Newton's 3rd Law (in a nut shell)

-every force has an equal and opposite reaction force
-for every action there is an equal and opposite reaction

1. **Quick and Easy Lab:** This is what I am going to use, it looks like so much fun and visually really shows the equal but opposite direction concept. This is a you tube video of an inflated balloon taped to a straw. The balloon is released and as the air leaves the balloon the balloon on the straw travels along the string (the equal but opposite direction force to the air leaving the balloon). The string is anchored across the classroom. This can be done multiple times and the distance is recorded. You could have the students time it as well and then for students that are curious you could talk about speed (distance/time)

For the second trial inflate the balloon to half the size. What happens to the distance the balloon travels and the time it takes. With less air leaving the balloon the balloon will travel a shorter distance.

I am going to have the students do each balloon 3 times and record their data so 6 trials in total.

I have been working with my students on how to make a table or chart so this will be an easy way to reinforce those skills. The following is the you tube video showing the set up. All you need is a balloon, masking tape, a meter stick, string and a phone or stop watch if you want to talk about speed.

https://www.youtube.com/watch?v=F3OXJHkxWCA

2. Research : I may have the students do a bit of research first to discover the law and answer the questions, need a computer lab or laptops or IPADS
http://www.physicsclassroom.com/Class/newtlaws/u2l4a.html
http://www.physicsclassroom.com/Class/newtlaws/u2l4b.html

-the above two sites get students to predict/discuss the equal and opposite reaction force and then the students can check their predictions.

-identify the action/reaction pairs in exmples with more than two forces acting at a time

3. **Demo's or quick station labs**, 3 quick labs that could be done in addition to the balloon on the string up above or instead of.

http://www.groovylabinabox.com/4-groovy-ways-to-teach-newtons-3rd-law/

Sites & Resources :
http://www.education.com/pdf/newton-law-equal-reactions/

http://www.physicsclassroom.com/curriculum/newtlaws

Keri, this is a site I have used when translating the Science into French :

http://www.alloprof.qc.ca/BV/pages/p1014.aspx

Education World for the Venn diagram templates