Coach's Training for 2002 Ohio Science Olympiad Mission Possible Event

#	Do	Don't
1	Do have all participants and coaches read the rules thoroughly. Every word is there for a reason and we believe the participants should understand why each sentence was included in the rules.	Don't build anything before understanding the rules well enough to know how to maximize your score. And don't build it the night before the event.
2	Do check the national and state web pages for clarifications.	Don't make rash assumptions and base your whole device on your own interpretation of the rules. (Discuss questionable issues with others.)
3	Do have the participants prepared to answer questions and defend their reasoning during the event. Participants should know why a particular component is classified as a certain type of Energy Transfer or Simple Machine.	Don't send substitute students to an event without preparing them in some way by performing practice runs and studying the rules and the Transfer Lists or Machine Lists.
4	Do allow the device to evolve during the school year. Start with some basic components that satisfy the goals and earn a modest score then work up to maximizing the score and earning every bonus point possible.	Don't try to earn all of the points and bonus points on your first attempt.
5	Do make the device less than the maximum size (about 5 cm smaller in each dimension perhaps).	Don't make the device exactly the maximum size and don't forget to include all protrusions and the base in your measurements.
6	Do make the device sturdy enough to transport it. And consider having a box or case for it.	Don't forget to make the device small enough to fit on a bus seat if that is how it will be transported.
7	Do design the device to keep all of its components (especially liquids) contained.	Don't depend on having a table beneath the device (the state event is held on a carpeted floor).
8	Do design the device for simplicity of setup and for reliability.	Don't use expensive components that have to be replaced each time it is run. And don't use components that seem to have a high failure rate.
9	Do prepare a list of potential failures & remedies.	Don't panic when a component fails.
10	Do prepare a checklist similar to a NASA checklist used during a rocket launch. (Make sure batteries are fresh and connected, candles are lit, chemicals are loaded, mousetraps are set, etc.)	Don't just hope that one of the other team members took care of a particular item. And don't just hope for some good luck.
11	Do notice how important the execution time is. Many points can be earned by making a device run the proper length of time.	Don't allow precious time to be lost while trying to fix a stubborn component (it's usually better to skip over one bad item).
12	Do design a timer such as a screw drive, water clock, sand clock, etc. into the device.	Don't use store-bought clocks in the device. And don't use wristwatches or stopwatches during the event.
13	Do label each component from 1 to 30 (or whatever) such that the labels correspond to the Energy Transfer List or Simple Machine list numbers.	Don't make a mess of the labels by crossing out the labels and drawings arrows to/from/around them.
14	Do make the Lists legible. If they are difficult to read there will be penalties and it will probably slow down the event.	Don't attempt to present the List on a laptop computer or PDA (Palm Pilot, Pocket PC, etc.).
15	Do make sure that the List consists of sequential steps that lead directly to the next step.	Don't draw lines and arrows all over the List connecting the steps together in a roundabout way.
16	Do indicate bonus steps/points/attempts on the List and make sure the judge is aware of the bonus attempts.	Don't expect the judge to recognize a bonus attempt without indicating it in the List or perhaps on the device.
17	Do make sure that every step contributes to the completion task specified in the rules.	Don't add unnecessary steps. There are no "spare" energy transfers or simple machines and there is no reason to increase your risk of failure by adding more components.
18	Do be original and creative in your design. It should be fun to build it and fun to watch it run. And this could be a factor in breaking ties.	Don't use dangerous components in achieving your originality and creativity goals. Don't use unguarded razor blades, flammable substances, dangerous chemicals, etc.
19	Do make sure that participants wear their safety goggles correctly during setup and operation.	Don't allow safety goggles to be worn around the neck when they are supposed to be protecting the eyes.
20	Do use normal, safe, inexpensive AA, AAA, C, D, 9-volt or lantern batteries if your device requires electricity.	Don't use dangerous, expensive batteries from cars, motorcycles, lawn mowers or other strange sources.
21	Do help the judge keep track of touches or adjustments by asking permission before reaching in to fix a broken or stubborn component.	Don't have all three team members sticking their hands in the device chaotically during operation.
22	Do request a brief explanation of your score before leaving the event. (Not all judges may comply and time may not always be available, but any event we are supervising should expect this courtesy.)	Don't leave a Mission Possible event without attempting to get an explanation of your score. And don't leave without trying to check the math on your judge's score sheet (with the judge's permission, of course).