

**WKS – Nuclear Accidents
Three Mile Island, Chernobyl
& Fukushima**

Name _____
Period _____
Date _____

Today we will watch videos detailing the accidents that occurred at nuclear power plants. These videos and others can be found at my Nuclear Chemistry YouTube playlist:

<https://www.youtube.com/playlist?list=PLzy4QGtywlo-r21ny8w3zfAuclqcAcUJC>

Video: Three Mile Island (<https://youtu.be/-6mpqbBORhA?t=42s>, <https://youtu.be/-NVlxVzMj5E>)

1. What is the basic chain of events that occurred at the TMI power plant?

2. What is the “China Syndrome” that was feared?

Video: Nova: Back to Chernobyl (Full Video @ <https://youtu.be/e3FjkBozlu0>)

3. Make a list of the basic things that went wrong in the Chernobyl power plant and led to the meltdown.

4. List and explain two structural/design factors make the Chernobyl power plant more dangerous than an American power plant?

a) *Reactor Design:*

b) *Reactor Structure:*

5. What is the purpose of the sarcophagus? Why was it necessary to build a new containment structure (Chernobyl’s New Shield: <https://youtu.be/nPO-7FaWFKA>, Chernobyl’s New Shelter moves slowly into place: <https://youtu.be/zbpJqAlHJ6U>)

Video: Understanding the Accident of Fukushima Daiichi NPS (<https://youtu.be/JMaEjEWL6PU>)

6. How did the original cause of the Fukushima disaster differ from TMI and Chernobyl?

7. What is different about the Fukushima reactor?

8. Why did the reactors overheat and experience a meltdown?

9. What caused the reactors to explode?