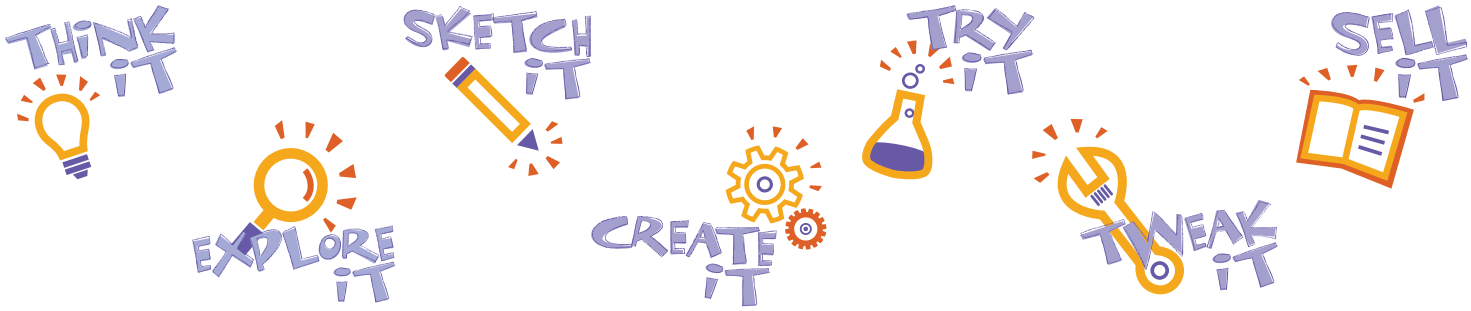
2017 6th Annual Global Invent It Challenge

Smithsonian

epals BY CRICKET MEDIA™

Think about a real-world environmental issue and come up with a planet-friendly solution.

Follow the Spark!Lab 7-step Process of Invention:



Why take part in the Invent It Challenge?

Students:

- Learn how an inventor thinks!
- Share your invention with the world!
- Meet other inventors!

Teachers:

- Engage students in a motivational STEM learning experience
- Bring Smithsonian expertise and resources into your classroom
- Get free ready-to-use teaching materials

Who can take part?

Challengers may enter individually or as part of a team in the **following 4 age groups:**

Age group 1: 5-7 years
Age group 2: 8-10 years
Age group 3: 11-13 years
Age group 4: 14-21 years

Visit challenges.epals.com for complete entry details and official rules.

Sponsors

Smithsonian

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Nelson Mullins

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LEGO

Timeline

January 17	March 17	April 17*	May 1*
Official Start (Kid Inventor's Day)	Submission Deadline	Winners Announced	ePals Choice Award Winner Announced

*Dates subject to change.

Standards Alignment: Invent It Challenge

ISTE NETS'S Standards

http://www.iste.org/standards/standards-for-students

1. **Creativity and Innovation**
2. **Communication and Collaboration**
3. **Research and Information Fluency**
4. **Critical Thinking, Problem Solving, and Decision Making**

Next Generation Science Standards

http://www.nextgenscience.org

Dimension 1: Practices
Asking questions; Developing and using models; Planning and carrying out investigations; Analyzing and interpreting data; Constructing explanations and designing solutions; Engaging in argument form evidence; Obtaining, evaluating and communicating information

Dimension 2: Crosscutting Concepts

- Cause and Effect
- Systems and system models
- Energy and Matter: Flows, cycles, and conservation
- Stability and Change

Dimension 3: Disciplinary Core Ideas

Life Science
LS2: Ecosystems: Interactions, Energy, Dynamics

Earth Science
ESS2-Earth's Systems

Physical Science
PS3 Energy

Engineering & Technology
ETS1 Engineering Design

National Association for Environmental Education Guidelines for Excellence

http://bit.ly/2dZuaAO

Strand 1: Questioning, Analysis, and Interpretation Skills

Strand 2: Knowledge of Environmental Processes and Systems

Strand 3: Skills for Understanding and Addressing Environmental Issues

Strand 4: Personal and Civic Responsibility

21st Century Learning Standards

www.p21.org

Learning and Innovation Skills

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Information, Media and Technology Skills

- Information Literacy
- Media Literacy
- ICT (Information, Communications and Technology) Literacy

Life and Career Skills

- Initiative and Self-Direction
- Productivity and Accountability

Common Core State Standards for English Language Arts

www.corestandards.org

CCSS.ELA -Literacy.CCRA.W.4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA -Literacy.CCRA.W.6
Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA -Literacy.CCRA.W.7
Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

CCSS.ELA -Literacy.CC RA.W.8
Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

CCSS.ELA -Literacy.CC RA.W.9
Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCSS.ELA -Literacy.CC RA.SL.5
Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

STEAM

www.steamedu.com

Science

- Conduct scientific inquiry through the Spark!Lab Process of Inquiry

Technology

- Conduct online research
- Communicate an invention idea through a digital presentation

Engineering

- Solve a problem
- Design an invention
- Build a prototype

Arts

- Imagine and sketch an invention
- Create a 3-D prototype

Math

- Measure and create a scale model of the invention
- Analyze data to refine invention