



Chain Reaction Challenge



HEY DIDDLE, DIDDLE

All Chain Reactions will be evaluated by Judges. Teams get points for every successful step their invention completes and for goals set and reached. Points are awarded for general awesomeness!

Team/Chain Reaction Name:	
Team Age Range:	
Team Member Names:	
	Points
Number of Unique Steps: Unique forms of energy transfer, simple machines or uses of stuff. 2 pts ea. Max 50 pts	
Chain Reaction Journal included, written or digital. 10 pts	
Goals Set: what new skills, knowledge or other goals did individuals or the team set? Goals Reached: What goals did you reach? Max 10 pts	
General Awesomeness: Additional points for thoughtful reflection, creativity, team spirit, etc. Max 10 pts	
	Total Points
Additional Comments:	



The Chain Reaction Challenge is designed to inspire creativity and challenge young learners to try and learn new skills, knowledge and attitudes. While it is not a competition against other teams, it can be seen as a competition against yourselves. Goals should be set and recorded in a Chain Reaction Journal or goals card at the beginning of the teams' effort. Goals can be changed and revised during the teams' experience.

Number of Unique Steps:

Are the number of unique events that make up the chain reaction that is your invention. Events are forms of energy transfer, simple machines or uses of items, etc. Repeating steps like cascading dominoes or marbles counts as a single step or an event like a ball rolling down a ramp used at different places also counts as a single use of that step. (Max 50 points)

For example, a marble rolling down a ramp to topple several dominos which activates another marble on a ramp to a second set of dominoes is only 2 unique steps. Each step is used twice.

Chain Reaction Goal Setting:

Setting goals is an important part of any project. As you start getting ideas for your Chain Reaction, set a goal about something you want to achieve or learn while designing and building your Invention. 2 pts for each goal set (10 max) and 2 more points for each goal achieved (10 max).

Sample Goals

Goals can be about things you want to learn.

I want to learn more about how levers work.

I want to learn how to program a micro:bit microcontroller

Goals can be about skills you want to learn

I want learn how print 3-D printed objects and use one on my invention

I want to learn how solder wires

Goals can also be about attitudes and feelings

I want to be a better team player

I want my machine to make someone laugh

Chain Reaction Journal:

Keeping a Chain Reaction Journal to record ideas, goals, changes, successes and failures is excellent practice. This can be in a written or digital format. The Arduino Science Journal App is a great tool to record observations, notes and photos of your progress. It can be used on a smartphone, tablet or Chromebook. It is worth 10 points.

Additional points:

Judges have discretion to add up to 10 points for thoughtful reflection, creativity, team spirit, new learning or general awesomeness. So, if some of the above goals are not met, but the team shows thoughtful reflection, recognized unexpected learning, shows great team spirit or just plain awesomeness, the judge can award additional points.