Other outdoor site features should be considered. Site features such as sundials, themed walkways, nature paths, bioswales, and other elements that make connections to the natural environment should be incorporated to complement the sustainable design features of the building and educational opportunities for the students.

NOTE: Images shown are intended to provide real-world examples and spark design creativity.
1 Amphitheater
An amphitheater is an outdoor performance space. This site feature could function on its own, or possibly be integrated with an indoor stage as double sided seating. Preferably, the seating area takes advantage of a natural slope. Often, the tiers are constructed as a combination of concrete and grass strips, wood or stone could also be provided. The amphitheater should complement the natural features of the site and all amenities provided should be durable and weather resistant. Consider the maintenance of this area during design.

2 Commons
Create at least one partially covered, climate appropriate outdoor space that has pedestrian connection from at least one place within common shared spaces to an exterior environment (ex. plaza, playground, water feature, facility learning experience).

3 Neighborhood
Create at least one partially covered, climate appropriate outdoor space that has pedestrian connection from at least one place within the general learning setting to an exterior environment (ex. plaza, playground, water feature, facility learning experience).

4 Drop-off and Pick-up Areas
Provide drop-off and pick-up areas surrounding any school building, regardless of grade level. There should be clearly identifiable bus and student drop-off and pick-up areas. These areas should be clearly defined and separated for ease of traffic and pedestrian congestion.

5 Gathering Space
Provide a large exterior space that includes open, maintained green space in combination with secondary hardscape (ex. sidewalks).

6 Community/School Garden
Prepare an expandable, fenced area for cultivation and harvest by students and/or community members.

7 Walking/Jogging/Running Path
Provide flexible perimeter path that offers opportunities for outdoor movement. Consider providing parkour equipment for enhanced physical development.

8 AT/FP (Anti-Terrorism/Force Protection)
Scale security and safety measures appropriate for children.

NOTE: Images shown are intended to provide real-world examples and spark design creativity.
SPACE TYPES & REQUIREMENTS

Site Circulation

School Type: E M H

Functional Area Descriptions
The exterior area of the school provides access, parking, recreation, and service areas. Insure a safe, functional, and aesthetically pleasing site. It must provide ADA accessibility and comply with all Anti-Terrorism / Force Protection (AT/FP) standards.

1 Site Layout
Siting a school complex poses unique safety considerations. Planners and designers should avoid creating blind spots. Multipurpose driveways and walkways should be sited to avoid conflicts between pedestrian and vehicular traffic.

2 Access and Circulation
Consider the hierarchy of entries and use the site to reinforce the function of each. Include access control considerations. Provide a clear path around the building for security and surveillance.

Provide separate entrances and exits for the bus loading area and the Privately Owned Vehicle (POV) parking areas, if possible. Separate POV parking areas and bus drop-off locations. Locate bus loading/unloading zones away from general parking areas and the associated traffic flow.

Planning Requirements

<table>
<thead>
<tr>
<th>Site Circulation</th>
<th>Spaces</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Staff Parking</td>
<td>2 spaces per learning studio</td>
<td></td>
</tr>
<tr>
<td>3 Visitor Parking</td>
<td>10% of student enrollment</td>
<td></td>
</tr>
<tr>
<td>3 Student Parking</td>
<td>20% of enrollment grades 11-12</td>
<td></td>
</tr>
</tbody>
</table>
Plan the bus circulation and drop-off area so that busses never need to backup. Where possible, plan a one-way loop near the building entrance. Provide bus zones with a large waiting area to handle students at dismissal.

Provide sidewalks for all areas where students approach or exit the school. Paths from playgrounds and fields to building entries should avoid crossing vehicular traffic.

Accommodation of chiller enclosures, transformers, dumpsters, service entries should be arranged and consolidated where possible, to minimize vehicular traffic on site. Locate the service areas to avoid views from major approaches.

3 Parking
Local regulations usually determine parking requirements in most jurisdictions (including military). Military Planning guidelines (e.g. Mil Hdbk 1190) may indicate different standards. Parking allocation standards for POV parking should be coordinated with military installation planners during program/project development. Consider sustainability when sizing parking capacity.

Refer to the Planning Requirements table for parking space allocation.

Divide parking areas by use: visitor, handicap accessible, staff, and student. Conveniently locate the visitor parking and accessible parking near the front entrance of the school. Place the staff parking so that it does not visually dominate the building and open spaces. Provide parking islands as required by code and installation guidelines.

If the site is constrained, coordinate with installation officials regarding the joint use of adjacent parking areas for staff members and recreational sites for school activities.

4 Recreation
Refer to the outdoor learning, outdoor play and athletic field sections.

5 Service Area
This is an area used for deliveries, trash removal, and other essential services required to support the operations of the school. Locate just outside the support area of the building and visually screen from the predominant areas of the site. Provide physical enclosures for trash receptacles. If a dock is provided, verify the height of vehicles making deliveries. Provide for a local recycling program.

6 Planting
All planting requirements should be adapted to local climate. In general, provide native plant materials. Shade trees are desirable when parking islands are provided. Avoid low branching trees to maintain clear sight lines. Use a mix of evergreen and deciduous plant material to shade parking areas and service areas (i.e. refuse areas, loading docks, HVAC units) from adjacent uses. Consider sight lines near entrances when choosing and placing plant material.

Select non-poisonous, thornless trees, shrubs, plants, and ground covers that can withstand harsher conditions, such as sun, glare, heat, and reduced water supply. Choose trees and shrubs that require minimum maintenance and will not litter the parking area with leaves, fruits, and nuts. Provide enough clearance in planting islands to accommodate for vehicle overhang. All plantings shall comply with AT/FP standards.
Outdoor Play Areas

School Type: E M H K 1 2 3 4 5 6

Functional Area Descriptions
Outdoor play areas shall include open turf areas, hard surface areas, outdoor tables and seating (middle schools) and play equipment (elementary schools). At CONUS middle schools (DDESS), athletic fields may also be provided if the school participates in interscholastic sports.

1 Play Lot
The play lot serves as the primary exterior activity center for preschool and kindergarten children up to 5 years of age. Used in association with the kindergarten, pre-kindergarten, Sure Start and PSCD programs, locate the play lot adjacent to the neighborhoods they serve, or a short distance away with an accessible path. Separate the kindergarten from the pre-kindergarten and Sure Start areas. A professionally designed play lot should accommodate the number of students it serves, site constraints, and specific equipment requirements. The play lot must comply with US Consumer Product Safety Commission (CPSC) and Americans with Disabilities Act (ADA).

Conceptual Plan

Planning Requirements

<table>
<thead>
<tr>
<th>Area Description</th>
<th>SF</th>
<th>M²</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outdoor Play Areas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Play Lot</td>
<td>3,000</td>
<td>279</td>
<td>+800sf (74m²) / classroom served (over 2)</td>
</tr>
<tr>
<td>1 Play Lot (enclosed storage)</td>
<td>100</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>2 Elementary/Middle School Playground</td>
<td>21,780</td>
<td>2,023</td>
<td>1 - 100 students</td>
</tr>
<tr>
<td>2 Elementary/Middle School Playground</td>
<td>43,560</td>
<td>4,047</td>
<td>101 - 500 students</td>
</tr>
<tr>
<td>2 Elementary/Middle School Playground</td>
<td>87,120</td>
<td>8,094</td>
<td>501 - 1000 students</td>
</tr>
<tr>
<td>2 Elementary/Middle School Playground</td>
<td>130,680</td>
<td>12,141</td>
<td>1001+ students</td>
</tr>
</tbody>
</table>

NOTE: Adjacency plan shown above is intended to provide an example to spark design creativity.
The minimum size for the play lot is 3,000 sf (279 m²). An additional 800 sf (74 m²) per learning studio served (over 2) shall be provided. Each play lot should have enclosed outdoor storage of at least 100 sf (9 m²) which can be secured.

An enclosed area with age appropriate play equipment and special facilities shall be provided, including:

- Provide play equipment such as climbers, slides, play walls and playhouses, play sculptures, and a play sand area conforming to the US Consumer Product Safety Commission Guidelines (CPSC) and Americans with Disabilities Act (ADA). Play sand areas may only be used if the area is fenced and can be segregated from dogs and cats.
- Locate and arrange equipment with adequate surrounding space in small, natural play groups.
- Locate playhouses, and play sculpture away from equipment like swings and slides for safety.
- Ensure that all elevated play structures are at least 6 ft (1.83 m) away from any hard surface.
- Provide a CPSC compliant Playground surface. These may include, but are not limited to poured rubber, rubber tiles or engineered wood fiber.
- Provide adequate drainage for playground surfaces.
- Provide tree-shaded areas for quiet activities, somewhat removed from the active play areas, i.e. play tables and activity panels.
- Fully develop the playground with landscape planting for activity and traffic control and to increase the interest and attractiveness of the playground.
- Avoid trees, shrubs, and ground covers with thorns, poisonous parts, or that attract bees. Also avoid trees with fruit or nuts.

2 Elementary/Middle School Playground

The playground serves children from 5 to 12 years of age. A professionally designed playground should accommodate the number of students it serves, site constraints, and specific equipment requirements. The playground must comply with US CPSC and ADA.

Age appropriate play equipment and special facilities shall be provided, including:

- Locate the playground equipment area adjacent to the school.
- Disperse popular or heavy use equipment to avoid crowding and locate exit slides in non-congested areas.
- Avoid rung ladders and climbing components as the sole means of access to play equipment.
- Consider prevailing sun angles. Keep slides out of the heat of the sun by locating the slide surface facing north. Use plastic slide surfaces only.
- Provide a CPSC compliant Playground surface. These may include, but are not limited to poured rubber, rubber tiles or engineered wood fiber.
- Provide adequate drainage for playground surfaces.
- Provide tree-shaded areas for quiet activities, somewhat removed from the active play areas, i.e. play tables and activity panels.
- Fully develop the playground with landscape planting for activity and traffic control and to increase the interest and attractiveness of the playground.
- Avoid trees, shrubs, and ground covers with thorns, poisonous parts, or that attract bees. Also avoid trees with fruit or nuts.
- Consider security when developing landscape planting. Keep shrubs under 3 ft (91 cm) in height and tree limbs at a minimum of 7 ft (2.1 m) above each designated play surface or use zone (ASTM 1487-07).

**Open Turf Areas**
Open turf areas shall provide space for informal active games for elementary school students. An area for field games including softball, touch or flag football, and soccer shall be provided for middle school students. Place the field games area on fairly level, well-drained land. Provide a shaded area for quiet activities such as reading, story-telling, and quiet games.

**Paved Hard Surface Areas**
A paved hard surface area shall be provided. This space should be large enough for activities such as hopscotch, four square, jump rope and other outdoor games. Set off the paved multipurpose area from the other areas by plantings and locate near the school gymnasium. Create a division between active, energetic spaces and quiet, discovery zones. At the elementary school level, several basketball hoops shall be provided at 6 ft (1.83 m), 8 ft (2.44 m), and 10 ft (3.05 m) heights, spaced far enough apart to avoid collisions when multiple baskets are in use. At the middle school level provide full basketball courts with regulation height baskets.

**Outdoor Tables and Seating (Middle School)**
At the middle school level, outdoor tables and seating may be provided near the dining area for outdoor dining or socializing at lunch or recess times.

**Play Equipment**
Separate play equipment areas shall be provided for pre-k and kindergarten children up to age 5 and older elementary children ages 5-12. Play equipment is not typically provided at the middle school level. The area for the younger children is called the play lot. It is a fenced area adjacent to the neighborhoods it serves, or a short distance away along an accessible path. A separate playground serving children ages 5-12 shall be provided at all elementary schools. Play equipment meeting ADA standards shall be provided at all age levels.
ATHLETIC FIELDS

1 Athletic Fields
DoDEA-Americas (DDESS) (CONUS)
Middle and high schools: For all DoDEA-Americas middle and high schools provide a football/soccer field with a 400 meter track, a baseball field, and a separate softball field. For schools with an enrollment over 200 and participation in interscholastic competitions, a practice field (football/soccer) shall also be provided, space permitting. The number of outdoor basketball and tennis courts will depend on the size of the school and the school program.

DoDEA-Europe and DoDEA-Pacific (DoDDS) (OCONUS): Middle schools: After school athletics for middle school age students are the responsibility of youth services. Refer to outdoor play areas for field, paved and equipment areas to be provided.

Functional Area Description
Sports fields are the primary active outdoor area for middle and high school students. Planning a multipurpose athletic field complex at a school has several advantages: fields can share the lighting and irrigation systems, they conserve land use, and they allow for concentrated and more cost-effective maintenance.

Planning Requirements

<table>
<thead>
<tr>
<th>Area Description</th>
<th>Spaces</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Fields</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a Track and Field, Football/Soccer Field Bleacher Seating</td>
<td>1.7 seats per student in schools with up to 400 students</td>
<td></td>
</tr>
<tr>
<td>1a Track and Field, Football/Soccer Field Bleacher Seating</td>
<td>1.6 seats per student in schools with between 401-800 students</td>
<td></td>
</tr>
<tr>
<td>1a Track and Field, Football/Soccer Field Bleacher Seating</td>
<td>1.5 seats per student in schools with over 801 students</td>
<td></td>
</tr>
<tr>
<td>Field House</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a Concession</td>
<td>290</td>
<td>24</td>
</tr>
<tr>
<td>2b Concession Storage</td>
<td>100</td>
<td>9</td>
</tr>
<tr>
<td>2c Men’s and Women’s Restrooms</td>
<td>530</td>
<td>49</td>
</tr>
<tr>
<td>2d Team Equipment Storage</td>
<td>1,200</td>
<td>111</td>
</tr>
<tr>
<td>2e Covered Area</td>
<td>200</td>
<td>12</td>
</tr>
</tbody>
</table>

2,120 197

NOTE: Images shown are intended to provide real-world examples and spark design creativity.
High schools: provide sports fields in the following order, as space permits: football/soccer field with a 400 meter track, basketball, tennis, softball, and baseball. Priority shall be given to sports which are represented and participating in interscholastic competitions.

**Site Layout**
The following guidelines should be considered in developing a site layout for the sports fields:
- Optimum orientation for sun and wind control.
- Circulation for players and spectators.
- Buffer zones between action spaces.
- Access from showers, classrooms, parking, and buses.
- Grading and slope for drainage.
- Layout, dimensions, and amenities shall be designed in accordance with the National Federation of State High School Associations (NFHS) Court and field diagram guide.

**1a Track and Field, Football/Soccer Field Bleachers, and Press Box**
- Provide a 400 meter, all weather running track with 6 lanes for schools with less than 400 students and 8 lanes for schools with 400 or more students.
- Include high jump and pole vault within the perimeter of the running track. Place the discus throw, shot put, and long/triple jump outside the track area. The pole vault and high jump should be placed where they won’t interfere with the bleachers.
- Include the soccer and football fields in the center of the running track. If space permits, provide a separate soccer field. A practice field is optional.
- Provide prefabricated permanent bleachers. Unless site conditions will not allow, divide bleachers into home and away sides. Provide 70 percent of the seating capacity on the home side of the field. Total seating capacity shall be based on the planning requirements table. Round to the nearest modular dimension for the prefabricated units.
- Provide a press box centered at the top of the bleachers on the home side of the field. It shall be totally enclosed with windows in the front and sides. Provide seating for eight people at a counter along the front wall. Provide two LAN drops and four electrical outlets above the counter.
- Provide lighting on competition sports fields only.
- Typical orientation for the football field is in a north/south direction.
- Provide a scoreboard on competition sports fields only.
**1b Baseball and Softball Fields**
- Baseball and softball fields shall be separate. Common dimensions for a baseball field are 360 ft x 360 ft (110 m x 110 m); softball fields are typically 320 ft x 320 ft (98 m x 98 m).
- Optional batting cages (if applicable, based on existing physical education sports program).
- Provide lighting on competition sports fields only.
- Typically the baseball and softball fields should be oriented so that the batter is looking north when standing at the plate.

**1c Tennis and Basketball Courts**
- Provide two basketball courts for schools with less than 400 students and three basketball courts for schools with 400 or more students.
- Provide two tennis courts for schools with less than 400 students and three tennis courts for schools with 400 or more students. Three courts minimum shall be provided for competition.
- Typical orientation for the length of basketball and tennis courts is north/south.

**NOTE:** the example conceptual plan shown is intended to spark design creativity.
2 Field House
The field house supports all outdoor sports activities by providing covered space for a variety of support activities, as outlined below.

2a Concession
The concession area shall have ample counter space for appliances and serving the public. Provide roll-up shutter at the transaction counter. Provide double stainless steel sink. Provide small commercial ice maker for concession and first aid on the fields. Provide separate hand wash sink as required by code. Provide electrical outlets for reach in cooler and other appliances and vending, as required. Provide two LAN drops in the concession area.

2b Concession Storage
Provide lockable storage room accessible from the concession area.

2c Men’s and Women’s Restrooms
The men’s and women’s restrooms shall be sized based on the capacity of the spectator seating provided at the sports fields.

2d Team Equipment Storage
Provide storage areas for individual sports. Provide single, double or overhead rolling doors as required for existing equipment. If an overhead rolling door is used, also provide a single personnel door so that the rolling door is not the only access to the space. The storage areas can be subdivided with wire cages as required for secure storage for individual sports.

2e Covered Area
The area directly adjacent to the concession transaction counter and the entrance to the public restrooms shall be covered. Provide drinking fountains outside each of the restrooms. Provide enough covered area for queuing at the concession and/or restrooms.

Future Expansion
Future expansion area could be for expanding the public toilets, or for providing team lockers near the fields. The design of the facility should accommodate future expansion, if required.

NOTE: The conceptual 3D example shown is intended to spark design creativity.