Instrument Title: System for Observing Play and Leisure Activity in Youth (SOPLAY)

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SAMPLE SOPLAY/SOPARC MAPPING STRATEGIES

This document provides examples for the initial mapping of Target Areas.

Procedures for Describing Target Areas

1. Obtain a detailed map from school (PARK) officials.
2. Walk throughout the entire school campus.
3. Indicate precisely (draw) on the map each area that is available for physical activity anytime (e.g., before school, during lunch, and after school. Include areas that are used for physical education classes too.
4. Be sure to include all Target Areas, including: (a) basketball, volleyball, tennis, handball, and wall ball courts; (b) tracks, baseball, hockey, soccer, and other playing fields; (c) gymnasiums, weight training and multipurpose rooms; (d) grass, dirt, cement, matted, tiled or carpeted areas specifically available for users (e.g., students) to be physically active.
5. Number the Target Areas sequentially—in the specific order they will be observed during each rotation rotation. Establish a logical route (e.g., The first Target Area is the one closest to the main cafeteria door).
6. Store the finalized map of Target Areas in a specific "records" office.
7. Occasionally it may be necessary to add or delete a Target Area (e.g., campus/park construction). Designate only ONE person to add/delete Target Areas (e.g., the leader of the field observation team). This person makes the changes on the master map and provides revised copies to field observation team members.

Sample Operational Definitions of Environmental Variables (for Schools)

This section provides definitions and instructions to be used in completing mapping variables identified on the data collection sheet (see attached).

I. Fixed Setting:
Code Target Area as either (1) Indoors or (2) Outdoors.

II. Location of Target Area:

On School Campus: Area within the designated school boundaries.
Adjacent to Campus = Area, typically within an adjacent park or community center, used by students for school-related activities.

III. Area Type:
Assign each Area one of these codes. If not sure of the correct code, complete the comments box at bottom of data form.

1. Court Space: area marked for basketball, tennis, volleyball, and/or other court games. Contains permanent markings specifically for court games.
2. Play space: Self-contained outdoor area designated for physical activity.
3. Field: Large open area designed for activity. It may or may not have goals, backstops, etc.; cannot be described as a Court space.
4. Pool: consists of a wading or swimming pool and the surrounding enclosed space.
5. Weight room: specifically designated room that is equipped with strength/endurance machines (e.g., weight machines (e.g., nautilus), free-weights, bench press) and/or aerobic machines such as stair-steppers and stationary bikes.
6. Gymnasium: large indoor space primarily for physical activity and game play. It may or may not have seating for spectators.
7 and 8. Multipurpose room/Auditorium: designated indoor spaces that can be used for multiple functions, including physical activity, plays, and eating.
IV. Area Improvements:
Improvements are permanent modifications to areas such as lines painted on courts (e.g., basketball, tennis, and four-square courts); cuts in grass or field areas (e.g., baseball diamonds); poles or holes in the cement/blacktop for poles or standards (e.g., basketball hoops; tether-ball and volleyball poles, tennis standards, football goal-posts).

Do not record for temporary improvements (e.g., temporary chalk lines for field games, portable nets for tennis and volleyball, portable soccer goals).

CODING CONVENTIONS:
An improvement identifies what the area is primarily designed for, regardless of how it is used at a particular time. For example, a tennis court is recorded as a tennis court—even if children are playing soccer on it.

• Two erect poles are often used for football and soccer goals. Two posts = one goal.
• A basketball court consist of a hoop plus permanent lines painted on the Surface Area
• Each half of a basketball court is counted as one. Each hoop is counted as one.
• When there is a basketball hoop without a painted court, or if there is only a shooting key or foul line painted, record only the hoop. The numbers for hoops and for half-courts are not always equal.
• The number of diamonds and backstops may not always be equal.
• A wallball court is a single erected wall. It could be the back of racquetball courts if a court is also specifically painted for wallball.
• A racquetball court must have walls on at least three sides.
• A volleyball court has two tall permanent poles separating areas about 30’ by 30’ (one court).
• A tennis court has two short poles and equal amount of play space on both sides of poles (one court).
• All climbing apparatus within 50 feet of each other and in the same Target Area are counted as one. If the items are widely separated (i.e., beyond 50 feet), count each group of climbing apparatus as a separate area.
• Record a baseball/softball diamond only if the diamond is a dirt area surrounded by grass, and places for the bases (home, first, second, third) are permanently marked. Do not record partial cut-outs (e.g., for home-base only) or temporary bases thrown on a “field” to make a diamond.

V. Improvement Overlap:
Record yes (1) to identify Target Area has multiple improvements that overlap within the same space but cannot be used simultaneously. For instance, record 1 if the court space has poles and/or painted lines that could be used to identify games for basketball, tennis, and volleyball (but not simultaneously).

VI. Surface Area:
• sand: particles smaller than gravel, but coarser than silt (i.e., beach).
• dirt: earth, soil; dusty when dry and not impacted.
• gravel: loose, broken small fragments of rock.
• mats: rubber or plastic coverings of floor or ground (e.g., for tumbling, etc).
• cement
• grass
• carpet
• tile
• water
• wood
• other (specify, e.g., tarmac).
Sample Data Collection:
Procedures for Environmental Assessments

Before going to map Target Areas be sure to have data collection forms, 2 pencils with erasers, and a school map. Make certain to record/number the proper Target Area sequence on the data collection form. Enter School ID number, Date, Observer ID number, and whether or not the form is a reliability assessment. Under Reliabilities circle “0” for primary observer and “1” for the reliability observer.

Complete the following variables for each Target Area. If an Area is locked or under construction, schedule an additional appointment.

**Fixed Setting:** Identify as either indoors or outdoors.

**Location:** Record whether Target Area is part of the school campus or adjacent to it.

**Area Type:** Select only one code. If none are appropriate, enter code 9 and describe the type.

**Area Improvements:** Count the number of improvements and record in the appropriate box(s)
For example, walk around the entire Target Area #1, count the number of basketball half courts, record this number in the space under the column for Target Area 1 and across the row for basketball courts (half courts). Count and record the quantity for each Improvement type in each different Target Area.

**Improvement Overlap:** Code 1 = Yes if any of the improvements overlap each other or are dual-use improvements in the same Target Area (i.e., Target Area has both basketball court markings and tennis court poles and markings, but the two games cannot be played simultaneously). If different games can be played at the same time they are not considered overlapping, therefore code 0 = No.

**Area surface:** (surface codes are listed near the bottom of the data collection form):
- **Primary** = Most dominant ground surface within each Target Area (i.e., 51% or greater).
- **Secondary** = Second most prominent surface area (if there is one). (E.g., dirt track surrounds a grassy field). Record "0" if there is no secondary surface.

**Area Size:** Use a standard measuring wheel. Enter the square footage/meters for each Target Area.

Mapping Training and Reliability
Training for mapping should include:
1. Explanation of variables and the coding conventions (rules).
2. Demonstration of how to complete Mapping Variables on the data collection forms (use pictures of actual school Target Areas).
3. Presentation of pictures of different variables on the data collection form. Observers will record responses to the pictures on Mapping Variable data collection forms. Inter-observer agreements will be tallied and percentage agreement recorded. Observers will train until 90% agreement is achieved.
4. Discuss discrepancies, refinement of definitions, and protocol recommendations. Note discrepancies (inter-observer disagreements), tally, and discuss until 100% agreement is reached.
5. Trained mappers should go to schools/parks in teams of two (a Primary and a Reliability assessor). Each observer should individually assess and record for Fixed Setting, Location, Area Type, Area Improvements, Area Overlap, and Surface Area for each Target Area. They should then resolve any differences before leaving the location.
## Mapping Variables Data Collection Sheet

<table>
<thead>
<tr>
<th>Park ID:</th>
<th>Date</th>
<th>Observer ID:</th>
<th>Reliability? 1. Yes; 0 No;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fixed Setting:
1 = indoor, 2 = outdoor

### Location:
1 = school campus, 2 = adjacent to campus

### Area Type:
1 = Court Space, 2 = Play Space, 3 = Field, 4 = Pool, 5 = Weight Room, 6 = Gymnasium, 7 = Multipurpose, 8 = Auditorium, 9 = Other

### Area Improvements: (code total #)

<table>
<thead>
<tr>
<th>Area</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Basketball Hoops</td>
<td>1</td>
</tr>
<tr>
<td>b. Basketball Half Courts</td>
<td>2</td>
</tr>
<tr>
<td>c. Wall-ball Courts</td>
<td>3</td>
</tr>
<tr>
<td>d. Racquet ball Courts</td>
<td>4</td>
</tr>
<tr>
<td>e. Volleyball Courts</td>
<td>5</td>
</tr>
<tr>
<td>f. Tennis Courts</td>
<td>6</td>
</tr>
<tr>
<td>g. Four-square</td>
<td>7</td>
</tr>
<tr>
<td>h. Tetherball poles</td>
<td>8</td>
</tr>
<tr>
<td>i. Track</td>
<td>9</td>
</tr>
<tr>
<td>j. Climbing Apparatus</td>
<td>10</td>
</tr>
<tr>
<td>k. Baseball/Softball Diamond</td>
<td>11</td>
</tr>
<tr>
<td>l. Baseball/Softball Backstop</td>
<td>12</td>
</tr>
<tr>
<td>m. Exercise Stations</td>
<td>13</td>
</tr>
<tr>
<td>n. Long-jump Pits</td>
<td>14</td>
</tr>
<tr>
<td>o. Football Goal (each goal post)</td>
<td>15</td>
</tr>
<tr>
<td>p. Soccer Goal (each goal post)</td>
<td>16</td>
</tr>
<tr>
<td>q. Other (specify)</td>
<td>17</td>
</tr>
</tbody>
</table>

### Improvement Overlap: Yes = 1, No = 0

### Surface Area:
A. Primary
B. Secondary

1 = black top, 2 = dirt, 3 = cement, 4 = grass, 5 = carpet, 6 = mats, 7 = wood, 8 = tile, 9 = gravel, 11 = water

### Area Size: (square footage)

### Comments: