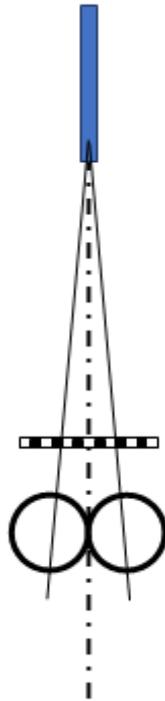| Activity name	Expected duration	Difficulty of the activity	Age of children for which the activity is suitable	Tools and material used	Objective of the activity
Practical Exercise 1:	1 lesson	medium	14 – 15 years	wooden metre, table or laboratory stand, tape measure	Introduction to the term parallax
Practical Exercise 2:	2 lessons	higher	12 – 14 years	tape measure, compass, drawing supplies, calculator	Introduction to methods of measuring distance in space
Practical Exercise 3:	1 lesson	medium	12 – 14 years	–	Introduction to scales for distances in the Solar System
Practical Exercise 4:	1 lesson	medium	12 – 14 years	–	Introduction to scales of planets in the Solar System

Practical Exercise 1: PARALLAX

The described activity should introduce the concept of parallax to pupils and its use to measure distances.

Aids:

- a suitable distant object (tree, lamppost, etc.),
- two hula-hoops (or two other aids to mark the two points from which the observation is done),
- length measuring tool (e. g. long wooden metre), table or laboratory stand,
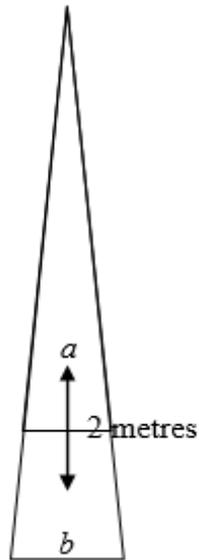- tape measure.

1. Assemble the system as shown. The centre of the wooden metre must be in the axis of the hoops and the distant object whose distance we want to measure and it must be at a suitable height, so that the object can be seen behind it (e. g. on a table or in a stand). The distance of the table with the metre and the hoops should bee two metres.

2. Depending on how high the metre is, stand or sit in the left hoop and write down behind what number on the metre you see the distant object.

3. Repeat the same when looking from the right hoop.

4. Then move the table with the metre two metres closer to the object (measure the distance with the tape measure).

5. Repeat the measuring in points 2 and 3 and write all the results in the table:

Distance of the close object (coffee table with metre)	The number on the metre that overlaps with the distant object ON THE LEFT	The number on the metre that overlaps with the distant object ON THE RIGHT
2 metres		
4 metres		

From the values in the table, calculate the bases of triangles a and b according to the figure and determine the distance of the observed object:

Calculations:

Answer the following questions:

a) What is the relationship between the distance of the object and the apparent change of position when viewed from a different perspective?

b) Where and how is this method used in astronomy?