

Polyatomic Ions "Cootie Catcher"

by Dean Campbell, Bradley University, 2011

To assemble, cut out the square template and then carefully fold in the order described below. Folds along the dashed lines move paper toward the center of the printed side; folds along the solid lines move paper away from the center of the printed side. For an instructional video, search "chemistry cootie catcher" on YouTube.com.


 First folds Second folds Third folds Fourth folds



Suggested use:

- 1) Select a characteristic element on the outside faces of the points.
- 2) Select the ion names among the exposed inside faces of the points.
- 3) Turn up the flap under those ion names to find their corresponding symbols.

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transition metals chromate dichromate permanganate mercury(I)	carbon carbonate hydrogen carbonate acetate cyanide	CO_3^{2-} HCO_3^- $\text{C}_2\text{H}_3\text{O}_2^-$ CN^-	NO_3^- NO_2^- NH_4^+ OH^-	nitrogen (& hydroxide) nitrate nitrite ammonium hydroxide	phosphorus phosphate hydrogen phosphate dihydrogen phosphate phosphite
		CrO_4^{2-} $\text{Cr}_2\text{O}_7^{2-}$ MnO_4^- Hg_2^{2+}	PO_4^{3-} HPO_4^{2-} H_2PO_4^- PO_3^{3-}		
iodine periodate iodate iodite hypoiodite	bromine perbromate bromate bromite hypobromite	IO_4^- IO_3^- IO_2^- IO^-	BrO_4^- BrO_3^- BrO_2^- BrO^-	chlorine perchlorate chlorate chlorite hypochlorite	sulfur sulfate hydrogen sulfate sulfite hydrogen sulfite
		SO_4^{2-} HSO_4^- SO_3^{2-} HSO_3^-	ClO_4^- ClO_3^- ClO_2^- ClO^-		