

Inclined Plane: On a Roll



Materials

- *Simple Machines* Video: <https://bit.ly/littlesteamersvirtual>
- A wall or door
- Paper towel rolls, TP rolls, Cardboard scraps
- Wall-friendly tape (masking or painters work well)
- A small spherical object (pom pom, cotton ball, marble, etc...)
- A small cup
- Stickers (optional—tape can be used)

Learning Objectives

I can explain how an inclined plane works to transport objects from one place to another

I can build a path of inclined planes to move an object from one place to another

I can identify examples of simple machines in the world around me

Skills



Problem Solving



Fine Motor



Creative Play

Exploration

Begin this activity by watching the *Simple Machines* video on YouTube—the **inclined plane** is highlighted around 7:44. In the video, they use an inclined plane as a ramp that makes it easier to put a barrel on top of a platform. You may wish to discuss:

- **Can you think of a time when you went *up* a ramp? Tell me about it.**
- **Can you think of a time when you went *down* a ramp? Tell me about it.**
- **Where have you see an inclined plane before? Can you think of some different examples?**

In this activity, learners are going to use inclined planes to help move objects from one point to another. Paper towel rolls, toilet paper rolls, or even just cardboard scraps can be used as inclined planes. An adult will mark the starting point on the wall with a sticker or piece of tape, and the mark ending point with a small cup taped to the wall (photo 1). Tell the learner that they have to use the given inclined plane materials and attach them to the wall with tape in such a way that they will transport the spherical object (pom pom, cotton ball, marble, etc...) from the sticker to the cup. It is suggested to begin with a 'simple' setup, that will only require the use of one inclined plane (photo 2). Once the learner is comfortable with the process and has had practice attaching the cardboard to the wall in a way that completes the task, feel free to move the start and end points further apart and allow more inclined planes to be used to accomplish the task (photo 3). During and after the activity:

- **Were you able to get the object into the cup? Explain how you did this.**
- **What was easy about this task? What was difficult?**
- **What kinds of changes did you have to make to your inclined plane(s)?**
- **How did you know where to put the inclined plane(s)?**

