Toshiba/NSTA ExploraVision

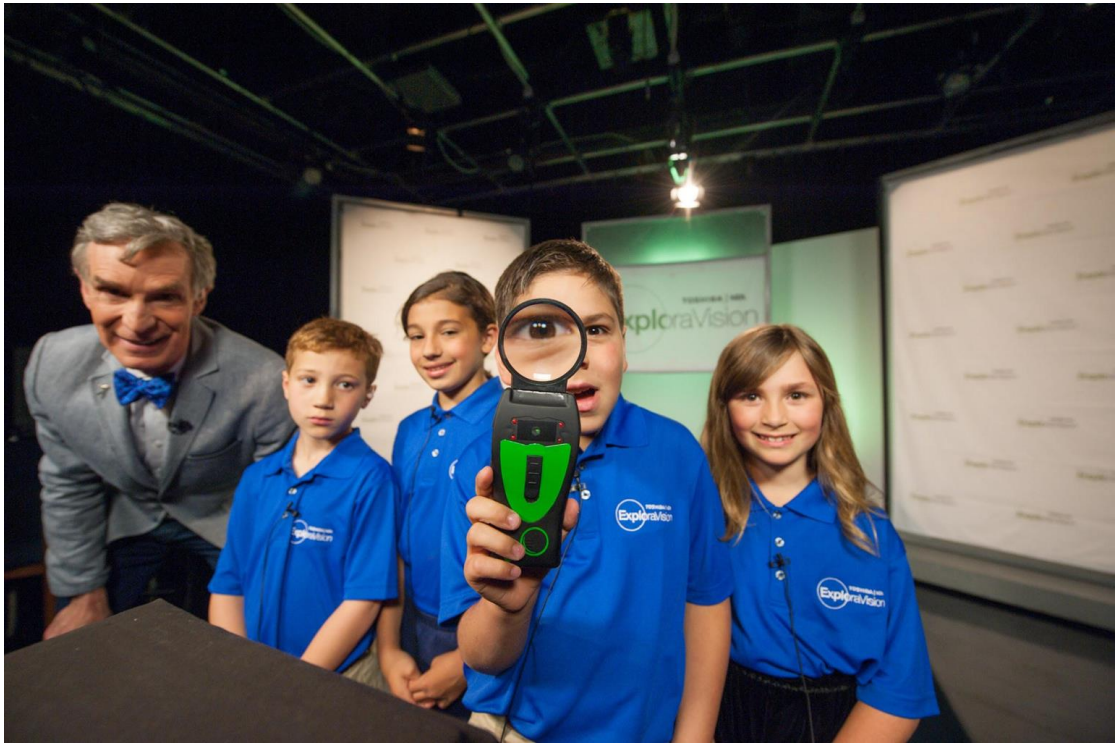
Introducing STEM Competition in Your Classroom
-- Program Guide --

TOSHIBA | NSTA ExploraVision

About Toshiba/NSTA ExploraVision

ExploraVision is a STEM competition for K-12 students. It encourages students to combine their imagination with their knowledge of science and technology to explore visions for the future. Teams of 2-4 students select a technology, research how it works, learn why it was invented, and then predict how that technology may change in the future. Students identify what “breakthroughs” are required for their idea to become a reality and describe the positive and negative consequences of their technology on society. The students write a paper and draw a series of web pages to describe and communicate their idea. Finalists make an actual website, video and a prototype of their future vision. ExploraVision is more than a science fair or a competition—it can be a tool to ignite every student’s enthusiasm for STEM subjects!

Video About Toshiba/NSTA ExploraVision



- Watch About ExploraVision video
- What Bill Nye the Science Guy has to say about the program (click here)
- 2016 K-3 national winner, The Tick Detective team from NY (Picture left)

Why Participate in ExploraVision?

- Engage students in project-based learning to solve real world problems
- Help students, teachers, and the community become interested in STEM
- Help students develop skills such as critical thinking and communication
- Teach students how to work effectively in groups on an interdisciplinary project
- Help steer students toward a lifetime of learning and curiosity
- Teach multiple subjects in one project: STEAM, english, research & history
- FREE to enter and everyone who enters receives a gift and a certificate from ExploraVision!

Prizes -- For The Students

- $10,000* savings bond for each first-place team member and $5,000* for each second-place team member
- An expense-paid trip to Washington, D.C. in June for ExploraVision Awards Weekend for each national winning student and their parents/guardians
- A technology/science-related gift for each regional winning student
- A unique prize for all students on the 500 Honorable Mention winning teams
- A certificate of participation and an entry gift for every student who submits a complete project

* Savings bonds maturity value

Prizes -- For The Schools

- A technology/science-related gift for each of the schools of the regional winning teams
- National press coverage and national recognition
- An awards ceremony for each regional winning team at their school where they will receive a winner's banner, plaque, and other gifts

Prizes -- For Teachers/Coaches and Mentors

- An expense-paid trip to Washington, D.C. in June for ExploraVision Awards Weekend for the teacher/coach and mentor of each national winning team
- A one-year NSTA membership for teachers/coaches of the national winning teams
- A certificate of participation and an entry gift for each coach and mentor of every team that submits a complete project
- A technology/science-related gift for the teacher/coach and mentor of each regional winning team
- An expense-paid trip to an NSTA conference for ExploraVision Ambassadors

ExploraVision Key Dates

- Coach registration Open: July 1, 2019 at www.exploravision.org
- Project Entry Due: **February 10, 2020** at www.exploravision.org
- Regional Winner Announcement: March 10, 2020
- National Winner Announcement: April 23, 2020
- Awards Weekend: June 4 - June 6, 2020 in Washington, D.C.

General Requirements -- Students

- Must be full-time K-12 students
- Must be currently enrolled in and attending a public, private, or homeschool in the U.S. or Canada
- Must not be older than 21

General Requirements -- Teachers/Coaches/Mentors

Teachers/Coaches:

- Are required for each team
- Must teach at a school attended by at least one of the team members
- Cannot be a parent/guardian of a team member
- May enter an unlimited number of teams
- Should guide the students but not perform work on the project

Mentors:

- Are optional
- Can be an individual that represents an organization or business or be a parent/guardian of a team member
- Should serve as a resource for the team but not perform work on the project

Project Entry Process

- **Step 1**: Teacher/Coach registration at www.exploravision.org
- **Step 2**: Register your team
- **Step 3**: Teams begin working on their projects (e.g. brainstorm topics, research, etc.)
- **Step 4**: Upload and enter projects
- Notes:
  - Teams are strongly encouraged to enter their project online
  - A teacher may register as many teams as he/she wishes
  - Each team is automatically assigned a project ID number upon registration
  - Your team's assigned project number must appear on each page of your project file if mailing to ensure no pages are lost. If submitting online, you do not need to add the project ID number
  - Project must be submitted online or received at NSTA by 11:59 pm EST on February 10, 2020 to be considered

Required Project Components

I. **Abstract** -- 10 points
II. **Description** -- 10 points
    A. Present Technology -- 10 points
    B. History -- 10 points
    C. Future Technology -- 20 points
    D. Breakthroughs -- 15 points
    E. Design Process -- 10 points
    F. Consequences -- 10 points
III. **Bibliography** -- 5 points
IV. **Sample Web Pages** -- 20 points

* No student, coach, mentor, and school names should appear
* Above sections should be clearly labeled and presented in exact order

I. Abstract

- Abstract of no more than 150 words that summarizes the proposed future technology and other relevant information must precede other project components
- Abstract should be on a separate page and does not count as part of the Description.
- Project title is encouraged
- No name of school/student/teacher should be stated as it's a blind judging
- It should be typed, double-spaced and clearly labeled
- No minimum word count

II. Description

- Each team must prepare a written description of the project that does not exceed 11 pages and can be a combination of text and artwork.
- Must include the following sections-with headings clearly labeled- in the following order:
  A. Present Technology*
  B. History
  C. Future Technology
  D. Breakthroughs*
  E. Design Process*
  F. Consequences*

* Section is central to Next Generation Science Standards

II. Description -- 1/4

A. Present Technology

- Give overview of chosen technology's current form, including scientific principles involved in its functioning.
- Define a problem or limitation of this current technology that you will address in your ExploraVision project.

B. History

- Research and describe the history of the technology from its inception.

II. Description -- 2/4

C. Future Technology

- Describe the team's vision for what this technology will be in the future, including scientific principles involved in developing the technology.

D. Breakthroughs

- Research and describe breakthroughs that are necessary to make the future technology design a reality.
- Describe why this future technology doesn't exist today.
- Choose one of your required breakthroughs and describe an investigation that would have to be planned and carried out to test your ExploraVision project. If possible, include the kind of data or measurements that would be collected in the investigation.

II. Description -- 3/4

E. Design Process

- Describe three alternative ideas of features the team considered for their project. The ideas and features should be directly related to the project, not a list related to other projects submitted in previous years or by other participants.
- Describe why the team rejected each feature and idea in favor of the ones in the submitted technology.
- Describe how your future technology feature is better than the rejected design feature.

II. Description -- 4/4

F. Consequences

- Recognizing that all technologies have positive and negative consequences, describe the potential positive and negative consequences of the new technology on society

III. Bibliography

- All sources used in researching the chosen technology should be referenced in the Bibliography.
- Sources must be clearly labeled and include title, author, publisher, and copyright date.
- Not counted as part of the 11-page limit for the Description.
- Footnotes are encouraged, but not required.
- No page limit for the Bibliography section.

IV. Sample Web Pages

- Team members must prepare exactly five sample web pages that communicate and promote their future technology vision.
- Must include description and illustration of the chosen technology.
- One of the five pages should be a model or visual representation of the technology that could be used to create a prototype for display.
- The model should help others visualize the design and should communicate the design features.
- Web pages can be hand-drawn, on an actual website, or computer generated with text, pictures, photographs and diagrams.

Judging

- The judging committees are made up of leading science educators and science and technology experts
- Judging is divided into two phases: regional and national judging
- All eligible projects will be evaluated in the regional judging phase
- 24 regional winning teams will move on to national judging
- The judging criteria for assigning points are based on **creativity**, **scientific accuracy**, **communication**, and **feasibility** of the project's vision
- Judges award higher scores to entries that are **unique** and **different** from those that have won previously

Resources

- Register you and your students team
- Sample Projects
- Sample Project Timeline
- Lesson Plan
- FAQ
- For more information
- Email
- Facebook
- Twitter
- Call: 1-800-explor-9

Through Toshiba's shared mission partnership with NSTA, the Toshiba/NSTA ExploraVision competition makes a vital contribution to the educational community