Appendix 1. Modeling and Construction Activity

Necessary Materials: Cardboard or thin board, Silicone or glue, scissors and bristle saw, toy car

Students are divided into classes of 3 or 4. Preparation questions given below are distributed to each group. Students are asked to answer questions about different inclined planes.

Preparation Questions		
	Pre-activity answers	Post-activity answers
Look at the two inclined planes. Describe what you notice about each plane?		
If you had to push something up on one of the inclined planes, on which inclined plane would it be easier to push something up? Why do you think so? How can you find out?		

Materials are then distributed to each group to construct the inclined plane securely. Students are tasked with designing three different inclined planes, each with a unique slope. They will engage in discussions to determine whether it is easier or more difficult for a car to navigate each inclined plane.

During these discussions, it becomes evident that cars can easily navigate inclined planes with smaller slopes, while they face challenges when attempting to traverse inclined planes with steeper slopes.

Upon completing the activity, students are asked to revisit the initial preparatory questions they were given at the beginning of the activity. They are encouraged to identify any changes in their ideas and explain the reasons behind those changes. This process is then further discussed as a class.