Class Activities

# Chapter 4S: Reliability

**Activity 1:** **Experiential Activity**

Learning objective: Define reliability and compute the reliability of a product system

Students are instructed to put themselves in the role of a consultant who is brought in to give advice on the importance of setting reliability goals and how that can be accomplished. The client is a potential battery supplier for Samsung’s Galaxy smartphone who is not involved in the making of faulty batteries in the Note 7 phone. The advice to this client will help secure a supplier contract from Samsung. Select several students to present their work to the rest of class.

**Activity 2: Individual Exercise**

Learning objective: Define reliability and compute the reliability of a product system

Have students reflect on their experience with a product failure. Describe the failure incidence and its consequences. Discuss what they learned from that experience and how the understanding of reliability will help reduce the likelihood of future product failures. Select several students to present their work to the rest of the class.

**Activity 3: Activity for Small Groups**

Learning objective: Distinguish among the concepts of reliability, maintainability, and availability

Have students illustrate the concepts of reliability, maintainability, and availability with the use of a product individually. Pair with one other student to share their illustration and discuss how to measure these three concepts quantitatively. Comment on the quote by Peter Drucker, “If you can’t measure it, you can’t improve it” under this context together. Have several students share their work with the rest of the class.