

>> Name these compounds. OK, you might ask yourself what's different about these? Well these are covalent compounds and when naming covalent compounds we have to pay attention to what our subscripts are. With ionic compounds we don't have to indicate subscripts, we just say the name of the metal and then the name of the non-metal with the i-d-e ending. OK. You do something very similar to this. You name your first compound. You name your second compound with the i-d-e ending also. But the difference is you have to indicate the two. What is the two? So we have one is mono, two is di, three is tri, four is penta – no sorry, four is tetra, five is penta, six is hexa, seven hepta, octa, nona, deca. OK, so you want to know one through ten. In this case we have one sulfur, we have two oxygen's. Now quite often when we only have one we leave off the mono. So for some things like carbon monoxide we do put in the mono, but a lot of times we just leave it off. And in this case we're going to leave it off. So we're going to have sulfur, and the two is di. So it would be sulfur di and then oxygen becomes oxide. So we have sulfur dioxide. OK. This one now you'll notice both of them have a subscript. So you have to say the subscript before each one. This is nitrogen and there's two so that would be dinitrogen. This is oxygen and it's the second we name, which means it has a i-d-e ending. So that's oxide. There is four of them. That's tetra. So that would be tetroxide. So we would call this dinitrogen tetroxide. Dinitrogen tetroxide. Now you might as, well I thought it was tetra. And if you look at it tetra oxide, says that fast tetra – you know, there's that catch in your voice as you go "a-o", "a-o", you know? It's just awkward. So when you have the a and o together you drop that a and you go right into the o. And so instead of tetra, it's tetroxide. OK, same with hexa, hexoxide. Heptoxide. Octa, no, octoxide. OK. So anyways you only want to have the one vowel there to make it flow a little bit nicer. OK, so what if now what if you're given the names themselves and you're asked to write the formula? So what you want to do is you want to dissect it. First thing they tell you is sulfur. Notice there's no prefixes. Well, with no prefixes that means the subscript is one, OK? So it's just going to be simple s. OK, but look what happens to this one. Fluoride, that was fluorine and it's at the end so it's i-d-e and it's got hexa as it's prefix. Hexa means six. So that means fluorine has a subscript of six. When you write it you have the SF<sub>6</sub>. So there's your sulfur, sulfur hexafluoride. OK, the second one is phosphorus pentachloride. Again, you don't see anything with phosphorous. Phosphorous is just your p with a subscript one. Penta tells us it's going to be five of whatever follows that. Chloride is the i-d-e ending put onto chlorine. So that means chlorine is going to have a subscript of five and you have PCl<sub>5</sub> as your formula for phosphorous pentachloride.