♦ Using Science Skills

Compound name	Formula
hydrochloric acid	HCl
hydrogen iodide	HI
~~lithium~~ chloride	LiCl
water	H_2O

26. Applying Concepts Write and balance the following chemical reactions.

27. Classify as decomposion, synthesis, single replacement, or double replacement

a. Hydrogen (H_2) reacts with iodine (I_2) to form hydrogen iodide.

___ H_2 + ___ I_2 → ___ HI

b. Lithium (Li) and hydrochloric acid react to produce hydrogen (H_2) and lithium chloride.

___ Li + ___ HCl → ___ H_2 + ___ LiCl

c. When you run an electrical current through water, you get hydrogen (H_2) and oxygen (O_2).

___ H_2O → ___ H_2 + ___ O_2

28. When baking soda and vinegar are combined, gas bubbles form, the vinegar smell disappears, and the mixture gets colder. Has a chemical or physical change taken place? How do you know?

This (is is not) a chemical change because (a no) new substance was produced.

If the was a reaction was it endothermic or exothermic

29. When balancing a chemical equation, why can you change the coefficients but not the subscripts?

If you want to balance this equation:
___ H_2 + ___ O_2 → ___ H_2O

Why is this not correct?

$H_2 + O_2 \rightarrow H_2O_2$