





### PreK 4 - Simple Machines: Inclined Planes

<b>Objectives:</b>	<ul style="list-style-type: none"><li>• Gain a basic understanding of the various uses of inclined planes.</li><li>• Think about how ramps are used to make places accessible for everyone.</li><li>• Experiment with household items that can be turned into a ramp.</li><li>• Vocabulary – inclined plane, steep, slope, accessible</li></ul>	
<b>Careful Looking of an Artwork:</b>	<ul style="list-style-type: none"><li>• Look at the painting <i>Up or Down Hill</i> by Rayberry from the Smithsonian American Art Museum's collection: <a href="https://www.si.edu/object/or-down-hill:saam_1995.18.5">https://www.si.edu/object/or-down-hill:saam_1995.18.5</a></li><li>• Look carefully at the painting. Discuss the following questions:<ul style="list-style-type: none"><li>-What do you see?</li><li>-What does it make you think about?</li><li>-What does it make you wonder?</li><li>-What direction is the car going?</li><li>-The car is going down a hill. What kind of simple machine is the hill shaped like?</li><li>-What would happen if the hill was steeper?</li><li>-The hill is an inclined plane. Inclined planes can be found in nature. Can you think of any that you have seen?</li></ul></li></ul>	



<b>Video:</b>	<ul style="list-style-type: none"><li>• Ramps are another name for inclined planes.</li><li>• Watch a video by SciShow Kids called <i>Ramps: A Super, Simple Machine</i>: <a href="https://youtu.be/3COvm0TtxWg">https://youtu.be/3COvm0TtxWg</a></li><li>• Check out their website as well for more fun science information: <a href="http://www.scishow.com">www.scishow.com</a></li></ul>
<b>Lombard Street:</b>	<ul style="list-style-type: none"><li>• Lombard Street is a famous street in San Francisco.</li><li>• What simple machine does it remind you of?</li><li>• Why do you think the road needed to zig zag?</li><li>• What would happen if the road went straight instead?</li><li>• Can you find materials in your house to make a road that uses inclined planes?</li><li>• Image from: <a href="https://commons.wikimedia.org/wiki/File:Lombard_Street_San_Francisco.jpg">https://commons.wikimedia.org/wiki/File:Lombard_Street_San_Francisco.jpg</a></li></ul> 
<b>Play with Ramps:</b>	<ul style="list-style-type: none"><li>• Check out the following website for 15 activities to play and explore inclined planes: <a href="https://buggyandbuddy.com/15-ways-kids-explore-ramps-inclined-planes/">https://buggyandbuddy.com/15-ways-kids-explore-ramps-inclined-planes/</a></li></ul>
<b>Inclined Planes for Accessibility:</b>	<ul style="list-style-type: none"><li>• Inclined planes are very important simple machines because they ensure that everyone, regardless of ability, can have access to buildings and other spaces.</li><li>• To learn more about the history of disability rights look here: <a href="https://www.historyforkids.net/disability-rights.html">https://www.historyforkids.net/disability-rights.html</a></li></ul>



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Smithsonian Early  
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### Ramp Scavenger Hunt:

- Take a walk through your neighborhood. Can you spot any inclined planes?
- When you come home, draw a picture of a ramp that you found.

