

Phab Physics *Rollercoaster Derby/Crash*

Location- Allamuchy School- 20 Johnsonburg Road, Allamuchy

Check-in	9:30 – 9:45
Welcome & Introduction	9:45 – 10:00
Building	10:00-11:00
Judging/Awards/Snack	11:00-12:00

Rollercoaster-

4. Rules

A. The marble must stop due to the Laws of Physics. There can be no obstruction to the track; pinching sides is not permitted. Tape cannot be used on the track surface EXCEPT:

- 1) The starting point will need to be clearly marked.
- 2) Tape may connect the locations where two pieces of track meet to create a smooth surface.

B. All of the building materials provided must be used in the design; masking tape can be used as needed. Specified additional materials can be used at the team's discretion. The design requirements and amount of each building material to be used will be announced at the start of the event and may include:

- 1) 4, 5, or 6 pieces of pipe insulation; length of these cannot be changed
- 2) 3 – 6 paper tubes; length can be changed but all parts must be used
- 3) Design may require 0, 1, or 2 loops

C. Starting point must be marked (crosswise) on the track with masking tape. Once trials begin there will be no more building, testing, or adjusting. Students will release their marbles from the upper edge of the starting point tape. Students may not touch the track during the trials except to release the marble.

5. Judging

A. Judges will measure the distance from the end of the track to the stopped marble.

B. Judges will have the final say in determining the winners.

C. In addition to successful task completion, judges may choose to recognize excellence in design.

Crash

All Materials will be supplied on site. Students are expected to be NOT familiar with the activity.

Parents/Volunteers - Please limit parent volunteers 5 per school, and provide a list of names for registration.

Parents are welcome to view the judging and award presentation, but will not be permitted in the building before that time.