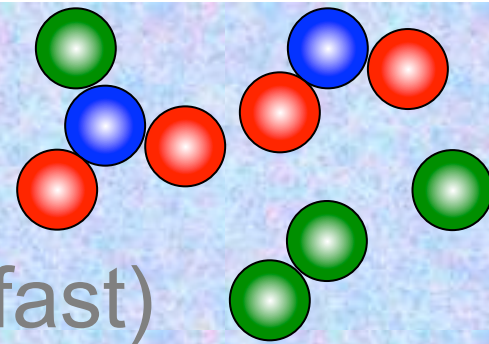


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2 \quad \Delta H = +157 \text{ kJ}$



Kelly Nguyen (left)

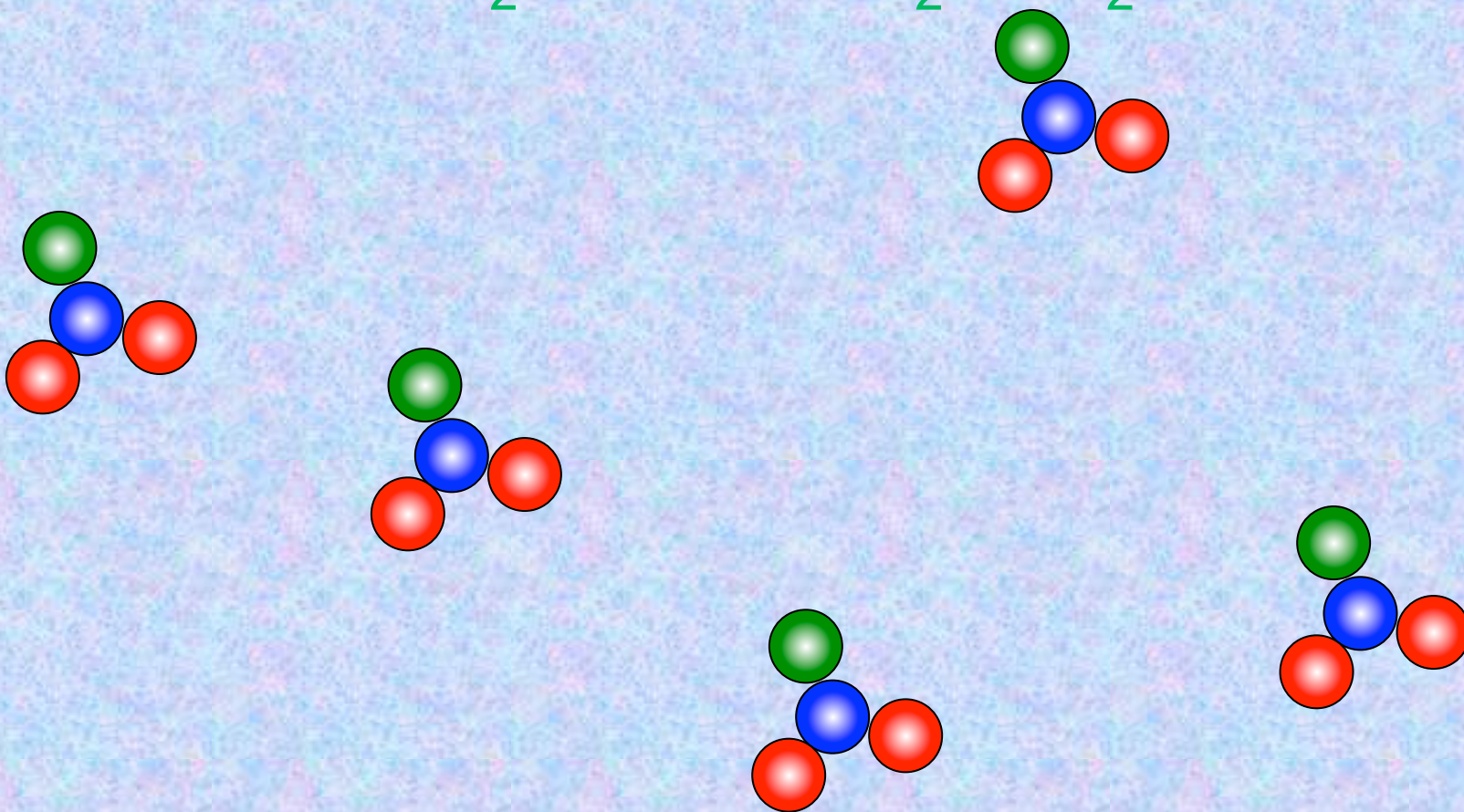
Sarah Walker (Right)

Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

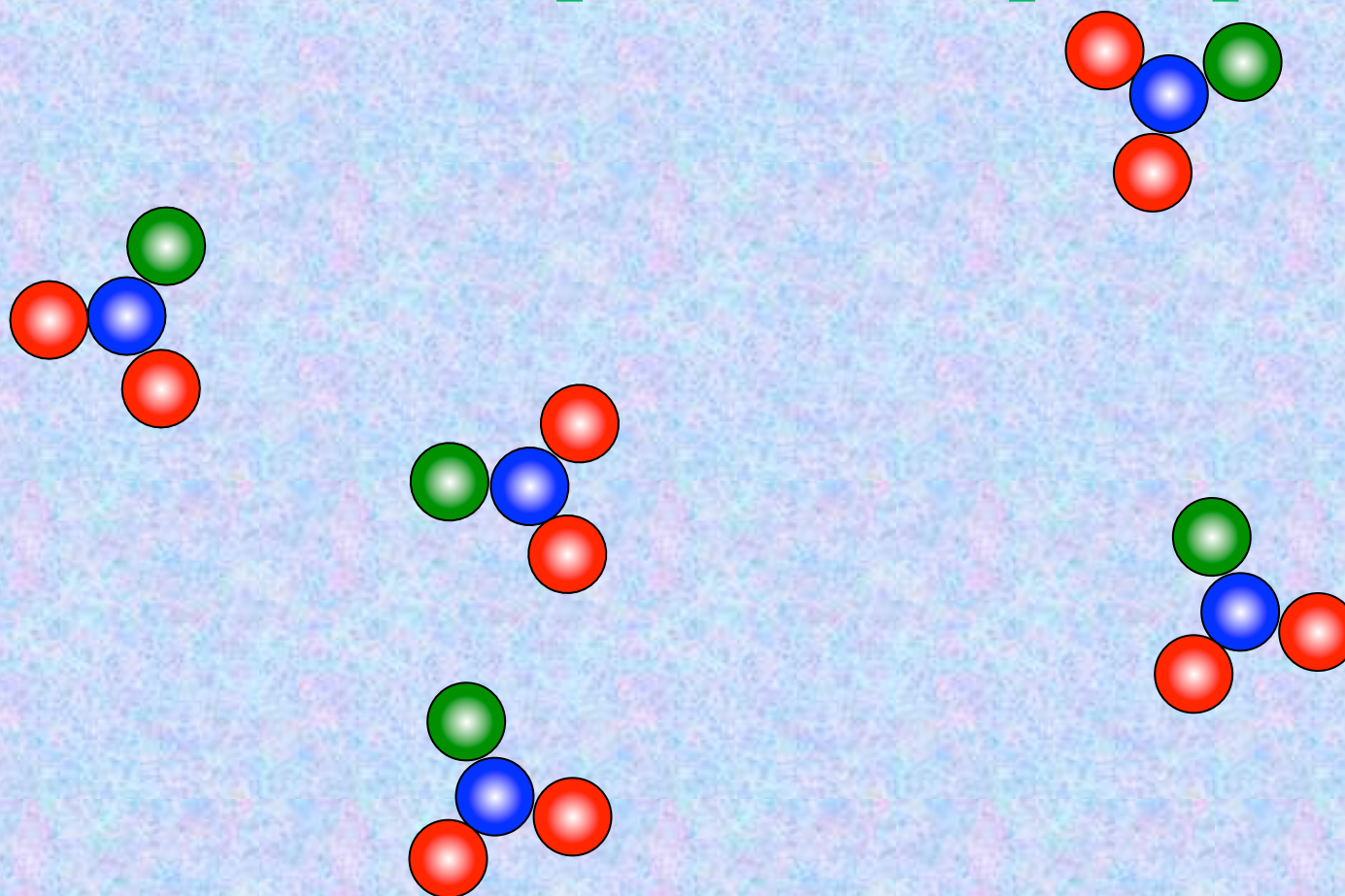


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

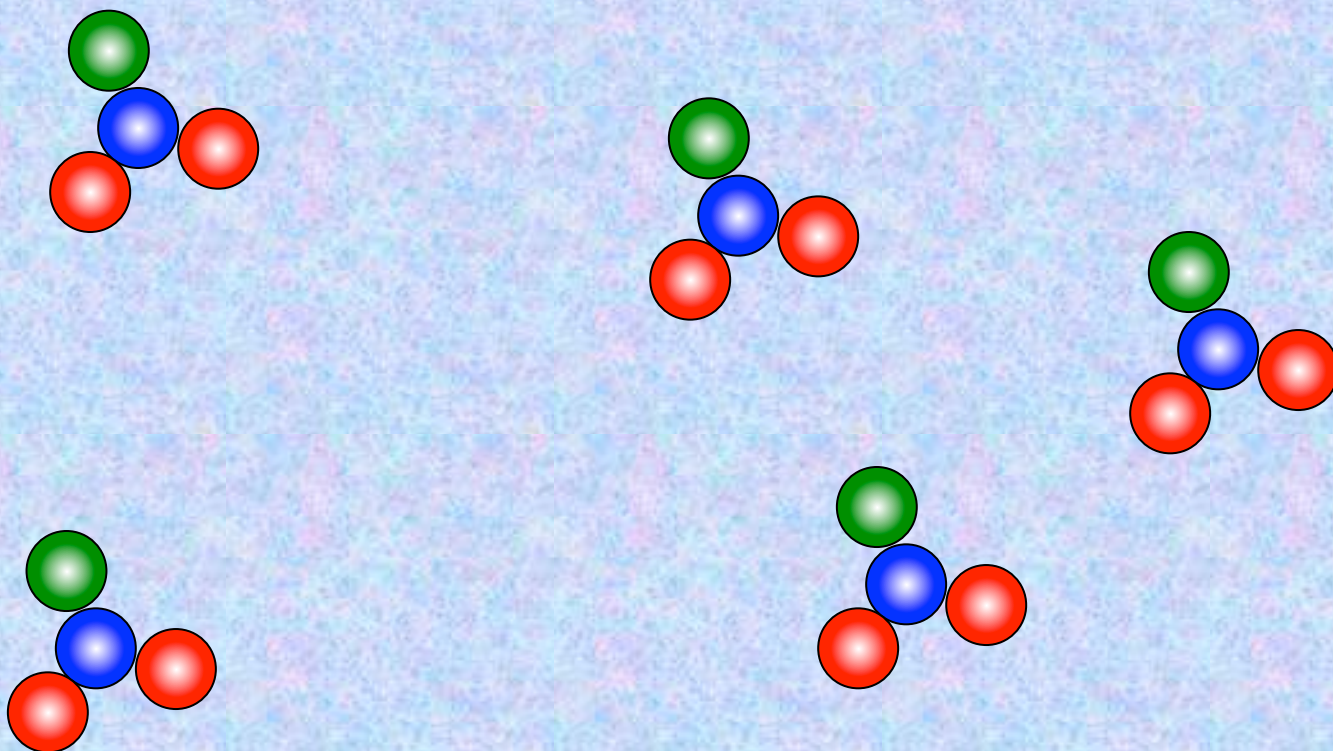


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

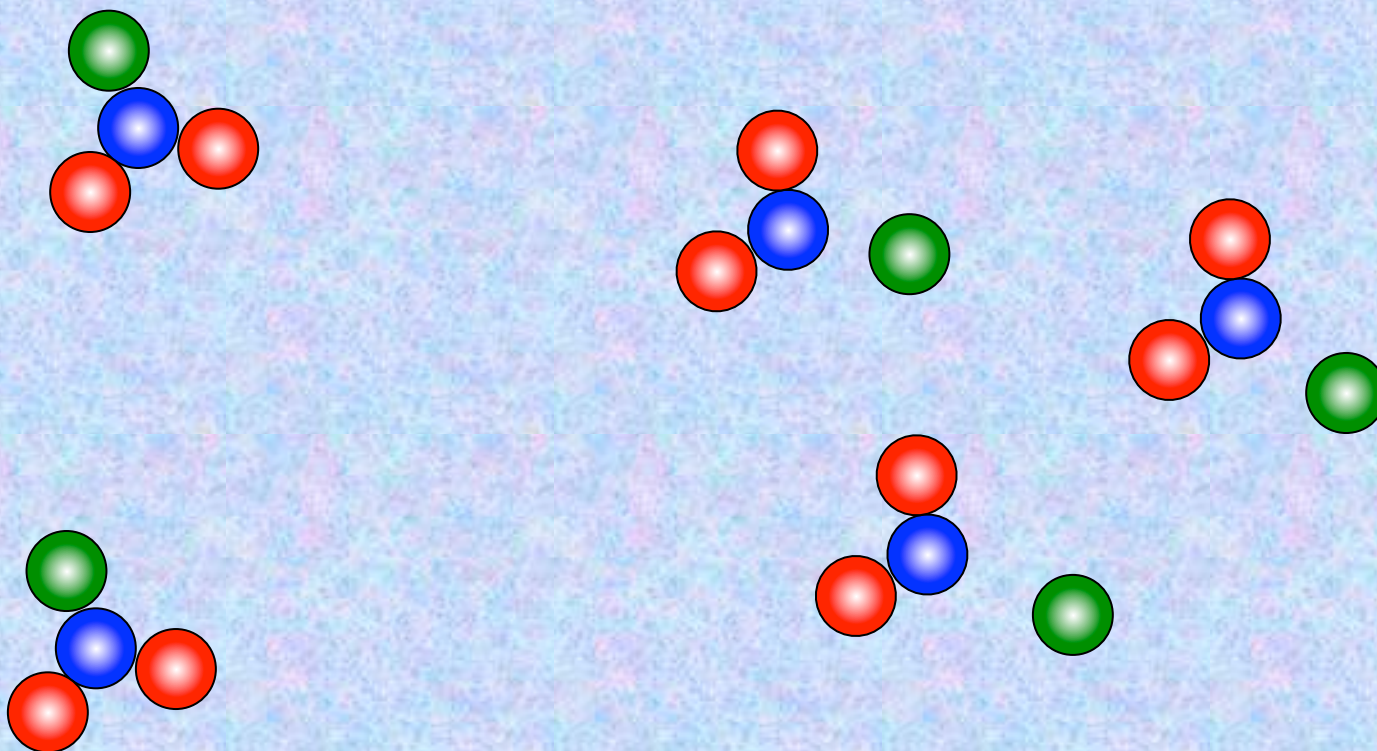


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

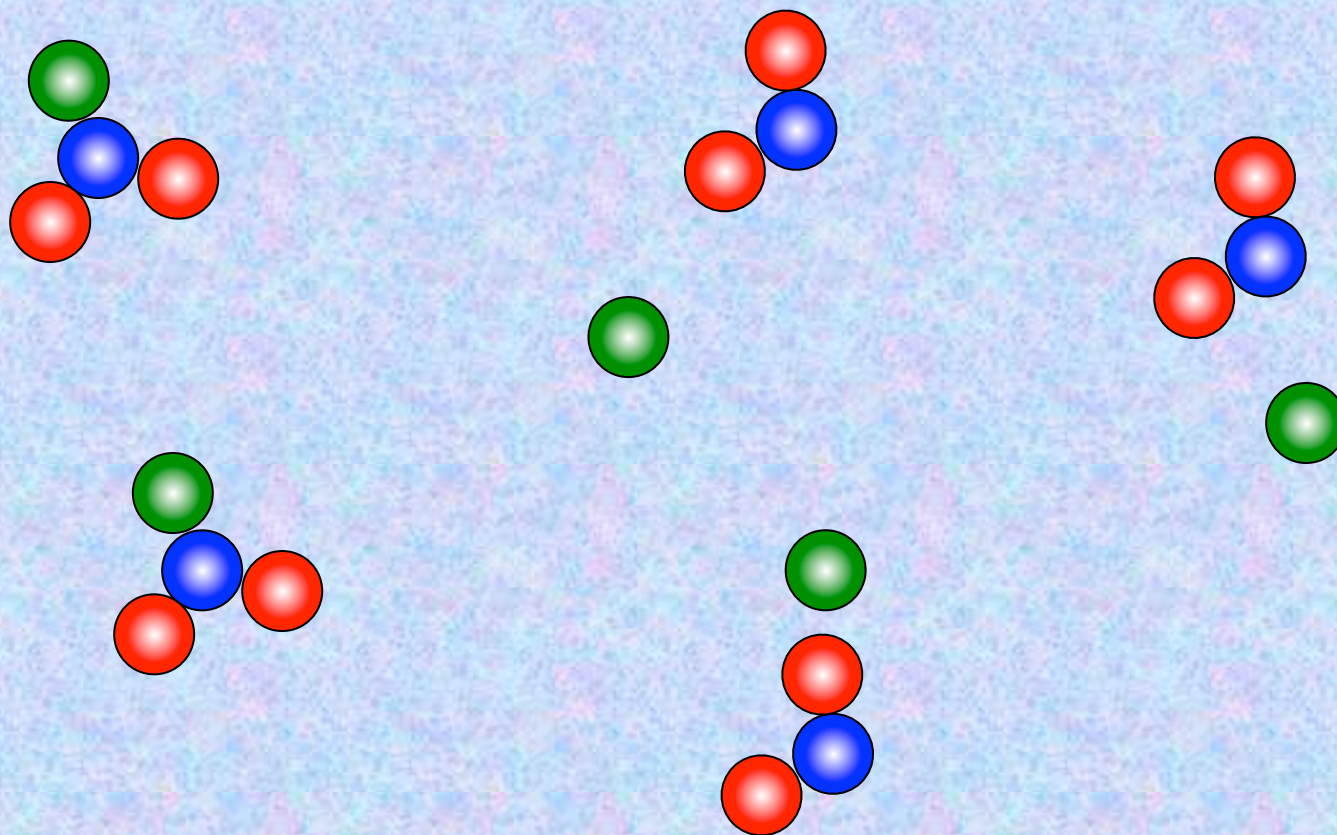


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

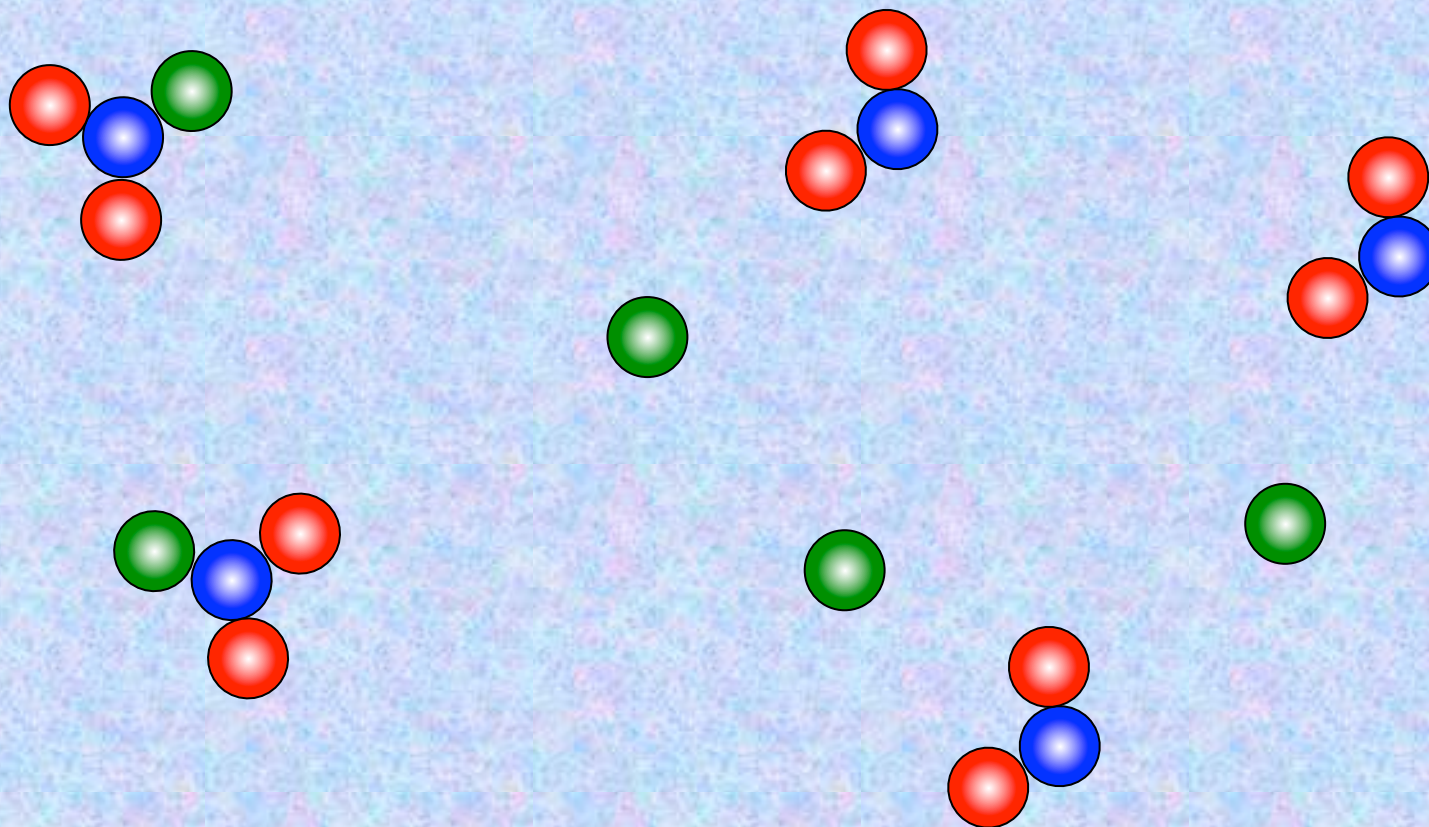


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

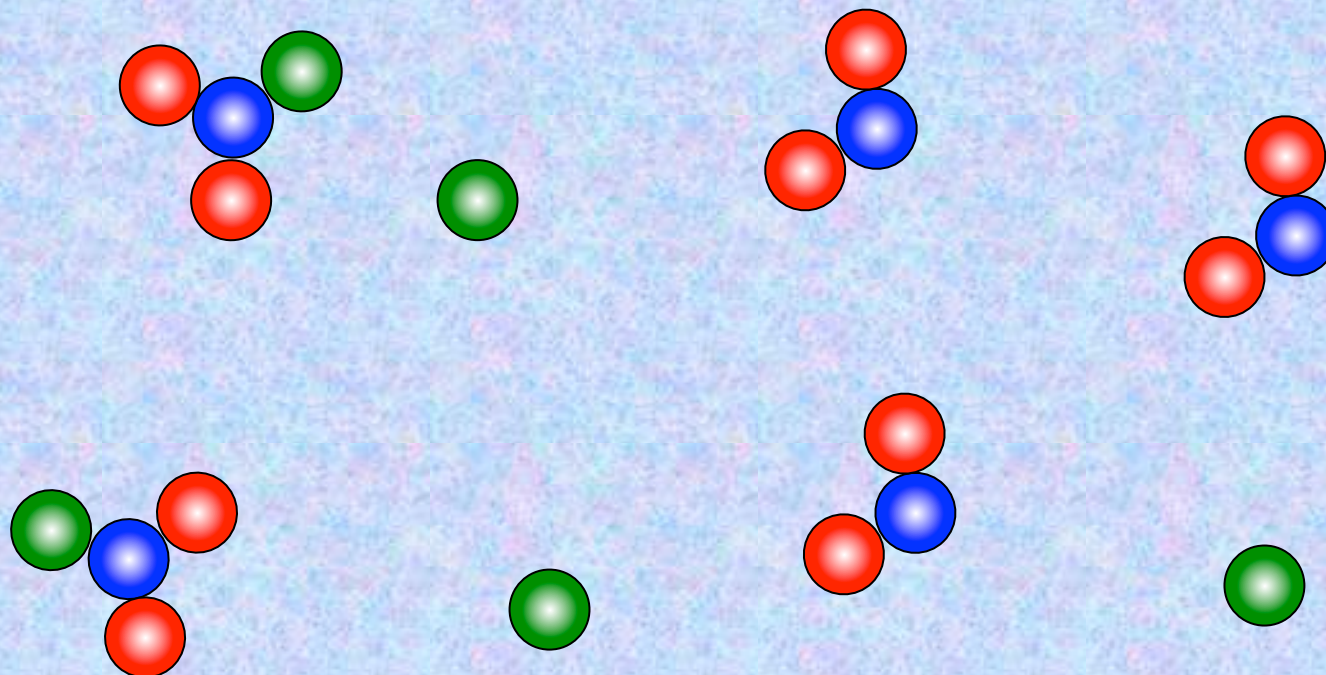


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

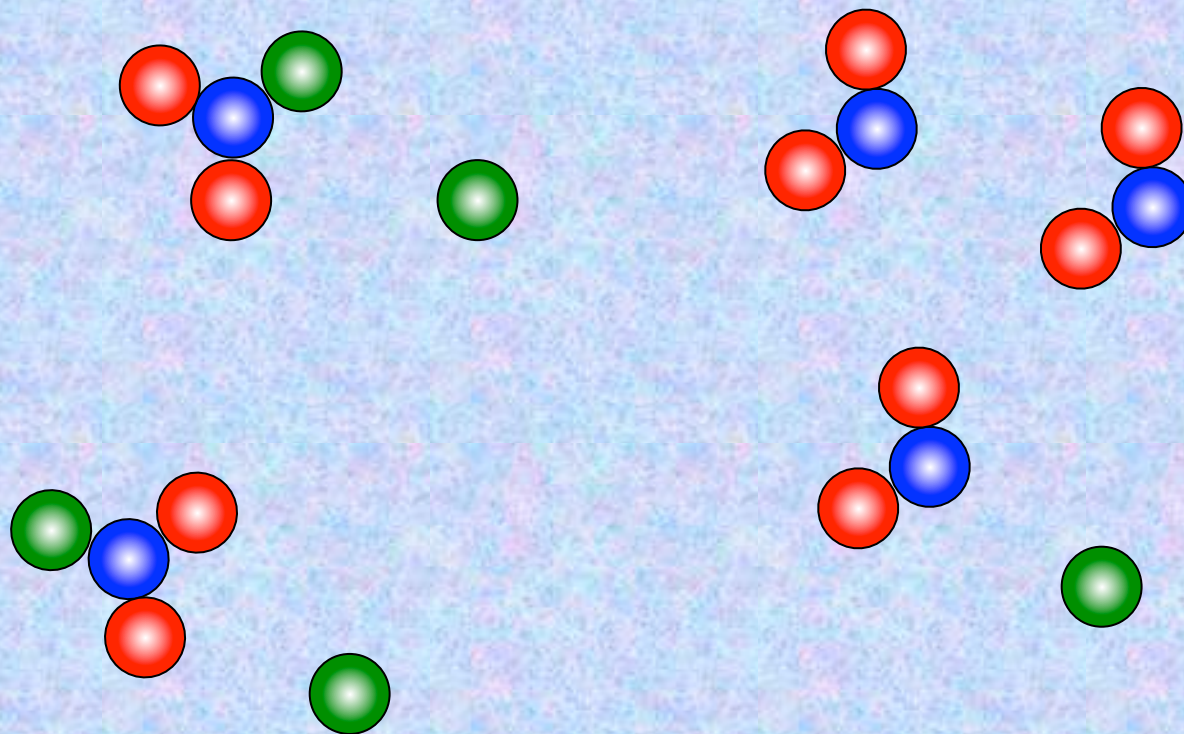


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

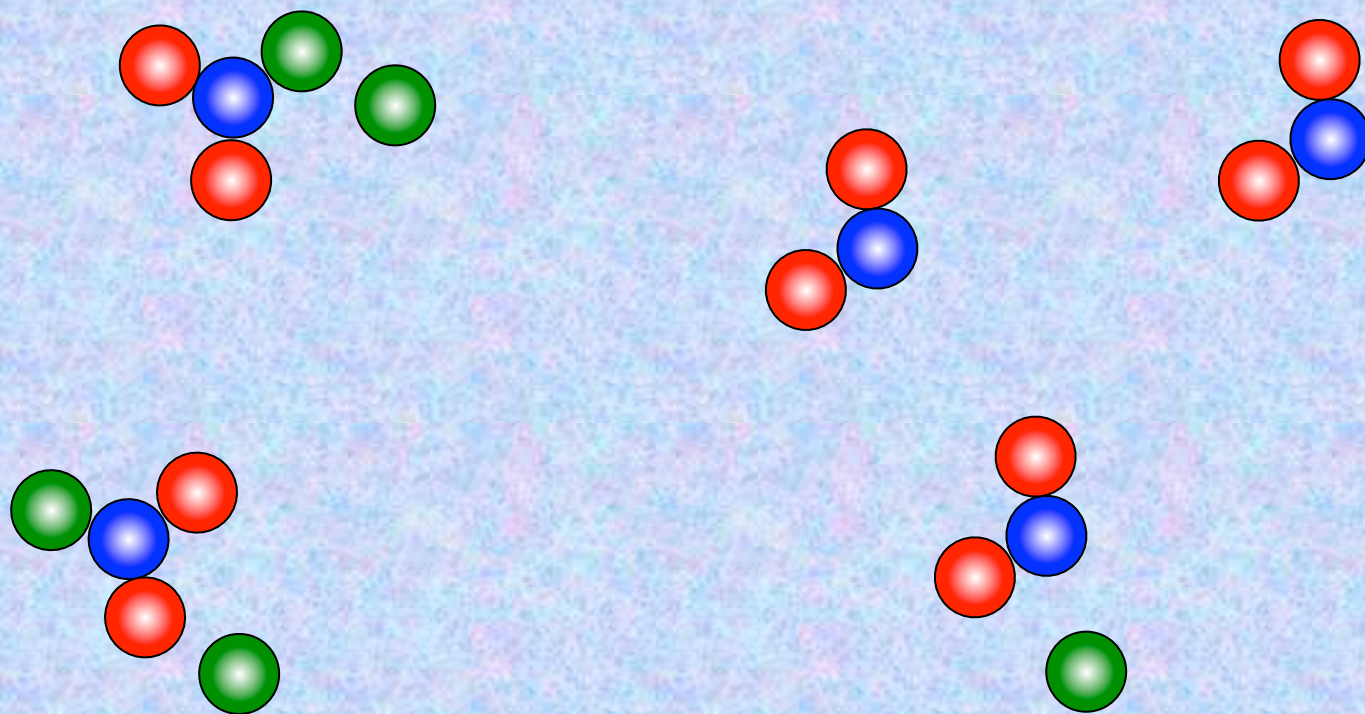


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$



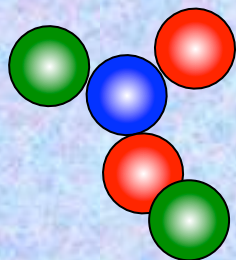
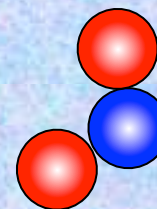
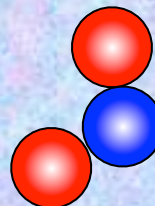
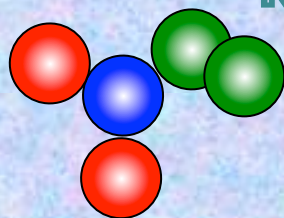
Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

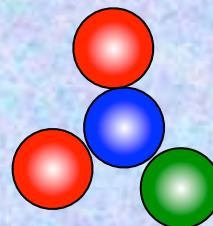
Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

KABOOM!



BOINK!



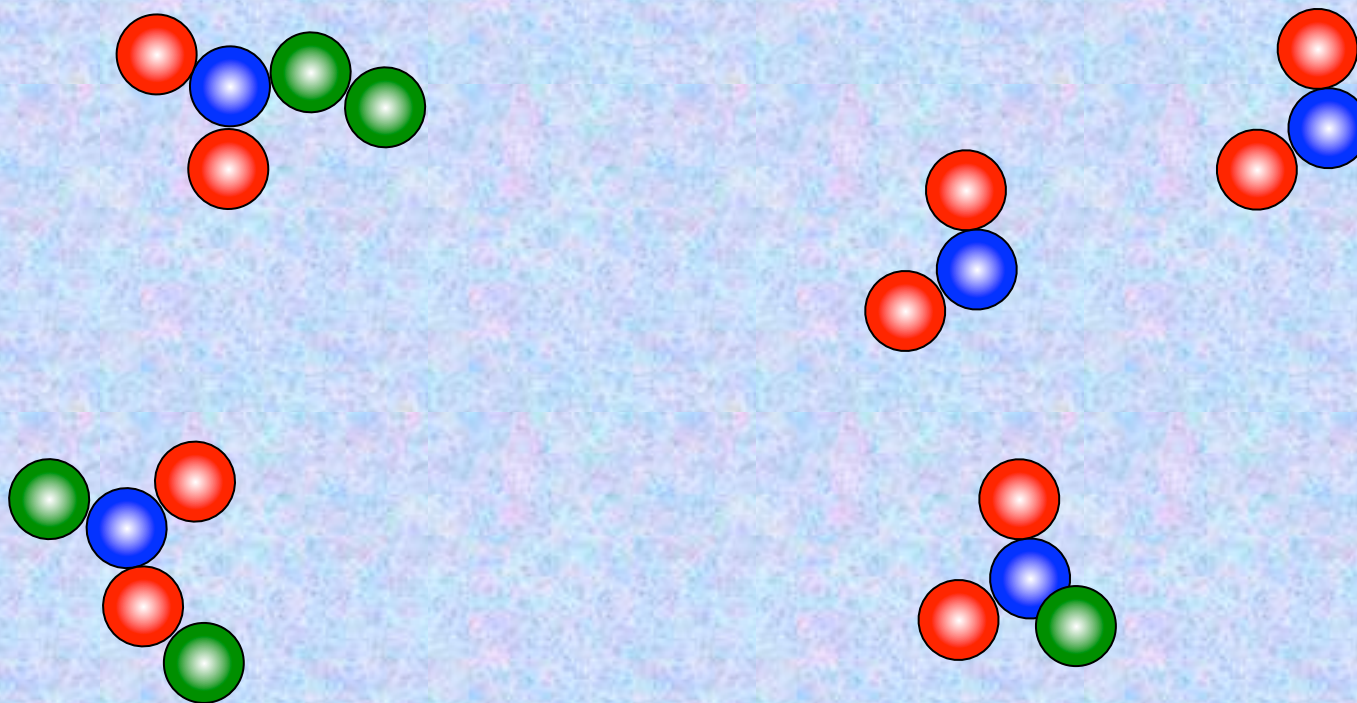
TOGETHER AGAIN 😊

Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

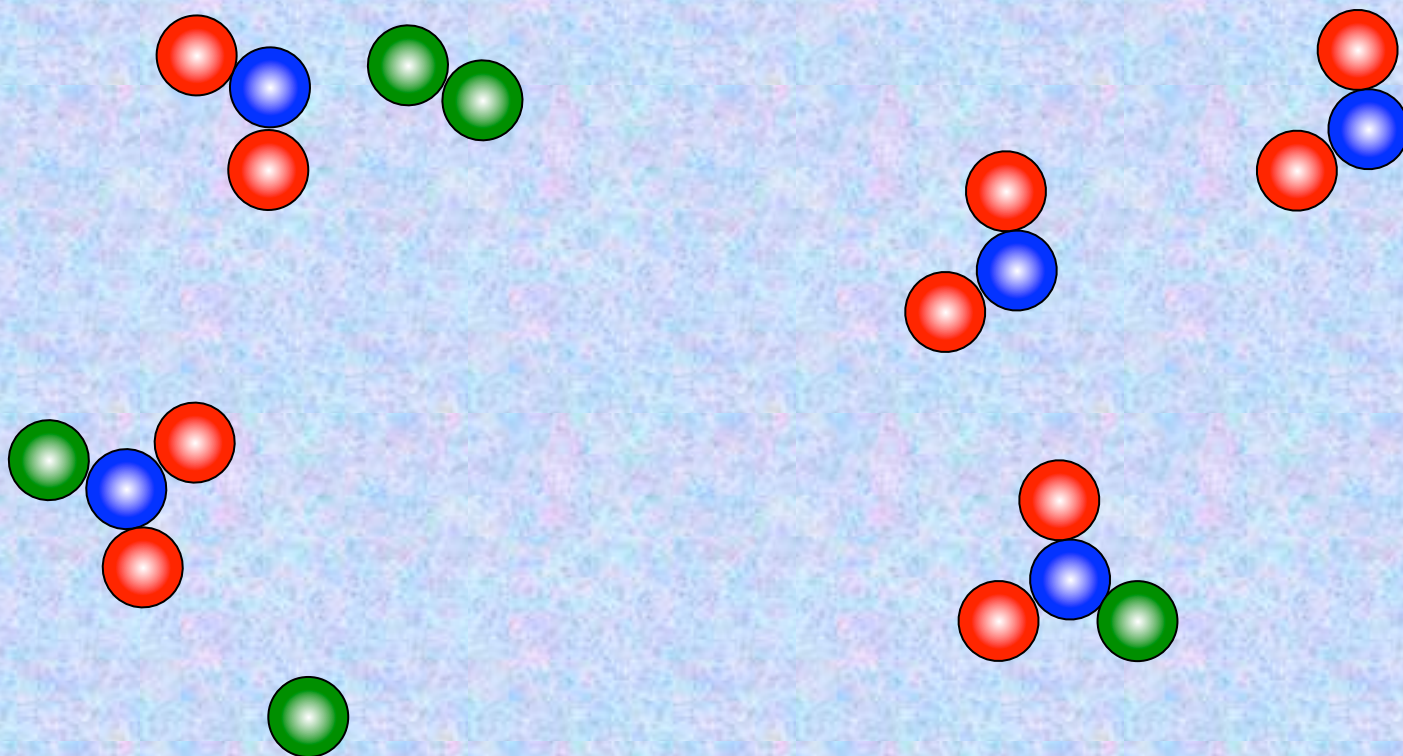


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

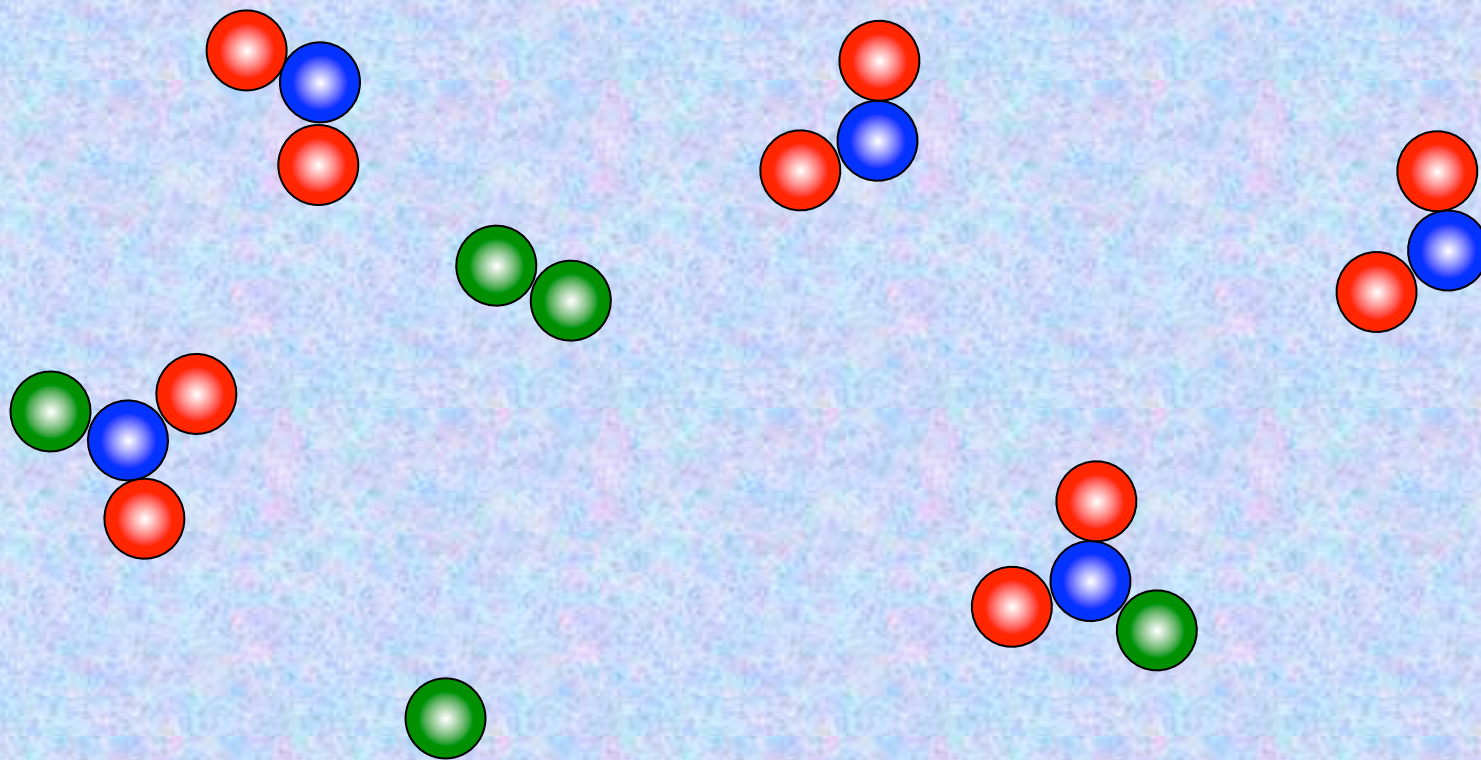


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

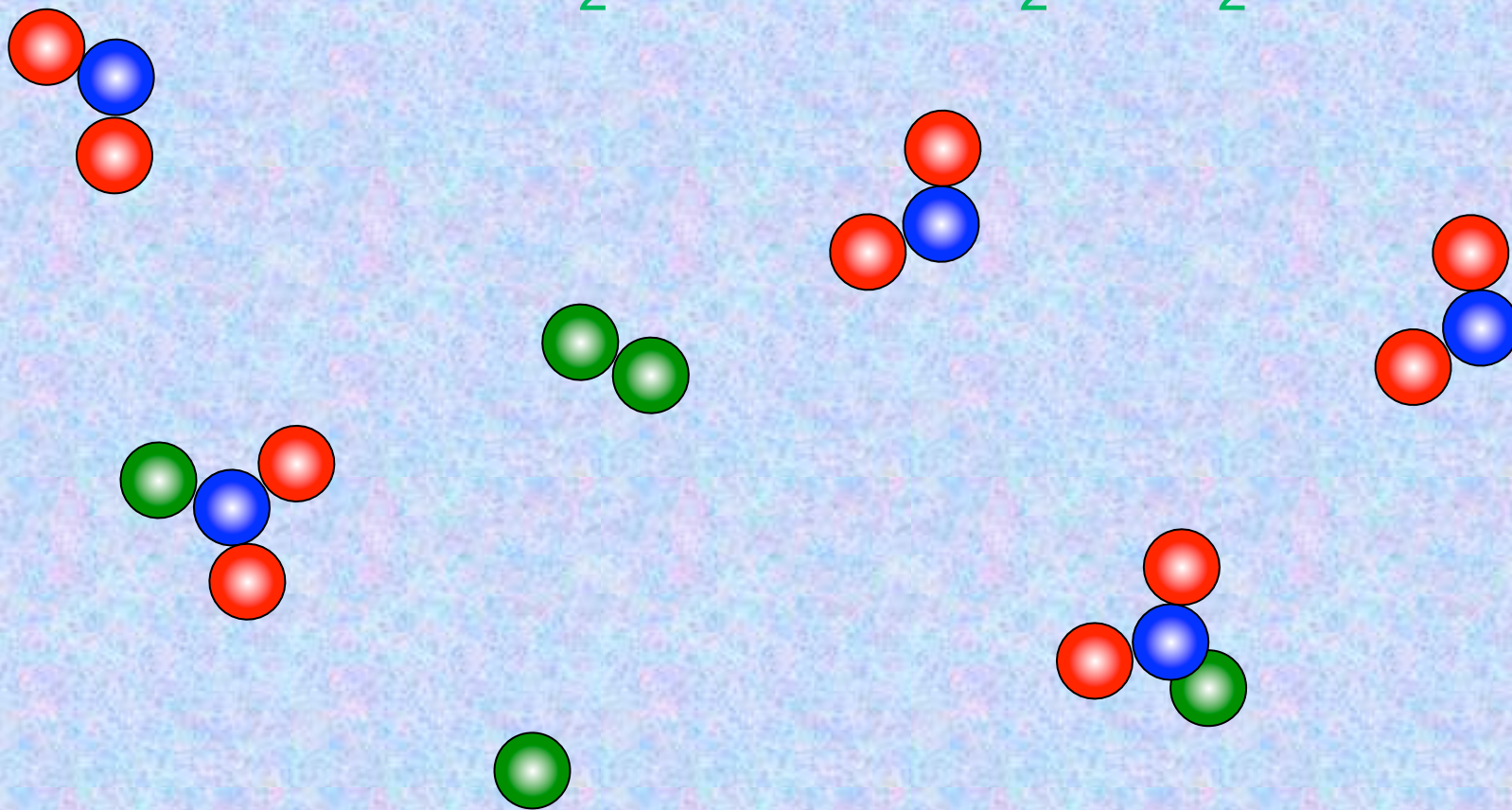


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

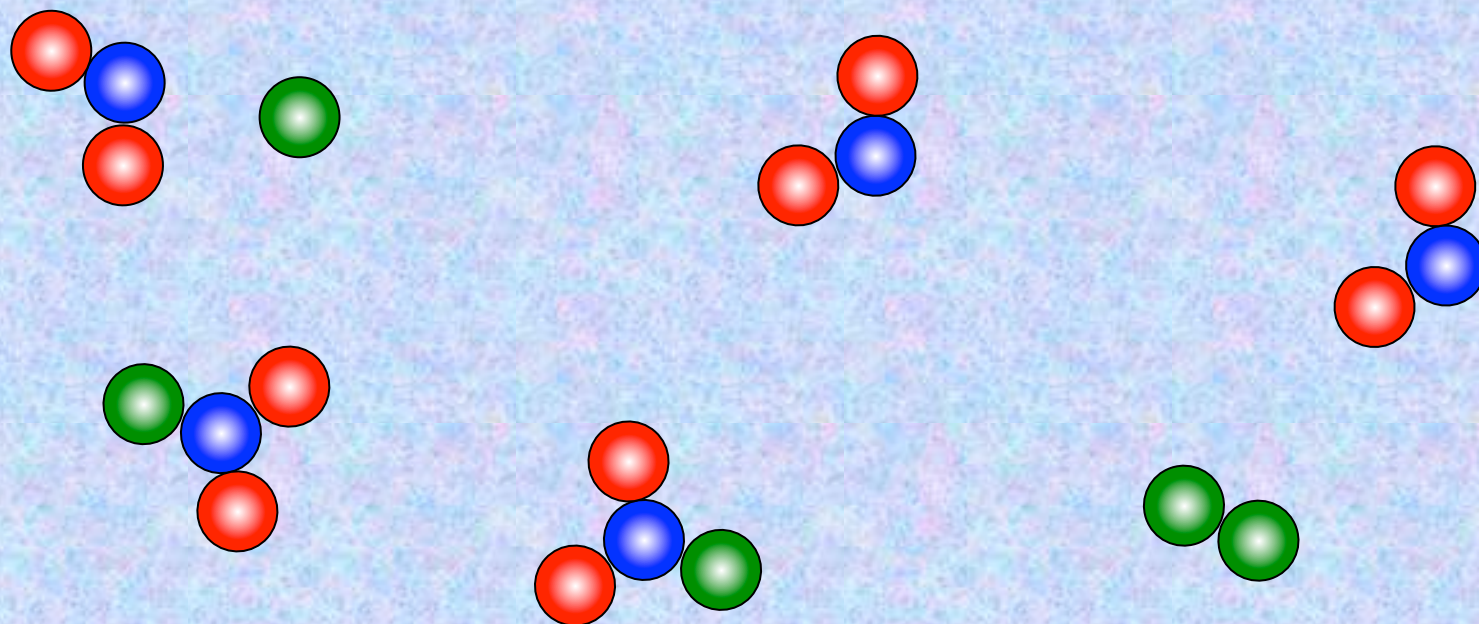


Project 8.

Step 1. $\text{NO}_2\text{Cl} \rightarrow \text{NO}_2 + \text{Cl}$ (slow)

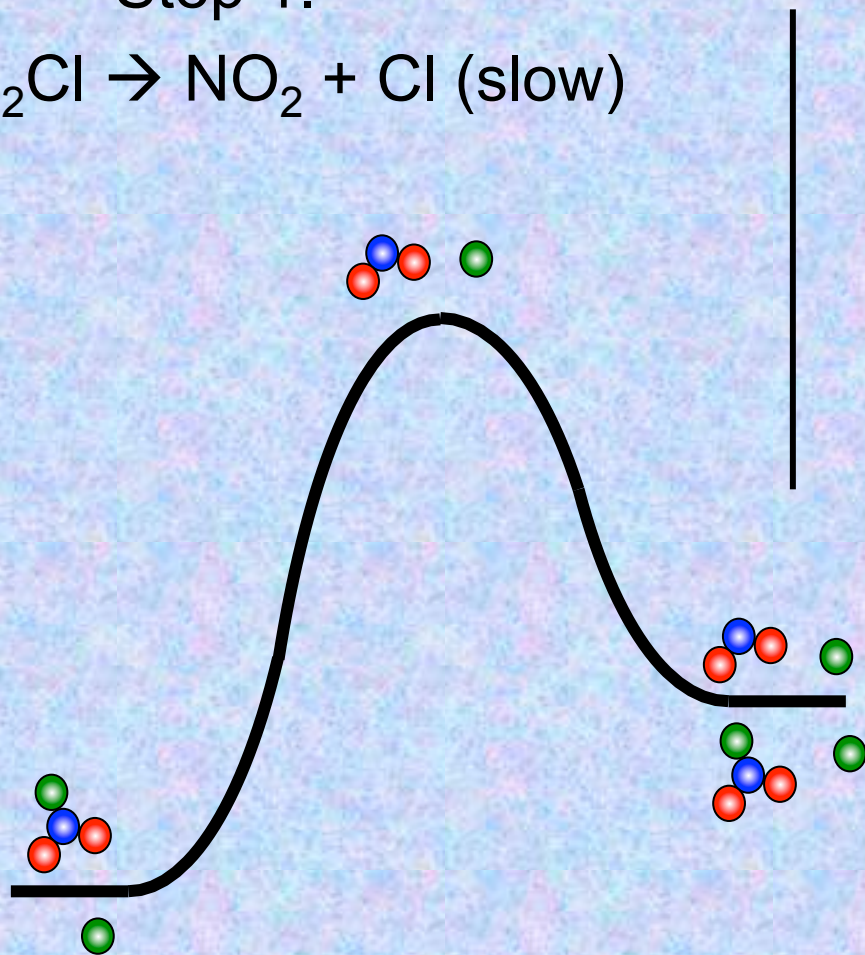
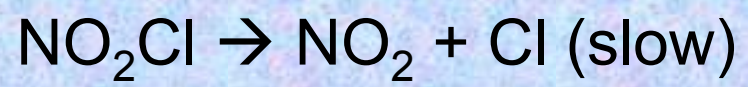
Step 2. $\text{NO}_2\text{Cl} + \text{Cl} \rightarrow \text{NO}_2 + \text{Cl}_2$ (fast)

Overall: $2 \text{NO}_2\text{Cl} \rightarrow 2 \text{NO}_2 + \text{Cl}_2$ $\Delta H = +157 \text{ kJ}$

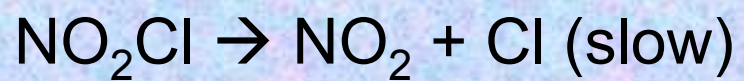


$$\text{Rate} = k[\text{NO}_2\text{Cl}]^1$$

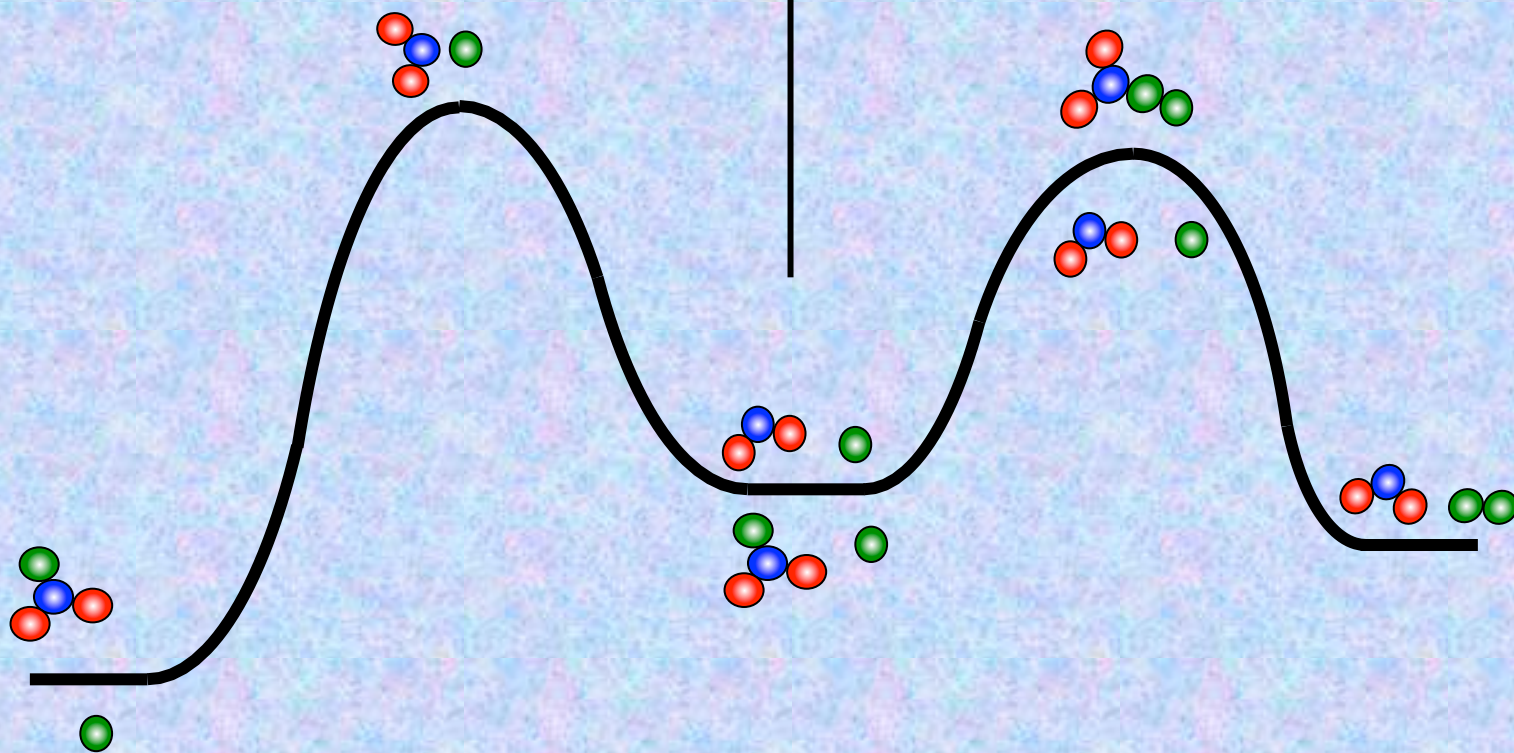
Step 1.



Step 1.



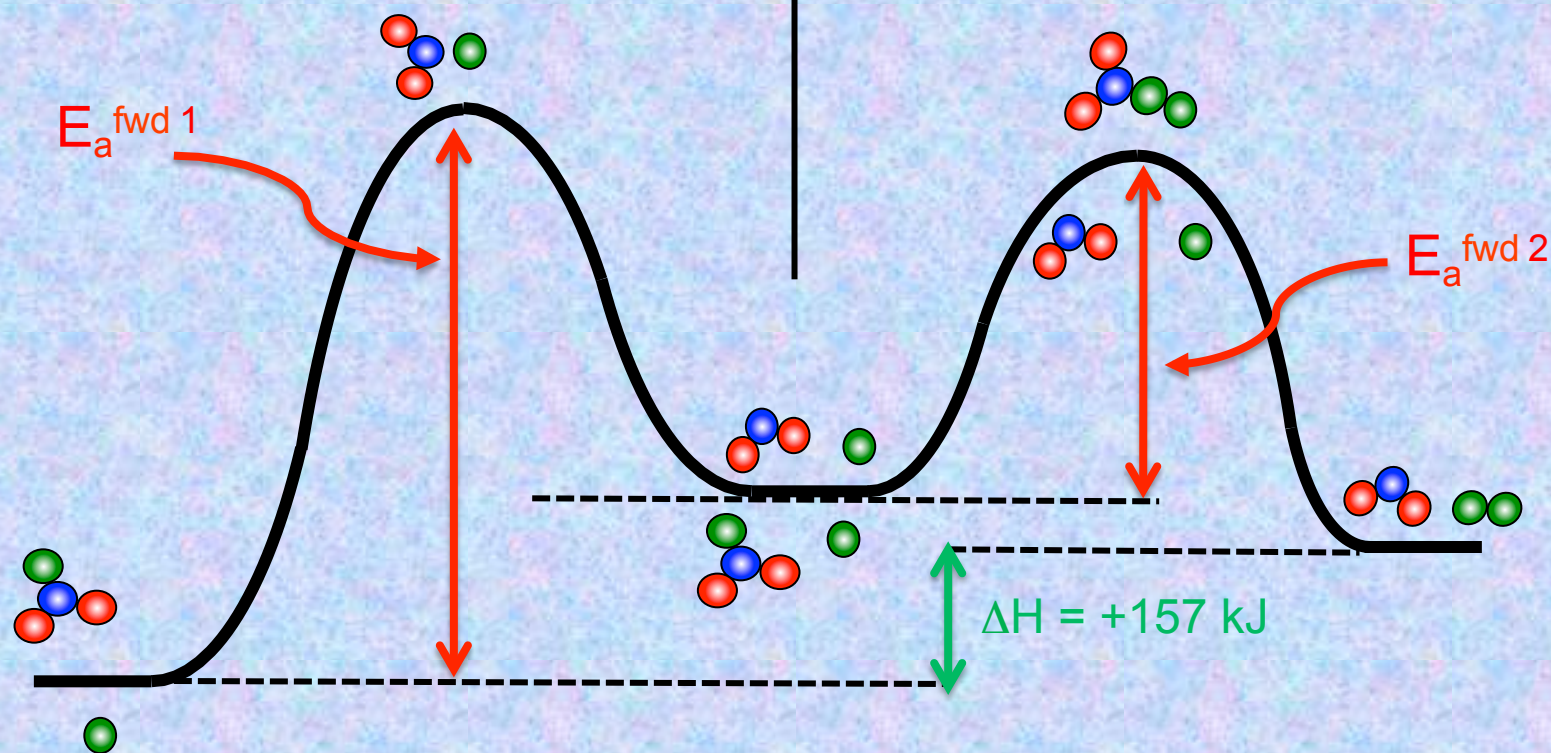
Step 2.



Step 1.



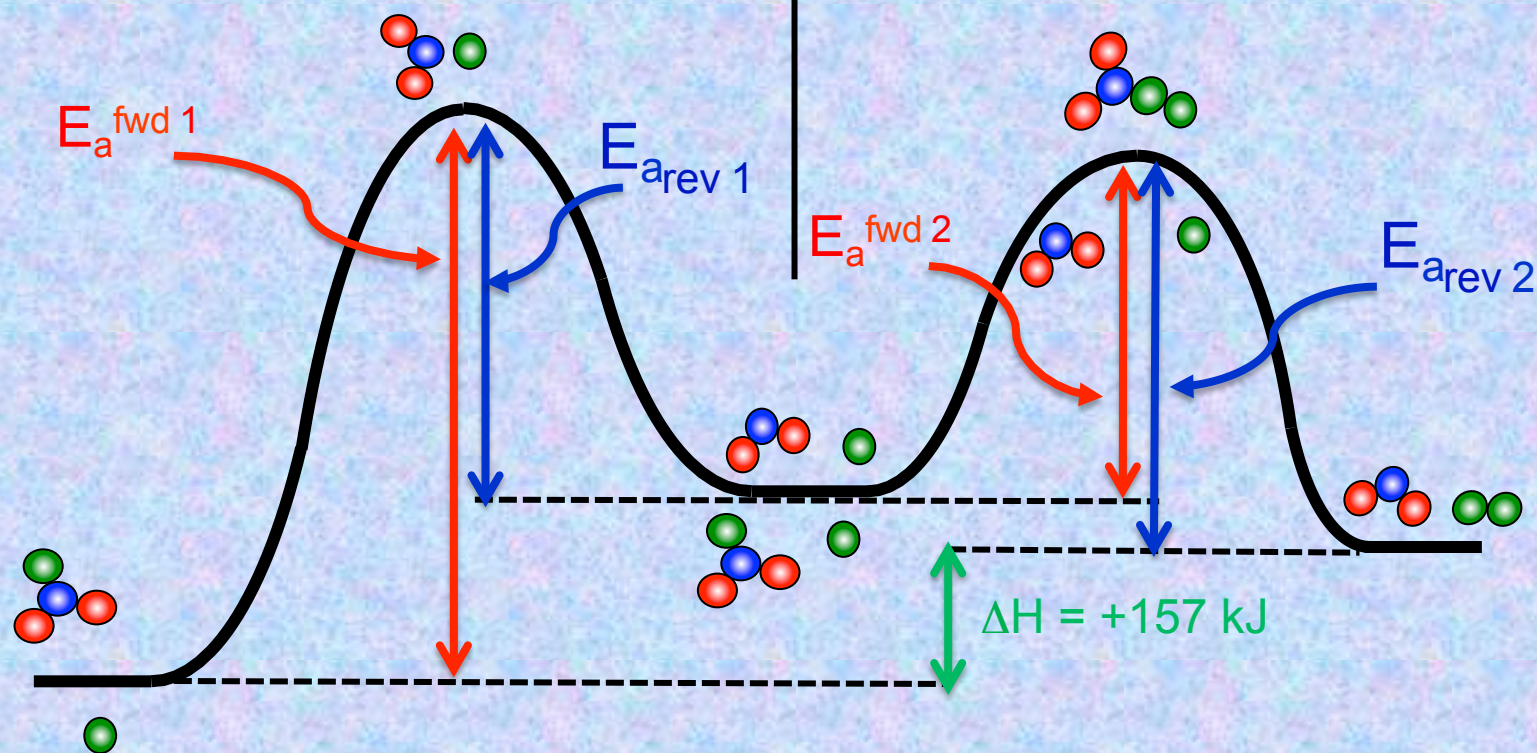
Step 2.



Step 1.



Step 2.



The End ☺