

Balancing Forces Teacher/Coach Outline

Contact bfox@lodiUSD.net to schedule the coach lessons with your class.

Lesson	Who Teaches Lesson	Lesson Brief	Time
1.1	Teacher	Introduce the phenomena, students write initial explanations, intro notebooks	40 min
1.2	Science Coach	Introduce the problem, discuss initial ideas, making blocks move, sharing observations	60 min
1.3	Teacher	Set purpose for reading, read <i>Forces All Around</i> , sharing observations/draw conclusions, introducing science idea of change	60 min
1.4 (Act. T,1)	Science Coach	Observing forces in chain reactions, creating forces in chain reactions	25 min
1.4 (Act. 2-4)	Teacher	Modeling how to write scientific explanation, asking questions, write a scientific explanation	35 min
2.1	Science Coach	Investigating non-touching forces, making sense of magnet observations, diagramming magnetic forces, activating prior knowledge	60 min
2.2 (act 1-2)	Science Coach	Investigating and discussing what objects magnetic forces act on	45 min
2.2 (act 3)	Teacher	Reading: <i>Handbook of Forces</i>	15 min
2.3	Teacher	Magnet tricks, sharing and discussing magnet tricks, reading about magnets in <i>Handbook of Forces</i> , Think-Pair-Share: Magnet tricks	60 min
2.4	Teacher	Set purpose for reading, partner read <i>What My Sister Taught Me About Magnets</i> , sharing evidence and reading data tables	55 min
2.5	Teacher	Return to floating train problem, word relationships, reviewing then writing a scientific explanation	60 min
3.1	Teacher	Revisit floating train, investigating and asking questions about gravity, revisit <i>Forces All Around</i> , diagramming an example of gravity	60 min

3.2	Teacher	Revisit <i>Handbook of Forces</i> , discussing gravity between two objects, reading with a new purpose	60 min
3.3 (act T,1)	Science Coach	Discussing forces in a video, exploring forces in a chain reaction	40 min
3.3 (act 2)	Teacher	Word relationships	20 min
3.4	Teacher	Diagramming forces, discussing the falling train, writing an explanation of the falling train	60 min
4.1	Science Coach	Revisit floating train, investigating touching force/gravity and magnetic forces/other forces, discussing and writing about 2 forces acting at once	60 min
4.2	Teacher	Floating paper clip challenge (these devices are reused in 4.4), learning more from <i>Handbook of Forces</i> , Word relationships	60 min
4.3	Teacher	Reading: <i>Explaining a Bridge</i> , concluding discussion	60 min
4.4	Teacher	Diagramming and exploring the floating paper clip, discussing and modeling the floating train, writing an explanation	60 min
5.1	Science Coach	Unbalanced Forces on the Paper Clip, Analyzing Data About Forces, Planning and Conducting Investigations (25 min)	60 min
5.2	Teacher	Reading <i>Hoverboard</i> , Discussing Evidence from <i>Hoverboard</i> , Word Relationships	60 min
5.3	Teacher	Introducing Electromagnets, Reading About Electromagnets, Investigating Repeating Patterns of Motion	60 min
5.4	Teacher	Discussing and Modeling the Floating Train, Diagramming the Floating Train	50 min
5.5	Teacher	Writing a Scientific Explanation About the Floating Train, Revisiting Anticipatory Charts, Inventing with Magnets	60 min