Who Discovered Chlorine?

Name _____

Scheele, Davy and the difference between making and naming · ages 11–14 · about 40 minutes

Read each evidence card. Decide whether it shows someone PRODUCING the substance (P) or IDENTIFYING what it is (I). Some may be neither (X). Paper only: chlorine gas is toxic and must not be made in class.

1774, Uppsala **P I X**

Scheele heats the mineral pyrolusite with muriatic acid. A yellow-green gas with a choking smell comes off.

1774 **P I X**

The gas bleaches wet blue litmus paper and flowers, and turns corks yellow.

1774 **P I X**

Scheele names it 'dephlogisticated muriatic acid', believing it is acid that has lost phlogiston.

1780s **P I X**

Followers of Lavoisier think the gas must contain oxygen. Berthollet suggests it is oxygen plus an unknown element.

1809 **P I X**

Gay-Lussac and Thénard try to break the gas down into simpler substances. They cannot.

1810 **P I X**

Humphry Davy argues the gas is an element, a substance that cannot be broken down, and names it chlorine (Greek chloros, pale green).

Write one sentence answering 'Who discovered chlorine?' that is fair to both Scheele and Davy.

Why did a wrong theory (phlogiston) give a real substance the wrong name?

Teacher key: cards 1–2 P; card 3 X (a name based on a wrong theory); card 4 X; card 5 I (evidence toward); card 6 I.

Sources: Britannica (Scheele); van der Krogt, Elementymology (chlorine); New World Encyclopedia; WebElements.