

An activity sheet for teaching double-slit interference

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This study aimed to enhance students' understanding in double-slit interference; especially the optical path difference. An alternative teaching tool called 'Activity Sheet' was developed and applied to the introductory physics class at Mahidol University in academic year 2016. The activity sheet contains a diagram of the double slit with two transparent strips. The sinusoidal wave pattern together with a ray of light printed on the strip was used to represent the light wave coming out of the source. Each strip is pinned at the point source and can be rotated around the pinned point. The results from the test indicate that most students realized the importance of the path difference after they had learnt with the activity sheet. In addition, most students from the interview said that learning with activity sheet helped them understand double-slit interference better and made it easier to visualize the superposition of interfering light waves.

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