Part one: What is critical thinking?

* Begin by discussing origin and meaning of the words “critical” and thinking, as well as the definition of “critical thinking.” Encourage students to give their own definitions of critical thinking, and explore any incongruencies or definitions you may not have considered.
* Activity: Give students notepads and pens. Display these two images:

 

* Ask students to write down a word or phrase to describe each picture, then pass their notebook to the student next to them. Once everyone has passed their notebook, ask everyone to flip to the next page of the notebook and draw what was written on the previous page. Students may be confused about what to draw if the words are vague. That’s ok! Encourage them to go on their own impressions. Once students are done drawing, have them pass their notebooks again. At this point, the process repeats, with the students writing down a word or two to describe the drawing given to them. Continue passing the notebooks, alternating between drawing and writing descriptive words, until the notebooks have been passed all the way around the room and back to their original owner. Ask students to show the pages of their notebook. You’ll see how the descriptions become more and more divergent over time, depending on the interpretations each student made during the activity.
* Ask students for their impressions. What did they notice? Why do they think they differ? What do they think influences changes and differences in everyone’s interpretation?

Part 2: Critical thinking and science

* Discuss biases. Based on the activity, how much does our own experiences and perceptions influence our ability to communicate? Where else do we see this come up?
* Discuss the scientific method in terms of a framework for critical thinking. What is the value of asking why and how? Should we accept what we are told as true? How do we decide what to believe or not believe?
* Discuss the value of getting things wrong. If you fail, are you more likely to think about what happened than you would be if things went fine?

Part 3: Practicing critical thinking

* Discuss the value of emotion in critical thinking. In what situations would it be very helpful to have your emotions play a large role in your thinking? In what situations would it be unhelpful?
* What are barriers to critical thinking? (E.g. being unwilling to admit you are wrong, not considering how your experiences shape your views)
* How do you successfully engage in critical thinking during social interactions? How does what you learned from the activity impact that?