

A new skate park is being built in town, and one of the major features is an incline that will allow skaters to accelerate at a certain rate. The designer of the skate park is a professional skateboarder who does not have a strong physics background. He has asked a group of local physics students to investigate two questions:

- Is acceleration constant down an incline whose angle is held constant?
- Does the acceleration of an object change when the angle of the incline changes?

Materials:

- inclined plane
- rolling object
- timer
- meter stick
- books to change angle of incline

Procedure:

You will need to devise two different experiments, each addressing one of the skate park designer's questions. Think about what you must keep constant and what you must change in order to answer each question.

Present your findings to the designer, providing supportive evidence from your experiments when answering his questions.