

Destination ImagiNation®

Assembly Required

Colorado Team Manager Training

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Your Team Will...

- Design and build ***Equipment*** that retrieves **Parts** and delivers **Products**
- May provide ***Infrastructure*** to help the ***Equipment*** do its job.
- Assemble **Products** from team-provided **Parts** to fill **Orders** and to use in your team's Presentation
- Earn extra points by deciding how best to fill **Orders** with no **Parts** or **Products** left over in the Assembly Area
- Present a team created **Story** about something that happens just in time

And Also....

- Have a lot of fun
- Bond with each other and with your Team Manager
- Learn about innovative engineering, technical design, mathematics, logistics and decision making, critical thinking, problem solving strategy, collaboration and communication

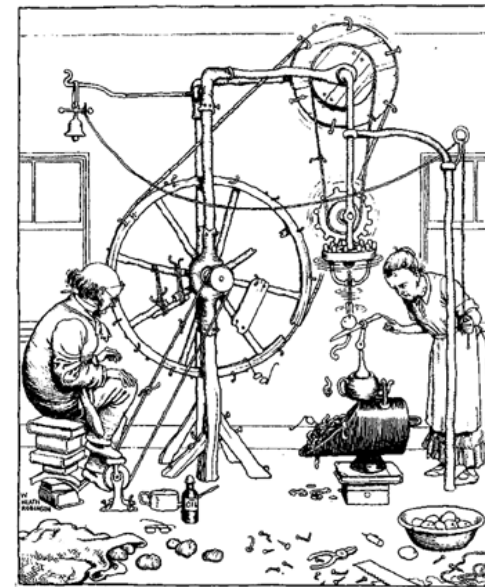
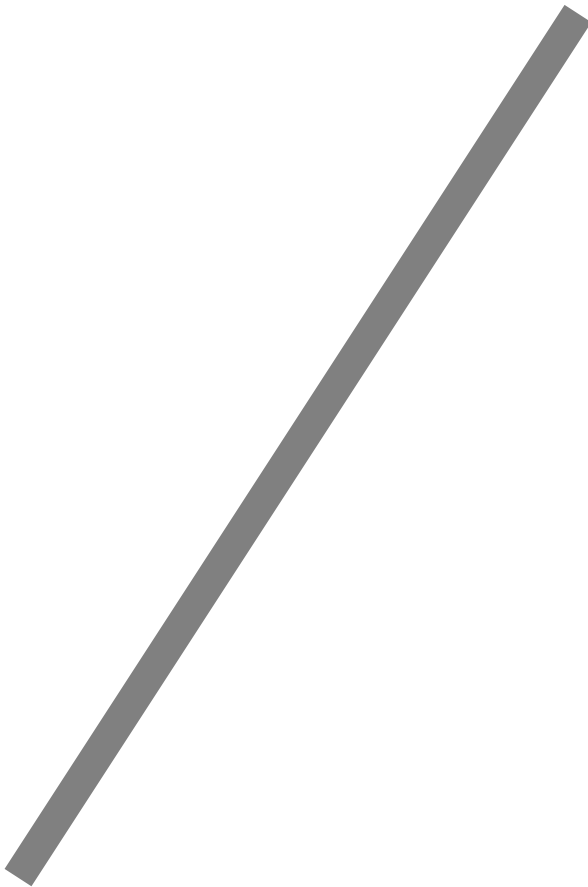
Where do we start?

- Put together a team of up to 7 members; pick a challenge
- Bond with each other and with your Team Manager through frequent team meetings where you discuss different plans of attack for solving the challenge
- During initial team meetings research and learn about innovative engineering, technical design, mathematics and logistics regarding a solution to the challenge
- These activities require decision making, critical thinking, collaboration and communication from all team members
- Once team has discussed several solutions, oversee that they choose one and move forward timely enough to create and practice a chosen solution

This Challenge Can Be Solved in Many Ways

From the very simple....

To the very complicated



The Professor's invention for peeling potatoes.

Finding a Solution

- Do not throw out ideas too soon; as the TM it's your job to keep record and manage ideas, not create/critique/suggest ideas.
- Make sure you and the team understand the point value for solving each portion of the challenge; this will help them focus their time and energy
- If you are unsure of what to do next, contact us. We can offer guidance, but obviously cannot provide solutions to the challenge.
- Questions regarding the challenge or rules of the road? Ask for a Clarification.

What are Clarifications?

- **A process to help you answer questions**
- Two types -
 - **Published:** written by International Challenge Masters when there is an issue about a *Team Challenge* or *Rules of the Road* that all teams should know about. These supersede EVERYTHING!
 - **Team:** a specific clarification that applies only to YOUR team. You can ask up to 10 team clarifications before February 15, 2012.

<http://idodi.org/index.php/what-is-a-clarification>

The General Idea

Intent of Challenge: team must design and build EQUIPMENT that will transport PARTS and deliver PRODUCTS.

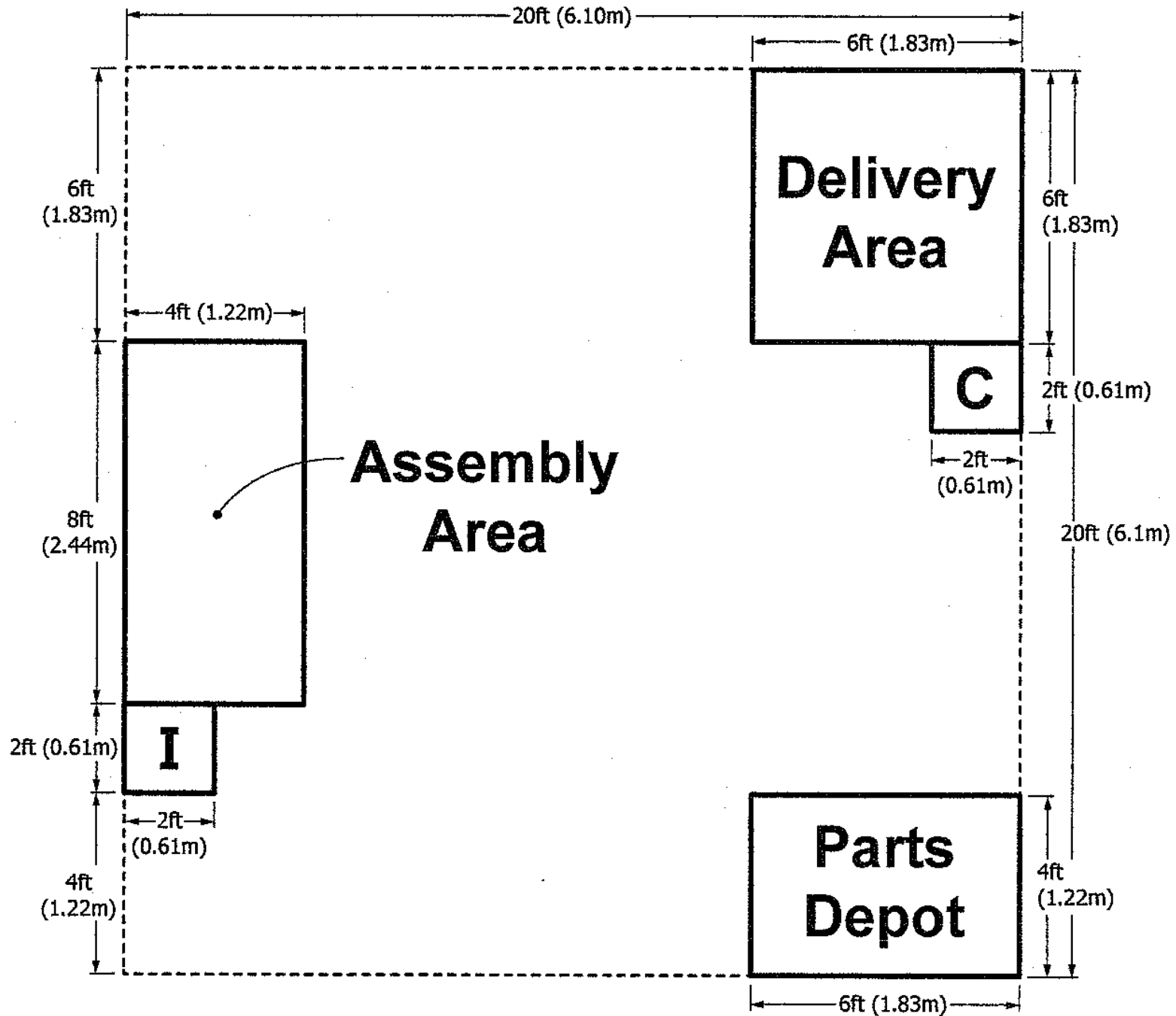
The presentation must include real-scale, mobile EQUIPMENT designed to travel the site (while transporting and delivering materials), operated by at least one member riding on the EQUIPMENT.

Team selects ORDERS to fill and will assemble PARTS into your teams chosen PRODUCTS.

Team incorporates the final PRODUCTS and assembly process into an original STORY about something that happens “just in time.”

Your story, products, parts and equipment are only limited by the challenge, rules of the road, and the limits of your team’s imagination. If they can make it into a coherent story, they can present it as their solution. Don’t forget Team Choice Elements (discussed later)!!

The Layout



Technical Design and Innovation

- There are 80 *important* points associated with Technical Innovation and Design of the Equipment. **This is a huge chunk of the total Central Challenge score.**
- Technical Design involves planning, efficiency, and reliability. How well did the intended solution work? Did it follow your plan?
- Technical Innovation involves science, engineering, and creativity. How does the solution work?
- The less direct team member involvement in Material movement, the higher the technical scores.
- **If the equipment damages the wood floor with marks, scratches or gouges, the Appraisers must stop the movement of equipment until the problem is corrected by the team. Time will continue. Special attention should be given to wheel size, softness and bearings.**

Order Card Details

The nomenclature "Product A 5" means "a quantity of five of Product A"

There are 10 Order Cards as shown on the 10 lines below. Each card stipulates a unique quantity of Product A and Product B to be assembled from Parts and delivered:

Product A 5	and	Product B 1
Product A 4	and	Product B 1
Product A 3	and	Product B 1
Product A 2	and	Product B 1
Product A 1	and	Product B 1
Product A 1	and	Product B 1
Product A 1	and	Product B 2
Product A 1	and	Product B 3
Product A 1	and	Product B 4
Product A 1	and	Product B 5

Max quantity of Product A = 20

Max parts per Product A = 9

Max points for Products A = 180

Max quantity of Product B = 20

Max parts per Product B = 8

Max points for Products B = 160

Max Total = 340

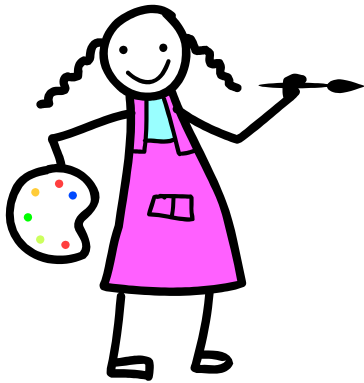
Team Choice Elements

What Are *Team Choice Elements (TCE)* ?



- *TCEs* are extra items that the team wishes to present as part of their solution.
- Common Choices are artwork or backdrops, dance routines, costumes, musical performances, or creative devices that are not already being scored elsewhere.
- When any team calls Time, the entire Presentation including all *TCEs* is done.

Choosing TCEs



- It works best if the team selects *TCEs* that showcase special skills that the team has, such as art or dance.
- It's not unheard of for the *TCEs* to be selected at the last minute, but that's not ideal.
- Something that is scored elsewhere can't be entirely a *TCE*, but some aspect of it may. For example, the Equipment can't be a *TCE*, but decorations on it could be.
- The team can present up to two *TCEs*, and the total score that can be earned is 60 points.

Optimizing TCEs

- TCEs are scored for Creativity, Originality, Quality, Workmanship, Effort and Integration into the Presentation.



- If the team is doing a musical TCE, Originality is very important. Playing a few bars from a well-known song has never scored very well.
- When describing the TCE on the forms, have the team be *very clear* about what they want scored. Saying “Costumes” will get every costume scored (and averaged). If the team really wants to be scored only on the sewing on the giant hamster costume scored, they need to say “the sewing on the giant hamster costume.”



This section is scaled to 100 points

CENTRAL CHALLENGE		UP TO 240
1.	EQUIPMENT	UP TO 80
	a. Equipment Propulsion System – innovation and design	Up to 40
	b. Equipment Energy Source –innovation and design	Up to 10
	c. Equipment Loading/Unloading Device[s] – innovation and design	Up to 30
2.	PRODUCT DESIGN AND USAGE	UP TO 30
	a. Creativity and Design of Product A	Up to 10
	b. Creativity and Design of Product B	Up to 10
	c. Creative use of finished Product in Presentation	Up to 10
3.	ORDER COMPLETION	SCALED TO 100
	a. Completed Order Score (See formula – A.3.d)	Up to 340
	b. Quality Control Bonus	
	1. Orders (# of Completed Orders x 2)	Up to 20
	2. Parts (# of Completed Orders x 2)	Up to 20
3. Trips (# of Completed Orders x 2)	Up to 20	
4.	STORY	UP TO 30
	a. Creativity and Originality of the Story	Up to 20
	b. Creative integration of the Assembly and Delivery process	Up to 10

TEAM CHOICE ELEMENTS

UP TO 60

5.

TEAM CHOICE ELEMENT 1

**UP TO
30**

a. Creativity and Originality

Up to 10

b. Quality, Workmanship, or Effort that is evident

Up to 10

c. Integration into Presentation

Up to 10

6.

TEAM CHOICE ELEMENT 2

**UP TO
30**

a. Creativity and Originality

Up to 10

b. Quality, Workmanship, or Effort that is evident

Up to 10

c. Integration into Presentation

Up to 10

Instant Challenge-up to 100 Points

Instant Challenge 25%

A time-driven team project that emphasizes the Creative Problem Solving process in a very short timeframe. The impromptu development of an *Instant Challenge* solution requires creativity and time management.

Central Challenge 60%

An academically based team project that emphasizes the Creative Problem Solving process over a sustained period of time.

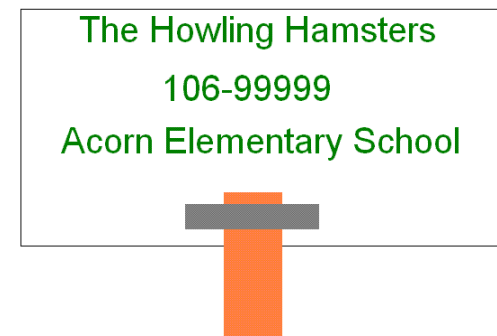
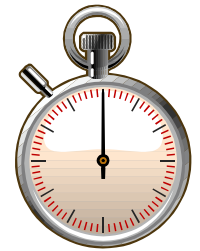


Team Choice Elements 15%

Team-selected elements that are incorporated with the *Central Challenge* to allow creative freedom in showcasing additional strengths. They are based on multiple intelligence theory and developed over a sustained period of time.

General Constraints

- The team has eight minutes total for their Presentation, **including the time needed to set up.**
- The total cost of the materials brought onto the floor and used during the Presentation is \$175. The *Rules of the Road* discuss how materials are valued, what items are exempt (safety equipment, for example), and how to fill out the *Expense Report Form*.
- Teams are limited to seven members, including anyone who has ever worked with the team on the Challenge.
- Teams should bring an *Identification Sign* that displays their team name, team number, and school, big enough for the Appraisers to see from a distance. Do not put effort into this; it is not scored; it is only to help the Appraisers find the right score sheets from the reams of paper they carry.



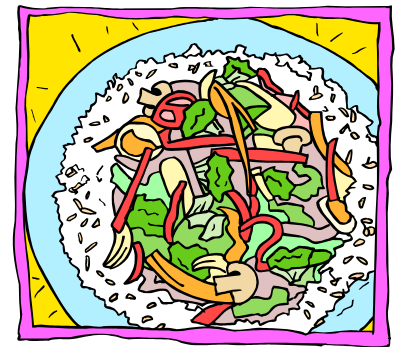
Management Hints

- The team may have trouble figuring out how to get started. Help them break down the Challenge into pieces. Then ask them “what is the easiest way you can think of to do this piece?” Then let them build that.
- Once they have a trivial solution on the floor, they will see how it all comes together and they will have a much easier time seeing how to make it better.
- Once the team has something that solves part of the Challenge, no matter how weakly, encourage them not to destroy it until the upgraded part is complete and functional. It’s always good to have fallbacks.
- Younger children rarely come with time management skills. It is part of your job to help them organize and schedule.



Management Hints

- Your kids will each have different skills, talents, and interests. Let them use them. If everyone hates art, maybe there shouldn't be any art in the solution.
- **Help them focus on where the most points are.** It's very easy for younger teams to get wrapped up in some part that has little or no scoring value, but completely ignore something mandatory.
- Practice on as close to a full size floor as you can.
- Practice recovering when something goes wrong.
- Take field trips to Lowe's and Home Depot
- Keep it fun. Have frequent breaks. Practice *Instant Challenge* a lot. Go out for Chinese food and see who understands the chopsticks. Go to plays.



Management Hints

- Keep track of costs, and make sure your parents know there will be cost sharing.
- As you get to the last week, focus on mandatory items. Pace the kids during the last week. Get the forms done. The last week is always stressful; be as prepared for it as you can.
- Have someone working on the Team Choice Elements, Story and performance at least a month before Tournament, and be practicing it. The first time you run through it, don't be surprised if it takes 20 minutes. It gets better with practice. And it will go faster than you ever dreamed at the Tournament.
- Your rights to critique the play and blocking and general performance are very limited. Consider videotaping a practice, having the kids watch it, and **critique themselves**. (You might cost your team points for interfering!)



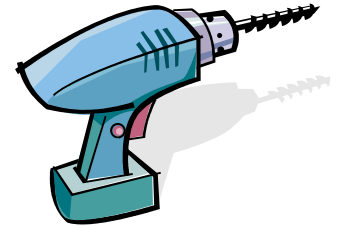
Other Rules and Information

Membership and Signing Up

- Your school needs to register with (and pay) Destination ImagiNation. Some school districts will arrange this for your team with a 30-Team Pak or a 5-Team Pak. Others will expect you to buy the membership at the ShopDI Web site. Either will also register you at the state level. Your school coordinator will help you with this.
- Your team needs to sign up as a team under that school registration. That will get you a team number. It will look like 106-NNNNN (ex. 106-22222). This is also done at ShopDI; either you or your school coordinator will do this.
- Your team needs to register with your Region. Procedures for this vary from Region to Region. Some Regions charge for this, some have their costs paid by their school system. If you don't register with your Region, there won't be a time slot for you at the Tournament.

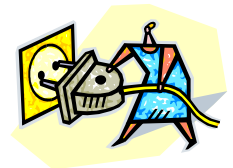
Construction Safety and Interference

- Your team is likely to be using real tools in order to build their Equipment. These tools can be dangerous if misused.



- It is Interference for parents or Team Managers to help a team member in the act of **using a tool on their solution**, even to hold a board steady while the team member cuts. If it's not safe for the kids to use the tool, they have to find another way (Duct tape ALWAYS works!).

- It is not Interference to hover over the team member in terror while she cuts the board, ready to yank the cord out of the wall. However, it may irritate the team member.

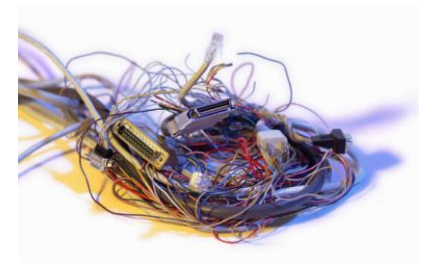


- It is not Interference to train team members on tool use, using scraps or parts that will not go into the solution. You have to train them.
- It is never Interference to stop a team member from doing something that might get someone hurt. You have to do that, it's your job!

Electrical Safety & Operation



- Electrical solutions to the technical Challenge are common.
- There are two primary dangers associated with electrical solutions: shock (in rare cases electrocution) and overheating (possible fire).
- The Challenge will provide 120 volt 3-wire AC power to the performance area. If the team provided devices that use this power have been modified or customized, full insulation must be maintained and the team must provide GFCI protection.
- To avoid electrocution, DC circuits are limited to 28 volts, and batteries must be unmodified and spill-proof in all positions.
- Be extremely careful with large 12-volt batteries, like you find in a computer UPS. Even though they may be spill-proof, they can get hot enough to leak electrolyte or explode if too much current flows.
- DC circuits with more than 10 amps current flow must have fuses or circuit breakers sized to protect the associated wiring and devices. Even small batteries may deliver more than 10 amps into a short. Rats-nest, unsafe looking wiring will not be allowed.
- Remember to bring fresh or fully charged batteries (and spares) to the performance. Don't leave batteries under load overnight.



Clarifications

- If you have questions about this Challenge (for example, can we do this; must we do this; what happens if we do this) and it's not obvious from the Challenge text, your team should seek a Clarification.
- When you register your team at ShopDI you will get the necessary materials for submitting Clarifications.
- You will get a fairly rapid response (24-48 hours) over e-mail. Your answer will not be shared with other teams.
- You may ask up to 10 Clarifications, and you must ask by February 15, 2012.
- Bring your Clarifications to Tournament with you.
- Check the IDODI website often for Published Clarifications that apply to all teams. These happen when many teams ask the same question.



Instant Challenge

- It is very common for *Instant Challenge* scores to determine who “wins” the Tournament. Often several teams have almost the same technical scores, and the team with the best IC score comes out ahead.
- If possible your team should practice *Instant Challenge* every time they meet. That probably won’t always happen, but do IC as often as possible.
- **Don’t skip an IC practice because you think the example is too crazy. Instant challenges are notorious for being crazy (and fun)! Be prepared. Practice using different materials.**

Tournament Forms

- In the days before the Tournament, your team will prepare the *Tournament Data Forms*. These forms tell the Appraisers how to award points to your team and should not be left until the night before.
- Team members should provide the words for the forms. If Elementary Level team members cannot write or type legibly, the Team Manager may transcribe for them.
- Losing the forms and having to redo them at Tournament is very stressful, so we recommend making an extra copy of the forms and giving the extra to a reliable team member or parent.
- Form blanks found in the Challenge and in *Rules of the Road*



Tournament Forms

Declaration of Independence

- A team's assertion that there was no Interference (or confesses to it, if there was)
- Signed by all team members and Team Managers.
- You can sign "dropped" for former team members who have left the team.
- Need one copy for *Team Challenge* and one copy for *Instant Challenge*.

Declaration of Independence
YOUR TEAM MUST BRING TWO COPIES OF THIS FORM TO EACH TOURNAMENT.

Membership Name & Team Name _____

Team Number: _____ Level: EL ML SL UL

Team Challenge _____

Sponsoring School/Organization (if not 1-Team Pak membership): _____
Please print and sign names of all team members participating in today's Presentation. Team members who contributed to the solution but who are unable to attend today's performance should also be listed. (Their signature is not necessary.) Please note the reason for their absence on the signature line.

1. Name: _____ Grade/Age: _____
Signature: _____

2. Name: _____ Grade/Age: _____
Signature: _____

3. Name: _____ Grade/Age: _____
Signature: _____

4. Name: _____ Grade/Age: _____
Signature: _____

5. Name: _____ Grade/Age: _____
Signature: _____

6. Name: _____ Grade/Age: _____
Signature: _____

7. Name: _____ Grade/Age: _____
Signature: _____

Please circle **True** or **False** for each statement below. If you answered **False** to any statement, please explain in the space provided below. A deduction may need to be assessed in order to be fair to teams that did not receive help.

TRUE FALSE We understand the rules of Interference.

TRUE FALSE The research, ideas, and solutions for our Team Challenge Presentation are those of ONLY the team members signed or listed above.

TRUE FALSE All team members who worked on our Team Challenge solution are listed above.

TRUE FALSE **Please do not circle until you arrive at Instant Challenge.** We do not know anything about the Instant Challenge we will be given at the Tournament.

To the best of my/our knowledge, the above statements are true. In addition, I/we certify that all elements of this team's solution, including chemicals, will be handled and used safely and not cause harm to individuals or the facility.

Team Manager Signature _____ Date _____

Team Manager Signature _____ Date _____

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Tournament Forms – Tournament Data Forms

- This form is in the Challenge. It is a two page form.
- The team should describe their two *Side Trips*, and very clearly state what they want to be scored on.
- The team should describe the requested elements of their solution very specifically, especially info about the Story. It can be very hard sometimes for the Appraisers to hear a young team who is speaking quietly, and the more information we have the more points we can find for them.
- If the Appraisers don't understand, they will visit the team before the Presentation and ask them to explain.
- Please bring five copies of this form. Single-sided is preferred.

The Tournament - Before the Big Day

- Get your forms done and copied (5 copies each)
- Prepare a crash kit with essential tools and spare parts, in case something breaks during the trip (It always does!)
- Make sure you know where you're going and how to get there
- Make sure your parents and grandparents know where they're going, how to get there, and what school and Challenge they need to look for inside the school (Challenges A, B, C, D, and E).
- Make sure you know how each team member is getting to the school. You will be happiest if you meet them before travel and you travel in a convoy.
- Pack the cars the night before. Don't let them stay up all night finishing stuff, unless they're high school.



The Tournament -- Arrival

- Plan to be at the school an hour before your Presentation, at least. An hour and a half to two hours is always better.
- You may want to drop props at the curb (with a parent guard) then go find a parking place.
- Figure out how to get to the Presentation site before you start parading props through the building.
- Parents can carry props! Give them something to do!
- Find a convenient piece of hallway to set your props down.
- Have the kids check over the props and make any repairs needed.



- Adults should not be seen with tools, brushes, makeup, sewing needles, or anything else in hand relating to the challenge solution, props, costumes, etc. Any aspect of the challenge solution, no matter how small, but be taken care of by team members ONLY. Tournament officials will be walking the halls on tournament day, and interference point deductions will be given for parental interference.
- Deal with snacks, restroom runs, and the schedule only.

The Tournament - Check-in

- About 20-45 minutes before GO time, the Prep Area Appraiser will be looking for you. Be findable or you may miss your presentation time. Trust us, it has happened!
- The Appraiser will invite you to bring your props to his check-in table. Parents can still carry!
- Give the Appraiser your forms.
- The Appraiser will engage the kids in conversation and try to help them be as loose as possible.
- When the previous team finishes, the Appraiser will “walk the floor” with the team, and then have them take their stuff to the Launch Area. At this point adults will be dismissed to their seats, and should take any materials that will not be needed in the performance such as tool boxes.

The Tournament - Presentation

- The Challenge Appraisers may visit with the team if they have questions about the forms.
- The Timekeeper/Announcer will visit with the team to discuss photography and video taping, and how they want to be announced.
- The Timekeeper/Announcer will announce the team, ask if they are ready, and tell them to begin.
- The team then has up to eight minutes to get their stuff onto the site, present their solution, and perform their skit.
- The Timekeeper/Announcer will call *Time* after eight minutes.



The Tournament -- After the Presentation

- The Challenge Appraisers will talk with the team about their solution for two or three minutes. It's helpful if the team knows this will happen, and knows which team member is best qualified to talk about what item.
- When the Appraisers are done, parents should come down and help the team remove the props.
- Raw Scores will be available as soon as possible after the Presentation, but rarely sooner than an hour. There will be a sign for what scores are ready for which team.
- Do not destroy your props, even if you hate them, until after the Closing Ceremony; teams often do much better than they think they did, even if there is a major malfunction.

