TeamSparks!™ Card

Pendulum Panic!

Goal

Design and build a lightweight container (from flat materials only) that attaches to a pendulum and can keep ping-pong balls safely inside during swinging motion.

Mission

The carnival owner is testing a new ride called Pendulum Panic. Your team must engineer a container that:

- **is made from the materials given**
- **attaches securely to a pendulum**
- **holds three ping-pong balls**
- **keeps the balls inside during a pendulum swing**

Coordinator Card

Time (Total: 10 minutes)

- **Plan (2 min): Sketch your container and discuss how it might keep balls from slipping out. No touching materials yet**
- **Build Phase - Round 1 (3 min): Construct your container using ONLY the provided materials. Attach a loop or hook point so it can hang from the pendulum.**
- **Spark Reveal**
- **Build Phase - Round 2 (3 min): Redesign or reinforce your container based on the Spark.**
- **Testing & Review (2 min): Attach your container and perform the swing test. Your score depends on how well your container performs after the Spark.**

Resource Card

Materials

- **2 sheets of paper**
- **4 index cards**
- **4 coffee stirrers**
- **2 pipe cleaners**
- **4 rubber bands**
- **4 paper clips**
- **4 mailing labels**
- **12-inch string**

Items that may NOT be damaged:

- **3 ping pong balls**
- **Pendulum Rig**

Mailing labels may not be attached to the ping pong balls or any part of the Pendulum Rig.

Strategist Card

Scoring (100 points total)

- **Container Stability (25 pts): Strong structure, secure attachment, balanced design.**
- **Ball Retention (25 pts): How well did the container keep balls inside after the Spark?**
- **Creative Engineering (20 pts): Innovative use of flat materials: curved walls, rims, flaps, rails, hinges.**
- **Teamwork (30 pts): Clear roles, respectful communication, additive ideas, time management, Spark adaptability.**

The Spark Card

Full Circle Frenzy!

Just when you think your container is complete, the carnival owner announces:
Your container must now survive a COMPLETE 360˚ loop!
Prepare for total inversion.

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