Unit 5 Theme: Learning From the Past (Physics and Magnets)

Students will understand the relationships among energy, force, and motion.

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|  | **I can statements:** | No | Kind of | Yes |
| P6 | I can explain the difference between mass and weight. | Pre-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| P7 | I can explain how mass and distance influence the pull of gravity. | Pre-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| P8 | I can define work and explain how simple machines make work easier. | Pre-test |  |  |
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| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| P9 | I can describe and recognize examples of the 6 types of simple machines. | Pre-test |  |  |
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| Post-test |  |  |
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| P10 | I can label the parts of a lever and calculate its mechanical advantage. | Pre-test |  |  |
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| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| P11 | I can describe how friction opposes motion. | Pre-test |  |  |
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| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| M1 | I can list the advantages and disadvantages of maglev transportation | Pre-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| M2 | I can create a maglev route from Salt Lake City to New York and calculate time of travel and length of track needed. I can design a maglev car that will travel down an inclined track at the fastest rate possible (variables: maximize load vs. speed) | Pre-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| M3 | I can explain the basics of magnets and how maglev vehicles suspend above the track | Pre-test |  |  |
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| Post-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| M4 | I can calculate the acceleration of a maglev car traveling down a maglev track at various inclines. I can compare and contrast the actual accelerations to the theoretical accelerations | Pre-test |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Post-test |  |  |
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