

Questions answered 1/11/17

Div A

For **Bridge-A-Roni**, Are there any rules about the type of pasta that can be used for the bridge? Is it supposed to be Spaghetti Noodles or can you use any type of pasta?

Any type of store-bought pasta is allowed.

Div B

Bottle Rocket: Can the egg assembly be attached after inspection?

After initial safety inspection, yes.

My kids that are doing Amazing Mechatronics were wondering if they are able to store notes on their raspberry pi. *You won't be using your own pi, so no.*

Are we allowed to personally bring our own device for something like a geomagnetic calculator and a latitude and longitude converter (For Road Scholar).

The rules say that you can bring any measuring devices that you want, so yes.

Can you describe what the hovercraft track will be made of (material)?

Every tournament site will be slightly different. Please check your tournament page for specifics on this.

Food Science - Is the thermometer considered part of the calorimeter for the 30 cm x 30 cm x 30 cm size requirement?

Nope.

Div C

The Astronomy clarification as of 9/9/16 says no laptops; however, I recall an announcement at the Coaches' Conference that they would be allowed. Which is correct?

The regional directors voted after the clinic that laptops are too much to handle in that event, so no laptops.

Forensics fibers and polymer kit-- is it current for 2017?

Yep.

Bottle Rockets--after reviewing FAQ page: Is it possible to get negative height (less than zero total points on height)? For example, if the rocket reaches an altitude of 200 is the total point score on height zero or -10 (height of 200 would be $200 - 130 = 70 \times 2 = 140$ points then subtract from 130 starting points = -10).

Yes, according to the rules, you can get a negative score if you have a high flier.

Mission Possible 4diii. says "An object must be continuously pushed or pulled 'without rolling' along a stationary Inclined Plane." On the score sheet it says "***Inclined Planes must be stationary and push or pull a 'non-spherical' object at least 10cm up vertically

before initiating next action to count for points." My question is whether the item being pushed or pulled up the inclined plane can have wheels or not. Wheels roll, but are not spherical. I cannot tell if the point is to avoid balls rolling up an inclined plane or whether wheeled objects (like a car or train) are also not allowed. Please clarify.

No wheels if you want points on the inclined plane.

Will Wright stuff be held in Reynolds this year? Can you please share venue dimensions?

It will be in Reynold's, I don't have measurements yet, but it is a full-sized basketball court plus some.

Div B & C

Bottle Rocket--just clarifying the rule for 1L is for B division only; C division still using 2 liter bottles, correct? ***Yep.***

Write it Do it - Can we use different colored pens to write directions? The rules don't anything against it. ***Sure.***

Where can we buy a launcher for the bottle rocket?

We have nerds, inc launchers for sale in the office, send Sharon an email: sascott7@ncsu.edu

Bottle Rockets: Can we use a parachute? ***Nope.***

For optics can we use electronic measuring tools such as an angle measurer ***YES***

Bottle Rocket--just clarifying the rule for 1L is for B division only; C division still using 2 liter bottles, correct? ***Correct.***

In Microbe Mission, are the metric conversions going to be simple metric-metric mass and length or will it be more difficult such as metric-English in energy, mass, volume, area, etc. were the participants will need charts for complex conversions? ***We do everything in metric.***

HoverCraft- Can passive components such as a potentiometer be used to vary motor speed? I am aware integrated circuits are not allowed is this considered one? ***I think this is fine if it is not digital.***

Towers- What does "span" mean in the context of the Towers rules? The rules specify that "the tower must span a 20 x 20cm opening." Does that mean the tower's width must be at least 20x20 or can it be less? ***The square opening is 20x20. If your tower can't sit on the platform in some orientation, it gets tiered down.***

Trial Events: Why did you get rid of Experimental Design? That was one of my favorite events that I always looked forward to. ***Nobody likes to grade ED. We will run it at both levels at States.***

Can we use adapters for the motors on the Hovercraft? *Hmmm – need a little more info on this one to give a good answer. Send Kim an email.*