

Tech-Explorer Safety Presentation & Pre-Build Instructions

Materials needed for presentation:

- Project safety forms
- Pre-activity evaluations
- Photo releases
- Instructional DVD
- Post-activity evaluations

Equipment needed:

- DVD Player
- Projector
- Projection Screen
- Pens
- Highlighters

Students who do not attend the Safety presentation should not be allowed to participate in the catapult build.

Allow 10 minutes for setup and 45 minutes for the presentation including questions and answers.

After setting up, distribute all forms to the students. Ask students to write clearly and complete the pre-activity evaluation form. Collect the forms. If photo release forms are needed, explain that each student must take them home, have their parent/guardian sign, and bring them back before the day of the build.

Have the students place the catapult instructions in front of them and proceed with the presentation.

Script

“We are here today to introduce you to an exciting hands-on project that will be both fun and challenging for you. The Tech-Explorer project has been sponsored by your local community college and funded by (your funding source) and will hopefully interest you in entering fields of science, technology, engineering and math. There are many high wage careers available in these fields and the demand for people with these skills is expected to grow.”

“Before we view the DVD, I would like to emphasize the importance of safety in both this project and in the workplace. The number-one concern of employers today is the health and safety of their employees. Additionally, the most common reason for losing a job is not adhering to

company safety regulations. When you do your job in an unsafe manner, you not only jeopardize your safety but the safety of your co-workers, as well."

"With this in mind, I would like the team captains to pay special attention to the DVD in regards to keeping yourself and your team-mates safe at all times. Team captains should highlight or mark on their instruction sheet any steps where safety precautions must be taken. Please pay special attention to those tasks that require safety goggles or gloves. It will be your responsibility on the day of the build to remind your team-mates to wear them."

"This DVD will show you the entire catapult building process. You will see and learn how to use a milling machine, lathe, drill press, shear, brake, power and hand tools. You will learn how to follow written instructions, work as a team and follow strict safety guidelines. Please watch the DVD closely as you will be asked to use this equipment very soon."

Show the DVD. After viewing the DVD, collect the instructions from everyone except the team captains. Give each of the team captains a DVD to take home with them.

"Your team captains have been given a DVD to take home to review at home in advance of the build. Will each captain commit to viewing the DVD at least three times before the build?"

"Now that we have all seen the instructional DVD, will you please read silently along with me as I read aloud the safety instructions?"

Read the safety instructions out loud, stressing the areas that require safety goggles and gloves. Make a special point to emphasize #8 which refers to "not using the catapult as a weapon."

"If you agree to abide by these 8 safety requirements, please print your name on the lower left hand side of the page and sign your name on the lower right hand side."

Collect the signed Project Safety forms. Explain the consequences of violating the agreement (e.g. removal from the shop floor, parts/pieces taken away, etc.).

"On the day of the build we will meet (at the build site). Please sit or line up in teams with your team captain in front as you are today. We will give your team captain a clipboard with the instruction sheets, printed name tags which have been color coded to identify your team and a baggie with each team member's name on it. Your team captains will distribute these items to you. Place your name tag on your upper chest where we can easily identify who you are and where you belong."

"The baggies are to place your parts in. Please keep them with you and put your parts, completed or not, in them. Instructors need to be able to look at your baggie to determine where your team needs to go next to complete your catapult."

“The adult at each station will instruct your team captain on the specific task, and after the captain has completed his/her part, he or she will instruct each team member. The adult helpers will be there for support and further instruction, if needed.”

“When you complete the assembly of your catapult, ask an adult helper to inspect it. If it has been correctly constructed, you will be given a Tech-Explorer sticker to place on one of the metal sides. At this time you may proceed to the contest area.”

“We will award prizes to a boy and girl who are the first to correctly assemble their catapults, and to a boy and girl whose catapults have the greatest accuracy at the contest. You will be given three practice shots and then three “official” tries to launch your bouncy ball into a bucket. There will be one more prize for a team member that was seen as most helpful to others during the project.”

“I suggest that you bring your lunch on the day of the build. Valuable time can be lost by going to the cafeteria. If you bring your lunch, you and your team can return faster and get back to work on your project. It is our wish that everyone completes their catapult and leaves here with a finished product.”

“For many of you this will be an amazing adventure, one that you will remember many years from now. For others this project may open doors to a career pathway that you would have never considered.”

“See you the day of the build.”