**Marble Roller Coaster Speaker Notes**

**Slide 1: “Marble Roller Coaster Challenge”**

* Briefly introduce activity

**Slide 2: Volunteer Introductions**

* Each volunteer introduces themselves with their pronouns, major, and a fun fact

**Slide 3: “Roller Coasters”**

* Ask students what makes roller coasters fun
  + Mention drops, loops, speed, etc.
* Briefly go over history, what a roller coaster is made out of, engineering process of roller coaster construction

**Slide 4: “Energy”**

* Quickly review concepts of potential and kinetic energy
* Ask students to try to define these terms and give examples of them!

**Slide 5: “Velocity, Acceleration & Momentum”**

* Introduce concepts of velocity, acceleration, and momentum
* Talk about different examples
* Relate concepts to a roller coaster
* Mention factors to consider in real life and in this challenge (stability, mass, etc.)
* Once again, try to ask students if they are familiar with these concepts, if they can define them, etc.

**Slide 6: “Mechanical Engineering”**

* Ask students if they have heard of mechanical engineering before and what they think it involves
* List out different roles of mechanical engineering
* If you are in mechanical engineering or have taken classes related, talk about them! Share your UConn experience
* Tie in how these roles fit in with roller coaster design

**Slide 7: “Your Challenge”**

* Present the workshop and what they will be doing
* REMEMBER: students are working in GROUPS of 3-4 students and are to share the supplies amongst the group

**Slide 8: “Materials”**

* Introduce materials that will be provided to them
* Encourage them to experiment with different supplies

**Slide 9: “Get Started!”**

* Tell students about the point system
* Start timer
* Walk around and answer questions, help out, encourage problem solving

**Slide 10: “Our Design”**

* Share aspects of the sample design
* Explain process of building the roller coaster
* If volunteers do not have a sample design, have students who want to share their designs do so (this slide can then be deleted)

**Slide 11: “Discussion Questions”**

* Go through each question
* If students don’t have any answers, try to ask simpler questions or answer with what you think!

**Slide 12: “Thank you!”**

* Offer to answer any questions about your experience in STEM and at UConn, transition to next part of MYO