



Spatial Orientation | Estimating Distances (by Using Your Thumb and Eyes)



Objective

Students can determine distances to objects with minimal effort. Additionally, they learn how to use their body in a simple way to gather geographical information, and often highlights how Mathematics can be practically applied and employed in our day-to-day lives.

Didactic-methodological legitimation

This method reifies the abstract concept of intercept theorem, and exposes its practical applications, and requires students to employ their mathematical knowledge and apply their theoretical understanding. Learners who have not already been confronted by intercept theorem can be familiarized with elementary geometry in practice. This method thus successfully combines Mathematics and Geography, making outdoor education both interdisciplinary and practice-oriented.

Advice on location

For this method, you need to find a spot where the object is in clear sight. You can also use other methods of distance measurement to validate your results. Calculating a distance by pacing might be adequate if there is an accessible route between yourself and the object.

Literature (German):

Universität Bayreuth (Hrsg.) (2001): BLK-Programm. Steigerung der Effizienz des mathematisch-naturwissenschaftlichen Unterrichts. Materialien zum Modellversuch: Vorschläge und Anregungen zu einer veränderten Aufgabenkultur, verfügbar: <<http://www.mathematik.uni-kassel.de/didaktik/sinus/pdf-Dokumente/12Strahlensatz.pdf>>, Zugriff: 2014-05-02.

Yachting, T. (2008): Navigation „unplugged“: Entfernungen schätzen auf See. <<http://www.teuto-yachting.de/Knowhow/know04/know04.htm#fuss>>, Zugriff: 2014-05-02.

