Day 1: Jesus' power helps us do hard things!

"For I can do everything through Christ, who gives me strength." Philippians 4:13

For a long time, Saul persecuted the early Christians, having many of them arrested or even stoned to death. But then on a trip to Damascus, he "saw the light" – literally – and it not only blinded him, it changed his heart. Jesus asked Ananias, a devout Christian, to heal Saul's blindness but Ananias was scared. See, he knew any "litmus test of faith" showed Saul as an extremely strong enemy of Jesus and his followers. Going to that man was just plain suicide! However, Ananias' faith was strong too; he bravely went to that powerful enemy, restored his sight and helped Saul become the great Christian leader that he was destined to be – St. Paul.

Like Ananias and Saul, we can often see others as threats to who we are and what we believe – as caustic to our souls as a strong acid or base would be to our bodies– but Jesus neutralizes that fear and brings us together, helping us see each other as brothers and sisters rather than as enemies.

Cabbage Acid/Base Indicator

You need:
red cabbage
water (distilled is best)
a large pot
vinegar
baking soda
small clear glasses

1. Roughly chop the red cabbage, place in a large pot and cover with cool water.
2. Cook over medium heat until water is purple (about 15 minutes). Remove from heat and allow to cool.
3. Strain the cabbage, reserving the liquid; this is your acid/base indicator. (its pH is roughly 7, or "neutral")
4. To test pH of vinegar and baking soda: Fill two small clear glasses with some of the cabbage juice. Add 1 tsp vinegar to one glass and 1 tsp baking soda to another. Stir to dissolve the baking soda and note the colors. Which is acidic? Basic?
5. *Have more fun*: Try this test with other household substances (e.g. liquid soap, lemon juice, bleach, Coke®, etc.)
6. *Take it further*: Try to neutralize the baking soda/cabbage juice solution by adding drops of vinegar until the color changes back to purple (i.e. neutral).

What's the science behind our cabbage indicator?

Red cabbage contains a pigment called ***flavin*** (an anthocyanin also found in apple skins, poppies, and red grapes). In acidic solutions (pH <7), anthocyanins turn red; in basic solutions (pH >7), they will appear greenish and in neutral solutions, they're bluish purple. The stronger the acid or base, the deeper the color change will be. So, you can (roughly) determine the pH of a solution by the color that it turns the flavin in your cabbage juice.

ROCKY RAILWAY
JESUS' POWER PULLS US THROUGH