





### PLAYING WITH YOUR SHADOW

 **GOAL:** Have fun with shadows: see how they change and one can get rid of one's own shadow; understand that they come from light sources.

 **MATERIAL/ENVIRONMENT:** Sunny outdoors, or indoors with a strong light source, something to mark the ground, sticks and a piece of string, a round item (fruit, ball, etc.) Presence of an adult to guide the activity, no astronomical knowledge required.

 **AGE GROUP:** From 4 onwards

- Have the children stand and look at their shadow.
- Ask the children to try to draw/mark their shadow themselves – their shadow will move...
- Either have the children guess themselves that they can work in pairs or tell them to form pairs/groups and draw/mark each other's position and outline their shadows on the ground. This can be repeated a few times during the day, or at the same time on different days of the year – the shadow and its shape will change.



- Ask the children how they can disconnect from their shadows. The answer is: **Jump!** Children jump up and down and observe that their shadows leave their feet.
- Take a round item and put a piece of string through it. Hold the string straight vertically.
- Pull it up and down the string to illustrate how the shadow moves away from the object and back (see figure).
- Take a stick and stick it in the ground where the shadow of the round object is. Lean the stick against the round object and observe that it points towards the sun or the light source.
- Remind the children that if they are climbing somewhere and their shadow is on the ground, the sun is in exactly the opposite direction.
- Observe that the shadow of the stick is minimal when aligned towards the light source, whether the stick is stuck in the ground or not.

