Name:

Teacher Ideas and Questions: **Levers**

When students complete the activities on levers they should be able to explain how tools, crowbars, fishing rods and see saws work. They should fully understand the actions of levers. Show examples that levers are just rods/bars that rest on a turning point. Use the ruler as a lever to move an eraser (put the ruler on a book or object). Simple machines require force to work.

Samples of Levers: Scissors, stapler, golf club, bats, boat oars, wheel barrels, can openers, nut crackers, tweezers, brooms, rakes. *(Many simple machines contain more than one, for instance—scissors have a screw, wedges can also be levers, pulleys have wheels and axles, bicycles have many simple machines).*

1. Prompt students with, how would they lift or move a rock that was too heavy.
2. How would they pry a lid of something that was stuck?
3. Discuss seesaws and what happens when they put pressure on one end.
4. Fulcrums are like pivot points, discuss what it means to pivot.
5. Simple machines (levers) are devices that do work, brainstorm as many of these tools as you can.
6. Look through a variety of internet sites, books or magazines to find examples of levers. (simple machines)
7. Your body has many levers, can you think of some? *(arms, hands, legs)*
8. How many levers can you name that are used in sports? *(golf club, bat, lacrosse stick, boat oars, tennis rackets, hockey stick..)*
9. How many levers can you name that are used around the house? *(rakes, shovels, wheel barrels, can opener, nut cracker, broom, spoons, tweezers, back of hammer used as a <u>wedge</u> to pull out nails which means the hammer is a lever and a wedge, scissors…)*
10. List all the ways you can think of that simple machines/levers help us?
11. Simple machines require force to work. Levers, lift or move things. Brainstorm examples of force on levers.
12. Have students write fiction narratives from the perspective of their life as a type of a lever.
13. Brainstorm examples of levers are in the school? playground? neighborhood?
14. Use the example of a see-saw / teeter-totter—what happens if you aren't the same weight as your friend? How do you make the teeter-totter work? *(Child/ load moves closer or farther from the fulcrum)*