1) **Teaching Context**
- **Grade level:** HS  
- **Subject area:** Earth Science  
- **Unit:** Climate Change  
- **What might come before or after this activity:** Students will have been introduced to the causes of climate change and political disagreements over the role of anthropogenic co2.
- **Other relevant contextual information:** This activity will support the critical thinking work students are doing in their 9th grade social studies and English classes.

2) **Content Objectives:**
- Students will demonstrate their understanding of the role of anthropogenic co2 in climate change.
- Students will identify how different sources use data to promote conflicting scientific claims.

**Literacy/Critical Thinking Objectives:**
- Students will analyze the messages and communication methods used in media documents.
- Students will respond to and ask questions about accuracy, credibility and bias in conflicting sources.

3) **Document(s) description and link:**
A 30-second video clip from 2007 UK documentary, “the Great Global Warming Swindle,” and a chart from the 2007 SOCCR report – from both the project Look Sharp lesson [What is Causing Global Warming](#)?

4) **Key Questions:**
- What messages do each document give about anthropogenic co2? How are they communicated?
- How can the relatively tiny amount of anthropogenic co2 be a major cause of global climate change?
- What questions do you need to ask to assess the credibility of these documents?

5) **Decoding Plan:**
- Before the decoding introduce the debate about anthropogenic co2 with a reminder that good science is based on a continual reassessment of one’s conclusions based on evolving information and peer review.
- Introduce the video as a clip from the 2007 British documentary, “the Great Global Warming Swindle.”
- After the 30 sec. clip ask students to: Look for the messages in the clip about anthropogenic co2 and the techniques used to communicate those messages.
- Follow with evidence probes where appropriate: e.g. *Where did you see that in the clip? Or How did the film makers communicate that message?* Intent is for students to identify the film’s position that the amount of human produced co2 is relatively tiny compared to natural co2 and to identify the techniques used to communicate that message.
- After decoding the video introduce the SOCCR chart and ask students *What discrepancies do you see between the two documents?* and again, probe for evidence. Might need to also probe (e.g., Why is that difference important?) to help students to recognize that the chart emphasizes the balance between natural co2 inputs and outputs but that the video emphasizes the large number for natural inputs only.
- Probe to make sure that they understand that a relatively small amount of anthropogenic co2 has thrown off the pre-modern equilibrium and that this is a primary factor in climate change.
- Ask students *Which source should you believe and why?* and probe their thinking about credibility. Intent is for them to identify the difference between a heavily peer reviewed findings (the SOCCR report) and the clip from YouTube.
- Probe around the issue of bias (Is one of these documents more biased than the other? What is your evidence?), the issue of context (Who might be the audience for each of these?) and the issue of interests (Who might be behind each of these documents?).
- Throughout ask them *How do you know that?* Most importantly, probe to have them define *What questions should you ask when evaluating conflicting sources?* End by summarizing those questions and connecting that back to the grounding of science in peer reviewed re-examination of evidence.