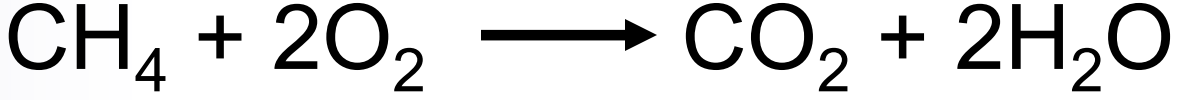
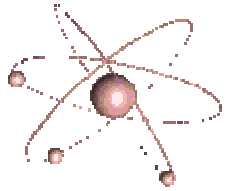
TYPES OF REACTIONS CARTOONS



TYPES OF REACTIONS



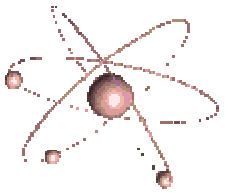
- ADDITION OR SYNTHESIS- WHEN TWO OR MORE SIMPLE COMPOUNDS COMBINE TO FORM A MORE COMPLICATED ONE

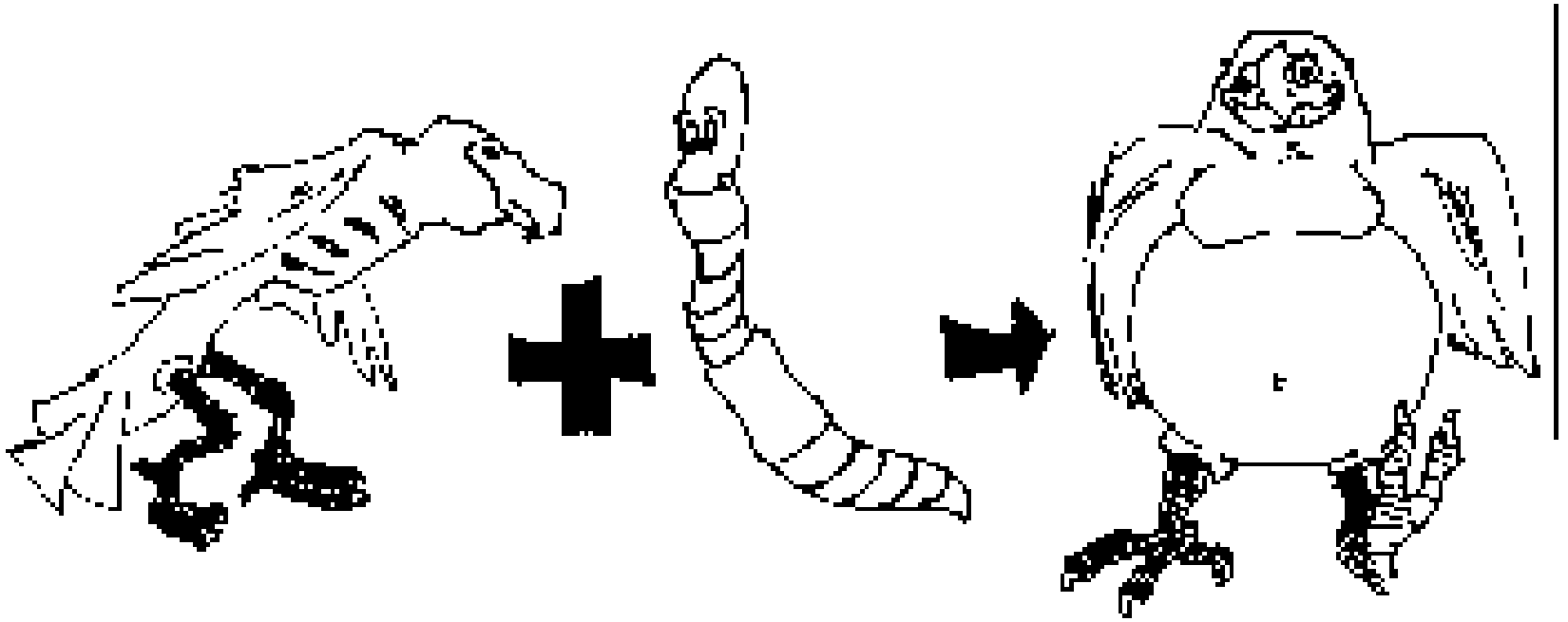
GENERAL FORM

$$A + B \rightarrow AB$$

$$8\,Fe + S_8 \rightarrow 8FeS_8$$

SNYTHESIS



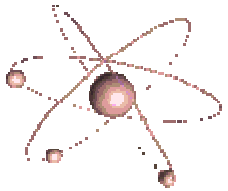


TYPES OF REACTIONS

- DECOMPOSITION- OPPOSITE OF A SYNTHESIS REACTION- A COMPLEX MOLECULE BREAKS DOWN TO MAKE A SIMPLER ONE

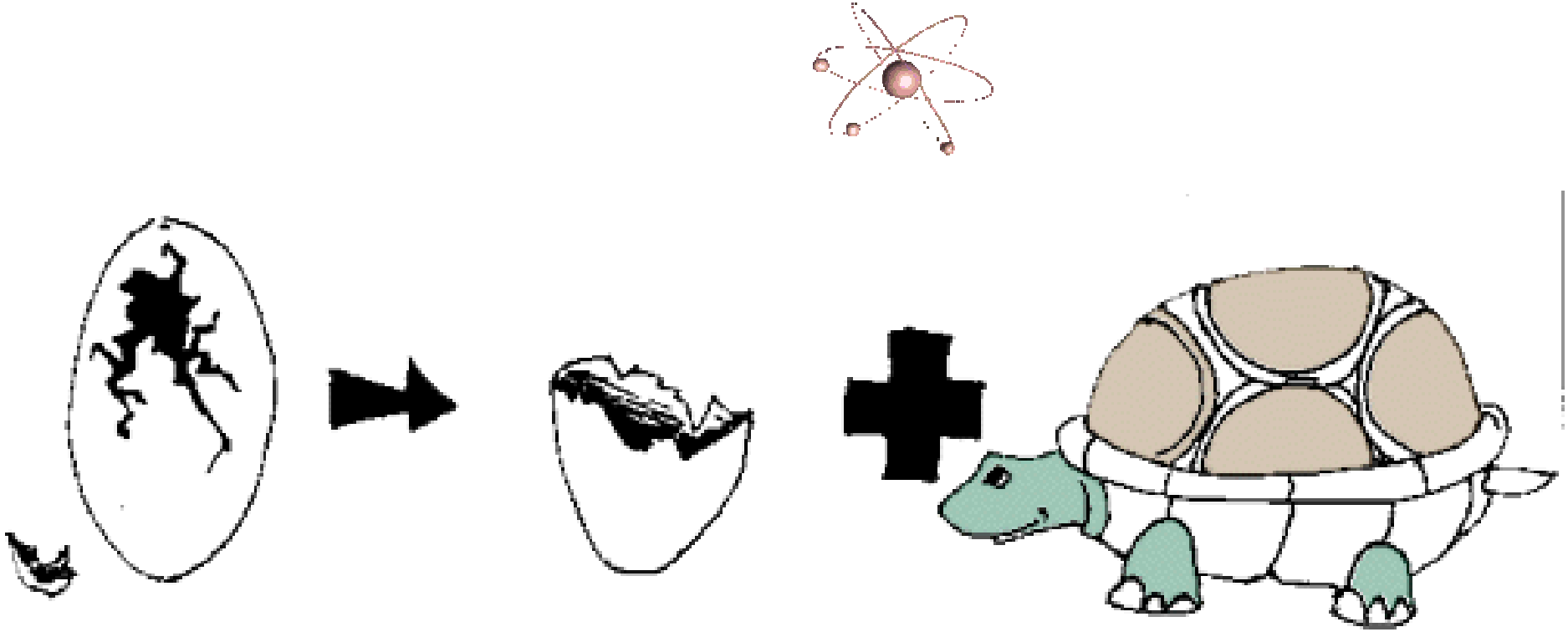
GENERAL FORM

$$AB \rightarrow A+B$$



$$2H_20 \rightarrow 2H_2 + 0_2$$

DECOMPOSITION



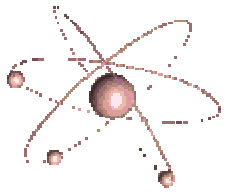
TYPES OF REACTIONS

- SINGLE DISPLACEMENT-WHEN ONE ELEMENT TRADES PLACES WITH ANOTHER ELEMENT IN A COMPOUND

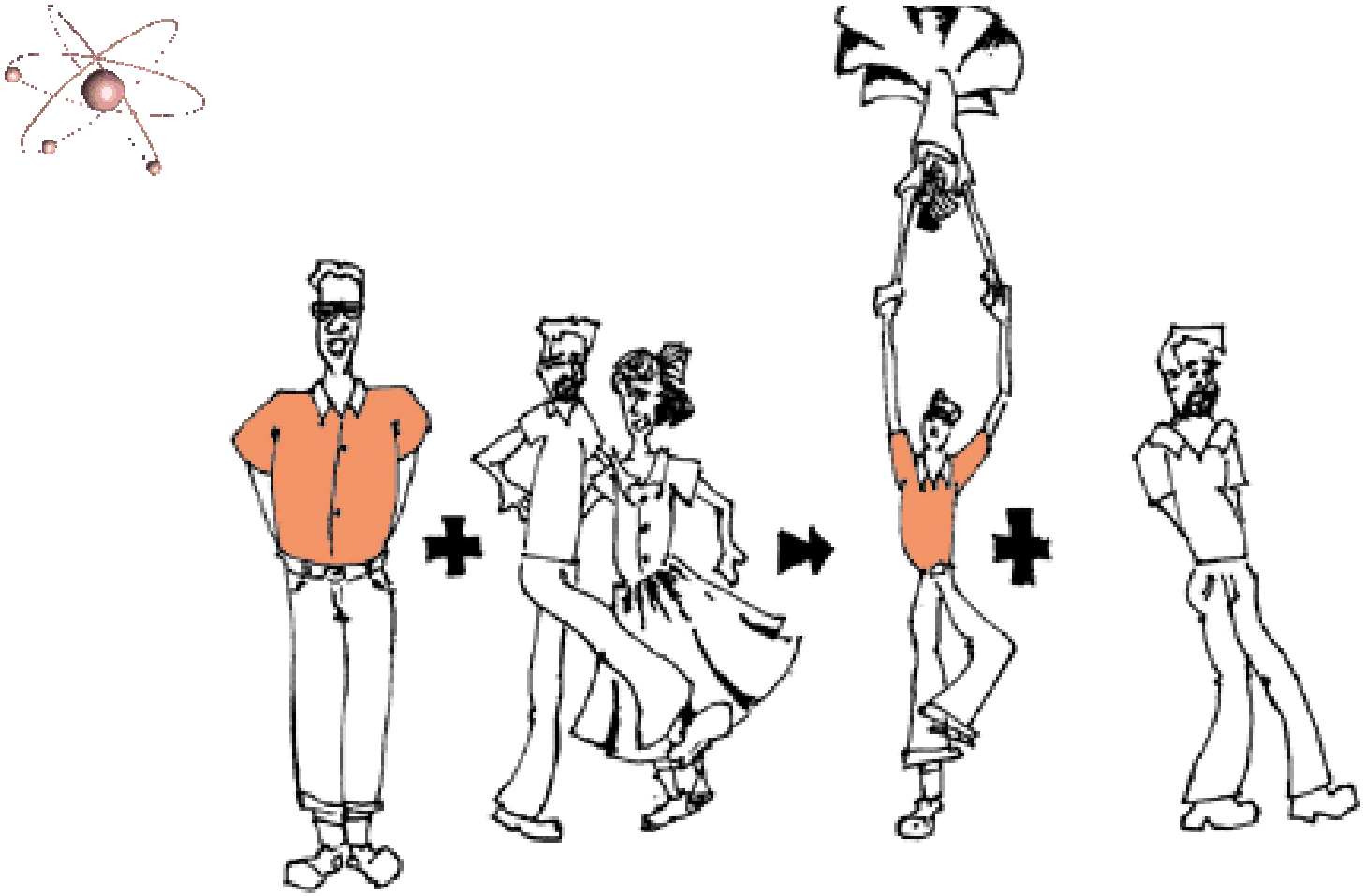
GENERAL FORM

$$A + BC \rightarrow AC + B$$

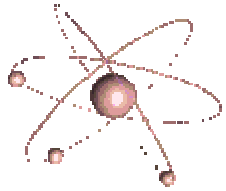
$$Mg + 2H_20 \rightarrow Mg(OH)_2 + H_2$$



SINGLE DISPLACEMENT



TYPES OF REACTIONS



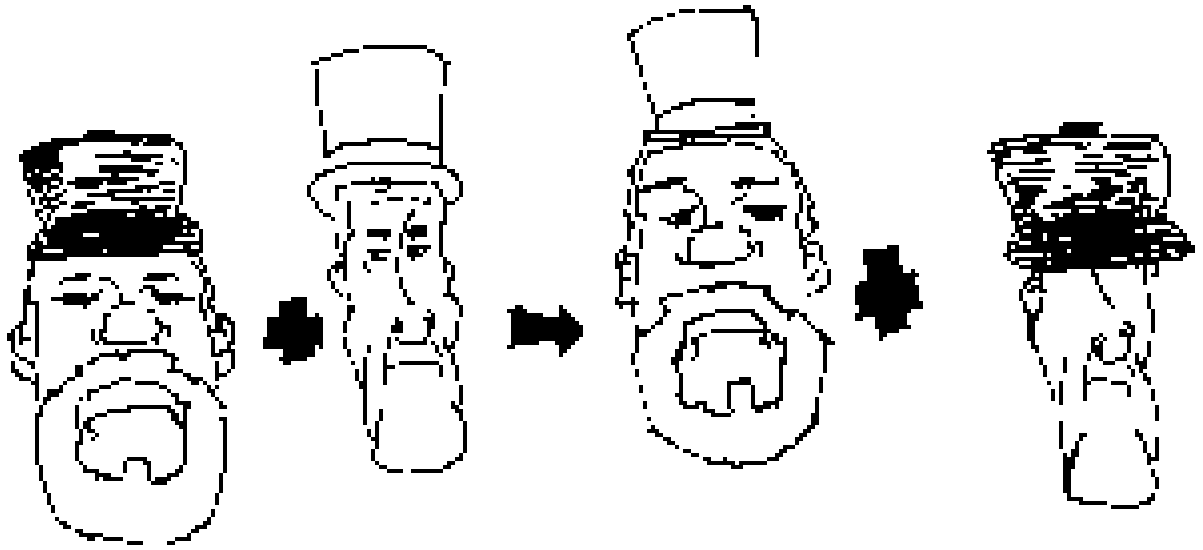
- DOUBLE DISPLACEMENT- WHEN THE ANIONS AND THE CATIONS OF TWO DIFFERENT MOLECULES SWITCH PLACES, FORMING TWO ENTIRELY DIFFERENT COMPOUNDS.

GENERAL FORMS

$$AB + CD \rightarrow AD + CB$$

$$Pb(NO_3)_2 + 2KI \rightarrow PbI_2 + 2KNO_3$$

DOUBLE DISPLACEMENT

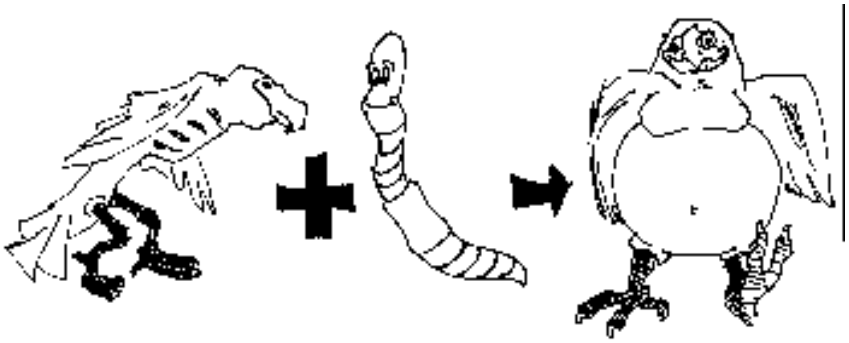


HOMEWORK

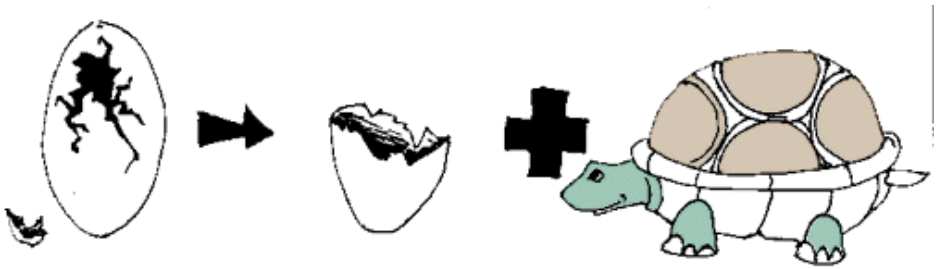
Complete the following for each of the Chemical Reactions we learned in class:

- 1. Write down the question asked to determine which chemical reaction it is.
- 2. Give a conceptual example of what the chemical equation for that type of reaction would look like. (ex: Synthesis = A + B = AB)
- 3. Give an example of a real chemical equation of that time of reaction. Make sure that it is balanced. (ex: Decomposition = $2H_2O$ —> $2H_2 + O_{2)}$
- 4. Draw your own, original, cartoon example of that type of reaction.

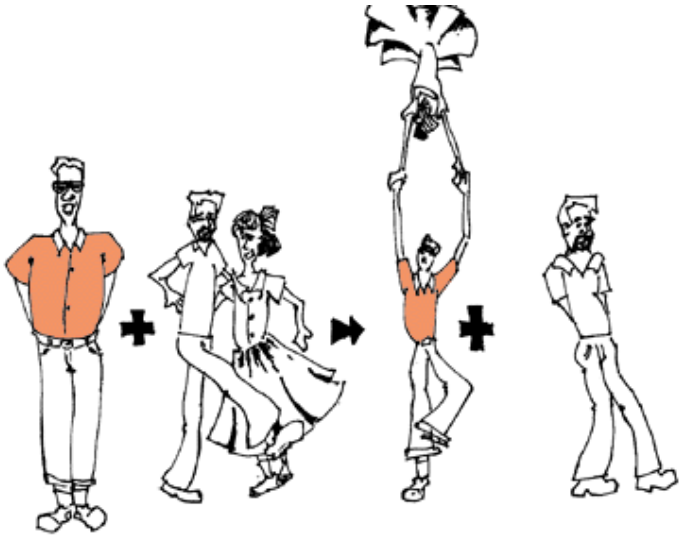
Addition



Decomposition



Single Displacement



Double Displacement