



Spark!Lab Dr. InBae Yoon

2019 Invent It Challenge

PARENT/ TEACHER GUIDE



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inventitchallenge2019.epals.com

Dear Parents and Teachers,

We are delighted to bring you the Dr. InBae Yoon Spark!Lab Invention Challenge, designed to ignite the inventive spirit in children ages 5-18 and provide a hands-on opportunity to invent. The goal of our Challenge is to teach and engage young people in the process of inventing, opening their eyes to a new way to view and tackle everyday problems in the world around them. With your help, we're training the next generation of inventors to look beyond what exists for better solutions and empowering them to recognize that they can generate those solutions!



Invention takes students beyond just the creation of a new object, and into a mindset of creativity and problem-solving. Building on the rich Smithsonian Spark!Lab 7-step process for inventing, the Challenge guides students to identify problems, explore existing solutions, brainstorm and sketch a new creative solution, choose the right tools, techniques and materials to construct a prototype, test the invention and ask others to test it, tweak the invention based on feedback and consider how to market the new invention. Inherent in the process are skills of science and engineering, but also life-skills of persistence and dedication. The process trains students to break a problem and solution down into parts and encourages them to brainstorm multiple ways to find a workable solution, either on their own or collaboratively with a team.

For the 2019 Challenge, we are asking students to think about how to enhance the daily lives of older adults. The needs of aging populations present a unique opportunity for students to develop empathy and consider how life changes as we age. You'll find that the Challenge resources present you with ways to spark your child or your students' thinking and support their discovery of a need they can address.

We encourage you to use this guide to support the engagement of your child, or your students, in the Dr. InBae Yoon Spark!Lab Invention Challenge.

Happy Inventing!

*Cricket Media and
Lemelson Center for the Study of Invention and Innovation*



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2019 Invent It Challenge

Think about a new invention that **enhances the daily lives** of older adults.

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HOW TO USE THIS GUIDE

New to invention? Not a problem! This guide, in tandem with the Challenge website, provides you with everything you need to support young inventors' participation in the Challenge and facilitate their submission of an invention.

To Get Started—Prepare Yourself!

- **Get yourself familiar with the invention process.** Take a look at the 7-steps recommended by experts at Smithsonian. Check out our lessons on how to teach and facilitate each step. (On the [Parent/Teacher page here](#))
- **Look at the scoring guide.** It's always good to start with the end in mind, so flip to page 13, to take a peek at how our expert judges have defined success—it won't be a surprise to see that it's linked to the process more than the product!
- **Get to know the submission requirements.** Review the PowerPoint template ([downloadable here](#)) to see how we recommend students document their inventive journey through the 7-steps. It's important that they capture evidence of going through each part of the process, and share that evidence in their submissions. Pictures are great!
- **Think about the timeline.** Submissions are due on Friday, April 5, 2019. Map out a timeline to work through each step in the process. (You'll want to set aside at least an hour for each step, typically with the Create It step requiring 2-3 hours.) It's helpful to do the steps over the course of a month to give your young inventor(s) time to grow their thinking and internalize the process.
- **Develop a Documentation Plan.** It's critical that students document and capture evidence as they go through each part of the process. Think about how and when documentation will take place – what devices you will use (still camera, video camera, etc.) and what help the students will need from you.

Engage Your Child/Your Student(s) and Get Started!

- **Introduce your child/student(s) to the topic.** We recommend showing the Get Inspired video on the [homepage](#) to introduce your young inventor(s) to some of the areas where seniors could use inventions to enhance their everyday lives!
- **Start chatting and brainstorming about the topic.** To help young inventors brainstorm, ask them to think about an older adult they know and if possible, give them time to talk to that older adult about how their body and life has changed as they've aged, what unique needs they may have now, and discuss the questions below.
- **Use the Student Guide.** Be sure to access the student guide (found on the [student page](#) of the website) to empower your young inventor's independent discovery and documentation.
- **Start the invention process!** Start the process by diving into the first step, Think It! On the following pages, you'll find specific guidance on each step.





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KEY STEPS OF THE INVENTION PROCESS

Learn about each step of the process, and all the fun and hard work that goes into inventing.

To invent you have to:



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Think-It: Have a great idea for an invention. Developing an idea is sometimes the hardest step in the invention process! Invention is all about solving problems. The best invention ideas often address issues that affect lots of people. This year's Challenge is about addressing the needs of older adults. So, the first step is to identify a way to enhance and improve the daily lives and activities of older adults.

Thinking about this Challenge:

Observe, research, and interact with the world around you and write down any challenge you see presented by being an older adult:

- Look around you—what are older adults doing in your community, region, nation, or across the globe?
- Look at your local newspaper or on the Internet—what are the issues related to being an older adult that people in your community and globally are talking about?
- Ask friends, teachers, and family members or people working in organizations serving older adults (like aging experts, doctors, physical trainers, or entrepreneurs) about aspects of daily life that are important to older adults.

If possible, talk through what you've discovered with partners and groups of other students to spark more ideas.

Every invention starts with an idea.

What's yours?

What problem are you trying to solve?

A large, rectangular grid of graph paper with a light blue background and a white grid pattern. The grid is designed for students to write down their ideas and observations. It has a decorative top edge with a series of white, rounded tabs, giving it the appearance of a spiral-bound notebook page.



Explore-It: Investigate inventions and ideas of the past.

Have an idea?

If you've identified an aspect of older adults' daily lives and activities that you want to enhance or improve, you're probably not the first inventor to try to solve it. Don't let this discourage you—instead, do some research to learn how others have addressed the problem!

- What do you like about their solutions?
- What do you think you can improve?
- How can your invention be different?

Many inventions build and improve on ones that have come before. Identify specific features and benefits of your invention that builds on inventions of the past. Think carefully about who your invention helps and make sure your idea clearly solves the identified problem in a way that is uniquely yours!

*Many inventions
build off of
other ideas.*

*How have other
people tried
to solve the
problem you're
working on?*

*How will your
invention be
different?*





Sketch-It: Draw pictures and diagrams to figure out how your invention might work.

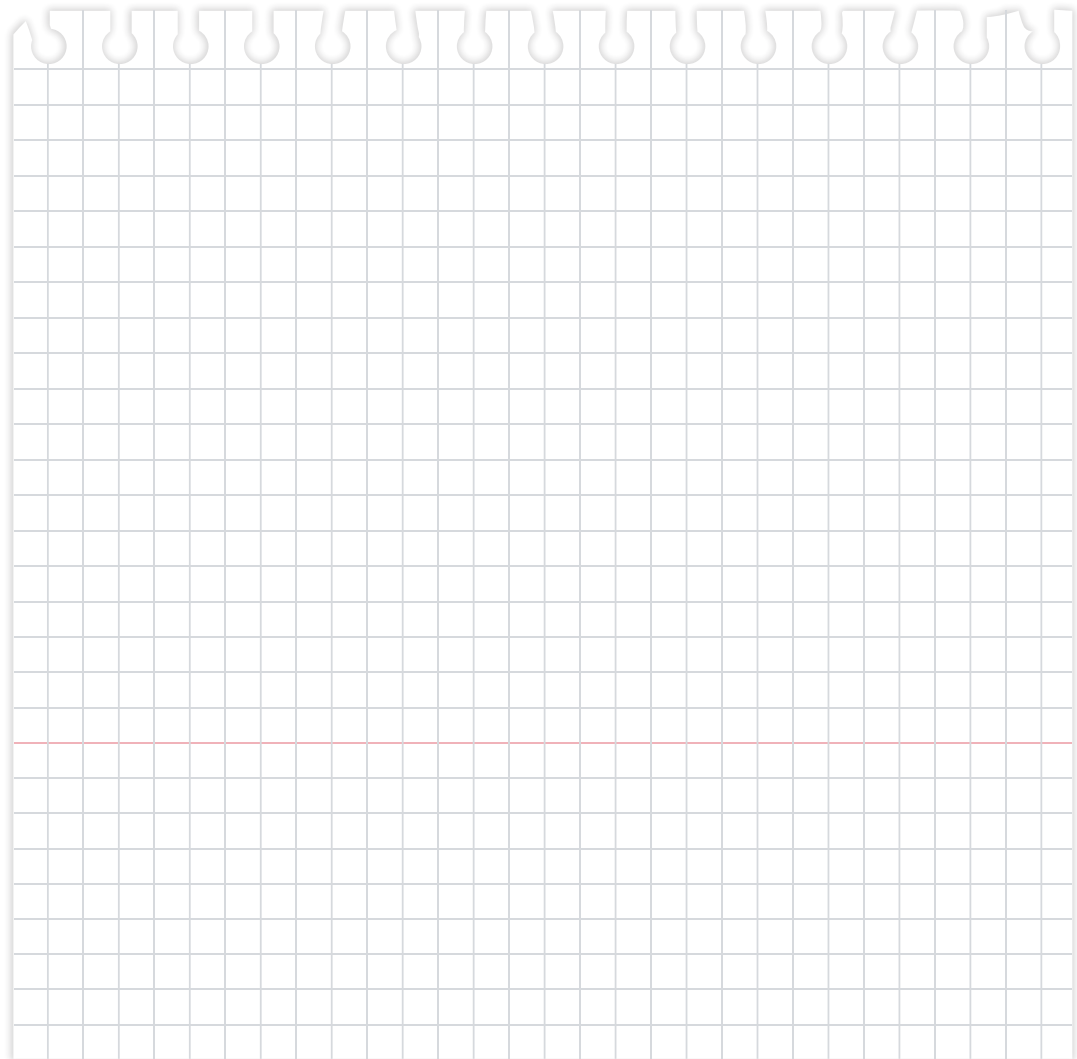
Once you have a basic concept of what your invention will be, make some simple sketches of your idea. Sketches help you take the idea in your head and put it on paper. Your sketches do not have to be perfect or artistic.

Sketches can help you think through not only what your invention will look like, but how it will work. You may want to make several sketches of your invention—from the front, side, looking down from above, or from the inside—to show how it will work.

Be sure to label your sketches to explain how the various parts and pieces function, so that you (and others) will know what you're/they're looking at!

Can you draw your ideas out on paper?

Inventors use pencil and paper to sketch their ideas.





Create-It: Build a prototype or model of your idea.

For many inventors, this is the most fun part of the invention process! This is when you create a prototype, or model, of your invention.

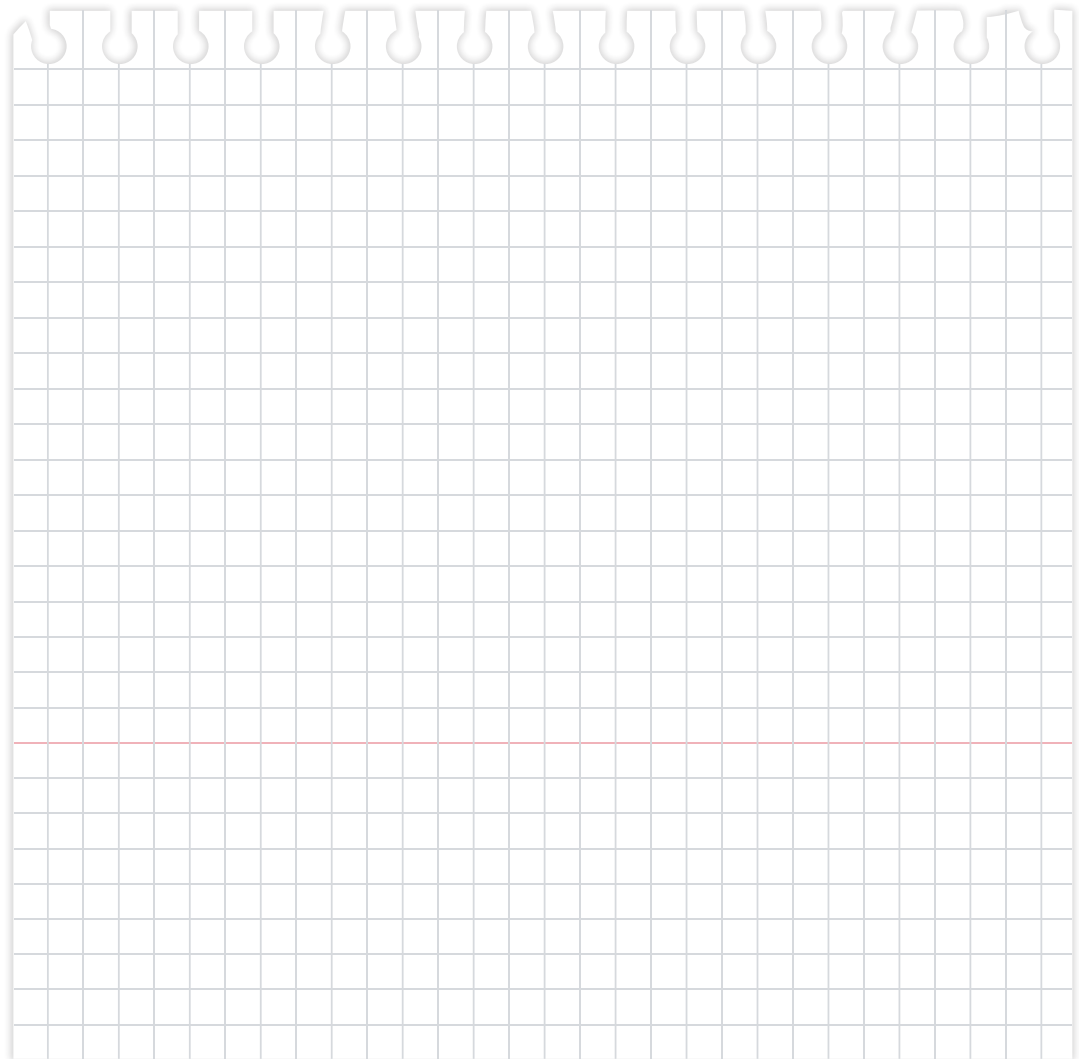
Using your sketches as a guide, build your first prototype. (Don't worry, this doesn't have to be perfect or even work!) Making your prototype/model helps you turn your concept into a three-dimensional form.

When you build your prototype/model, try using materials that you already have. Though the model does not need to actually work, it should show others what the pieces and parts look like. Remember to capture the steps you take building your prototype/model by video or photos.

A prototype is a model or a real-life example of your idea.

Inventors use simple materials to bring their ideas to life.

Create a prototype.





Try-It: Test your invention. Once your prototype/model is finished, ask friends, teachers, parents, and neighbors to try it! (If possible, ask some of the people you interviewed in the Think-it step or an older adult whose daily life and activities your invention is intended for) Have your testers perform some experiments to find out how well your prototype works. Write down the results of each test.

Ask your testers:

- What they like about your invention?
- What suggestions they have for making your invention better?

Be sure to write down what your testers say about your invention, so you have good notes for the next step of the process.

A large, rectangular grid of graph paper. The grid is composed of small squares. On the left side of the grid, there is a vertical line of small circles, resembling a spiral binding. The grid is empty, with no text or markings inside.

Test your
invention.

What works
well?





Tweak-It: Keep improving your idea. Using the feedback you got in the Try-it step, identify ways you can improve your invention.

Consider:

- Do you want to modify the design or change the materials it's made from?
- Do you want to add a new part to your invention, or take something away to make it simpler?
- How could you make your invention more environmentally friendly?

Many inventors go through multiple rounds of trying & tweaking to keep improving their invention, until they get it just the way they want it!

*How can you
improve your
prototype?*

*Inventors work
to make their
ideas better.*





Sell-It: Market your invention to people who might buy it. Once you have your final invention idea, it's time to introduce your idea to other people and encourage them to start using it!

Create a "fact sheet" and/or a video or written pitch about your invention.

Be sure to include the following information about your invention:

- Who is your "target audience"? Who should use your invention?
- What aspect of the daily lives of older adults does it enhance?
- How is it different from other inventions?
- How does it work?

*Inventors think
about how to
convince other
people to try or buy
their invention.*

*How would you
talk about your
idea to other
people?*

A large, rectangular area of graph paper with a light gray grid. At the top edge, there are ten white, circular punch holes, suggesting it's a page from a spiral-bound notebook. The grid is composed of small squares, and there is a faint horizontal line near the bottom of the grid.



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ENHANCING THE LIVES OF OLDER ADULTS TOPICS & RELATED RESOURCES

Use these ideas and resources to spark your inventions!

Ask yourself: "How can my invention enhance or improve the daily lives and activities of older adults?"

Mobility and Daily Living Activities

Our bodies change throughout our lives bringing new abilities and new challenges. For some older adults, physical tasks and activities become more challenging. New inventions would help improve their mobility and balance, strengthen their muscles, promote better eating and sleeping, and assist with daily tasks. Innovative solutions are needed to help older adults stay physically active and increase their ability to independently take care of themselves.

THINK ABOUT.....

How could an invention help older people increase their mobility?

What new inventions would help older adults with daily activities like shopping, cooking, cleaning or going out?

How might you help older people hear or see more clearly?

Could you invent something to help older people avoid falling?

Could your invention help people remain active and exercise safely?

Resources:

- [CDC: Physical Activity for Older Adults](#)
- [Medline Plus: Exercise for Seniors](#)
- [APA: Health and Age Related Changes](#)
- [Science Engineering Medicine: Physical Activity and Special Considerations for Older Adults](#)
- [Medical Futurist](#)
- [HelpGuide: Senior Exercise and Fitness Tips](#)
- [NIH: Health Tips for Older Adults](#)
- [National Council on Aging: Exercise Programs That Promote Senior Fitness](#)
- [National Council for Aging Care: Guide to Living A Healthy Lifestyle At An Old Age](#)



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Intellectual Engagement and Cognitive Health

Everyone needs to stay mentally active and intellectually challenged. It is especially important for older adults to keep learning and gaining new experiences. Inventions that promote memory and stimulate creative problem ignite intellectual interest and keep them connected to the world around them. What can you invent to keep older minds active and engaged?

THINK ABOUT.....

What can you invent that helps older adults stay intellectually engaged?

What kinds of inventions would provide new learning opportunities for older adults?

What kinds of thinking do some older adults need help with?

What kind of activities increase problem solving and improve memory for older adults?

Resources:

- [APA: Health and Age Related Changes](#)
- [CBS News](#)
- [Senior Living: Adaptive Technology](#)
- [Everyday Health](#)
- [Mental Health](#)
- [Smithsonian: How will AI help the Aging?](#)
- [UOC Intellectual Wellness](#)

Family, Community, and Social Relationships

Social engagement helps everyone to have meaningful connections with other people and their community. Sometimes, as people grow older, physical and mental challenges as well as lifestyle changes can limit their ability to stay socially active. But staying socially engaged with the world around them is as important for older adults as it is for younger people! What can you invent to help older adults be more connected socially? What technologies might help them become better connected to family, friends and their community? How could your inventions help them maintain their socially active lives and relationships?

THINK ABOUT.....

Why do some older adults feel alone?

Why is being social important for older people?

What can you invent to increase social interaction for older adults?

Resources:





- [Senior Living: Creative Living Movement](#)
- [The Conversation](#)
- [Argentum](#)
- [Create the Good](#)
- [Today's Research on Aging](#)






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Invent It Challenge Scoring Guide

Invent It Steps		1- Requires Development	2- Approaches Standard	3 - Meets Standard	4 - Exceeds Standard
	Identifies a way to improve or enhance the daily lives and activities of older adults.	Mentions a way to improve or enhance the daily lives and activities of older adults but does not define or explain it.	Presents a way to improve or enhance the daily lives and activities of older adults but provides a minimal explanation.	Presents, defines, and explains a way to improve or enhance the daily lives and activities of older adults.	Clearly presents and defines the scope of a way to improve and enhance the daily lives and activities of older adults, providing detailed background and explanation.
	Demonstrates invention's originality	Presents an invention that copies existing ideas or products rather than building on them.	Presents an invention that shows some originality (relying heavily on existing ideas or products).	Presents an original invention and shows how it builds on similar past ideas.	Presents an innovative invention with attributes that reflect but go well beyond similar past ideas.
	Demonstrates how the invention might work	Sketch is incomplete and doesn't show how the invention improves and enhances the daily lives and activities of older adults.	Sketch is complete and somewhat demonstrates how the invention improves and enhances the daily lives and activities of older adults.	Sketch is detailed and clearly labeled to demonstrate how the invention improves and enhances the daily lives and activities of older adults.	Multiple sketches clearly demonstrate and provide examples of how the invention might improve and enhance the daily lives and activities of older adults.
	Builds a prototype or model	Prototype or model is incomplete and does not reflect the sketch or plan.	Prototype or model minimally reflects the sketch or plan.	Prototype or model is complete and accurately represents the size, shape and function.	Working prototype or detailed model clearly shows how the invention will function and is accompanied by video, audio, or textual explanation.

Invent It Challenge Scoring Guide

Invent It Steps		1- Requires Development*	2- Approaches Standard	3 - Meets Standard	4 - Exceeds Standard
	Tests the invention	States that invention has been tested or feedback has been gathered but does not provide evidence.	Shows evidence of some testing of the invention or that minimal feedback has been gathered.	Shows evidence of thorough testing of the invention and/or gathering of comprehensive feedback from potential users or experts in the field.	Shows evidence of extensive and repeated testing of different versions of the invention, and/or gathering of comprehensive feedback from both potential users and experts in the field.
	Tweaks the invention	Proposes changes to the invention, but changes do not accurately reflect the testing of the invention or the feedback student received.	Proposes changes or improvements to the invention that somewhat reflect the testing and feedback.	Clearly improves the invention based on test results or feedback.	Significantly improves the invention based on test results or feedback and adds additional innovations of their own.
	Includes a “sales pitch” convincing others of the value of the invention	Provides basic information about the invention, but no reasons for using it.	Provides information about how the invention improves and enhances the daily lives and activities of older adults but doesn't include compelling reasons for using it.	Targets an appropriate audience, clearly defines the invention, shows how it is differentiated from similar products, and explains how it improves and enhances the daily lives and activities of older adults.	Includes a convincing and compelling “sales pitch” that clearly explains how the invention improves and enhances the daily lives and activities of older adults and is different from any similar products that came before it.

*Entries will be assigned a score of zero if no criterion are met.

Total Points for all categories, (possible 28): _____

Standards Alignment: Invent It Challenge



ISTE NETS'S Standards http://www.iste.org/standards/standards-for-students	Next Generation Science Standards http://www.nextgenscience.org	21st Century Learning Standards www.p21.org	Common Core State Standards for English Language Arts www.corestandards.org	STEAM www.steamedu.com
<ol style="list-style-type: none"> 1. Creativity and Innovation 2. Communication and Collaboration 3. Research and Information Fluency 4. Critical Thinking, Problem Solving, and Decision Making 	<p>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 from evidence; Obtaining, evaluating and communicating information</p> <p>Dimension 2: Crosscutting Concepts</p> <ul style="list-style-type: none"> • Cause and Effect • Systems and system models • Energy and Matter: Flows, cycles, and conservation • Stability and Change <p>Dimension 3: Disciplinary Core Ideas</p> <p>Life Science LS2: Ecosystems: Interactions, Energy, Dynamics</p> <p>Earth Science ESS2-Earth's Systems</p> <p>Physical Science PS3 Energy</p> <p>Engineering & Technology ETS1 Engineering Design</p>	<p>Learning and Innovation Skills</p> <ul style="list-style-type: none"> • Creativity and Innovation • Critical Thinking and Problem Solving • Communication and Collaboration <p>Information, Media and Technology Skills</p> <ul style="list-style-type: none"> • Information Literacy • Media Literacy • ICT (Information, Communications and Technology) Literacy <p>Life and Career Skills</p> <ul style="list-style-type: none"> • Initiative and Self-Direction • Productivity and Accountability 	<p><u>CCSS.ELA -Literacy.CCRA.W.4</u> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><u>CCSS.ELA -Literacy.CCRA.W.6</u> Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p><u>CCSS.ELA -Literacy.CCRA.W.7</u> Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p> <p><u>CCSS.ELA -Literacy.CC RA.W.8</u> Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p> <p><u>CCSS.ELA -Literacy.CC RA.W.9</u> Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p><u>CCSS.ELA -Literacy.CC RA.SL.5</u> Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p>	<p>Science</p> <ul style="list-style-type: none"> • Conduct scientific inquiry through the Spark!Lab Process of Inquiry <p>Technology</p> <ul style="list-style-type: none"> • Conduct online research • Communicate an invention idea through a digital presentation <p>Engineering</p> <ul style="list-style-type: none"> • Solve a problem • Design an invention • Build a prototype <p>Arts</p> <ul style="list-style-type: none"> • Imagine and sketch an invention • Create a 3-D prototype <p>Math</p> <ul style="list-style-type: none"> • Measure and create a scale model of the invention • Analyze data to refine invention



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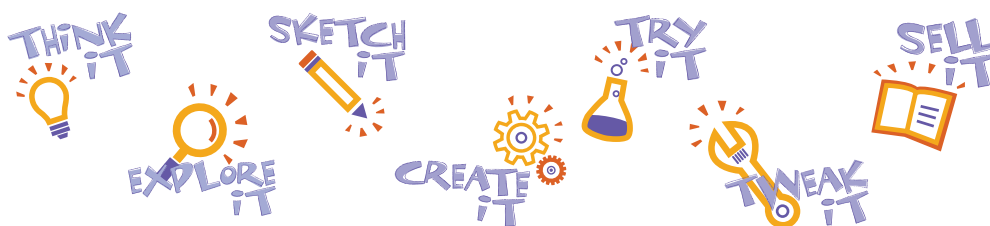
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Think about a new invention that **enhances the daily lives** of older adults.

SUBMISSION CHECKLIST

Use this checklist to ensure your entry meets the submission requirements.

- ☐ 1. Use the Student Notebook to follow the 7-step Process of Invention to create an invention that enhances and improves the daily lives and activities of older adults.



- ☐ 2. Document each step using either the provided Submission Template, a PowerPoint, or a video. Files should be 2GB or less and must be in one of the allowed formats: .ppt, .pptx, .avi, .mov, .mp3, .mp4, .mpg.
- ☐ 3. Use the Scoring Guide to check that your entry has addressed each of the 7 steps of the Invention Process.
- ☐ 4. Download and complete the Parental Consent Form.
- ☐ 5. Create a photo of the inventor(s) to submit along with your entry.
- ☐ 6. Go to the Submit Entry page on the Challenge website and click on the submission link.
- ☐ 7. Follow the instructions to submit your entry file, photo, and Parental Consent Form. If submitting a team entry, you must submit consent forms for each participant. (Entries must be received by 11:50 PM EST on April 5, 2019).

Timeline



*U.S. only



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Think about a
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Parental/Legal Guardian Permission & Release

By signing below, I acknowledge that I am the parent/legal guardian of the Spark!Lab Dr. InBae Yoon 2019 Invent It Challenge ("Challenge") student/minor child entrant indicated below (whose age of between 5 and 18 is indicated below), and hereby give him/her permission to enter, or be entered into the Challenge (an "Entry"), as an individual entrant or as a team entrant through my submission as his/her parent/legal guardian or submission through his/her teacher accompanied by consent form signed by the parent or legal guardian (hereinafter "Entrant") as set forth in the Official Rules. I have read and accept the Official Rules of the Challenge located at https://inventitchallenge2019.epals.com/wp-content/uploads/2019/01/Invent-It-2019-Official_Rules_Update_011719.pdf and acknowledge the privacy policies of the Challenge sponsors' (Cricket Media, Inc. and the Smithsonian Institution's Lemelson Center, hereinafter "Sponsors"), located respectively at www.cricketmedia.com and <http://www.si.edu/privacy> apply. None of the information you provide about you or your child is shared with any third parties. We do work with some third party service providers to support the operation of our service. More information on these can be found in Cricket Media's [privacy policy](#).

In accordance with the Official Rules, I confirm and agree that as a condition of Entry, the Sponsors, their respective parent[s], affiliate[s], and authorized distributor[s], including prize suppliers, and licensee[s] are granted a perpetual, irrevocable, worldwide, transferable, royalty-free, and non-exclusive right and license to use, reproduce, adapt, modify, publish, distribute, publicly perform, create a derivative work from, and publicly display the Entry, including the inventions depicted therein, the photographs, video, slides, text, images, interview, and/or audio or narrative of Entrant and of other individuals contained in the Entry submitted or related to such Entry, including any likeness, biographical information, text and/or information as contained therein or any statements or remarks made about the Challenge, for any purpose, including but not limited to advertising and promotional purposes, including without limitation for display on the Sponsors' websites, in any media now or hereafter developed, including social media, without any attribution or compensation to Entrant, except where prohibited by law. I understand and agree that I have no rights to review or approve any uses and/or edits that Sponsor[s] may make or authorize of the Entry or other materials submitted in connection with the Challenge. My grant includes the right and permission for Cricket Media, Inc. to copyright, in its own name or otherwise, my child's Entry. To the extent permitted by law, I release and hold harmless Sponsors from any and all claims, injuries, damages, or liability of any kind resulting from any use of or arising out of the use of my Entry. I understand and agree that this Release is binding and shall be interpreted by, and enforced in accordance with the laws of the Commonwealth of Virginia and applicable U.S. federal law, without regard to any conflict of law principles.

I represent and warrant that the Entry is provided in accordance with such Official Rules of the Challenge that the Entry is an original work, not previously published commercially, and to the extent individual[s] appear in any portion of the Entry that a written release for their participation has been secured, and shall, upon request, be provided to Sponsor[s]. I hereby warrant that I, the signatory below, am 18 years of age or over and have the legal right and capacity to execute in connection with my my/child's Entry in the Challenge. I have read the contents of this Permission and Release form, and understand and agree to its contents. (All information in the fields below must be completed, and this form signed).

Printed name of parent/legal guardian	<input type="text"/>		
Signature of Parent/legal guardian	<input type="text"/>		
Parent/legal guardian email	<input type="text"/>		
Printed name of my student/minor child entrant	<input type="text"/>	His/her date of birth	<input type="text"/>
Mailing Address (including city, state, country, zip code):	<input type="text"/>		
Telephone Number (including country code)	<input type="text"/>		
Name of Entry	<input type="text"/>	Grade in School (write in "Home School," if applicable)	<input type="text"/>
School Name and Mailing Address (including city, state, country, and zip code)	<input type="text"/>		
<input type="text"/>			



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OFFICIAL RULES

Spark!Lab Dr. InBae Yoon 2019 Invent It Challenge

No purchase necessary to enter or to win this contest (the 2019 “Invent-It-Challenge” or “Challenge”). Entry in the Challenge constitutes your acceptance of these Official Rules.

Sponsors: This Challenge is sponsored by **Cricket Media, Inc.** 1751 Pinnacle Drive, Suite 600, McLean, VA. U.S.A., 22102, and the **Smithsonian Institution’s Lemelson Center**, Washington, D.C. (“Sponsors”).

Eligibility: Open to legal residents, age 5-21 at time of entry, of: the 50 United States (and District of Columbia), Canada (other than Quebec) and only those countries in which this contest is fully permitted by law. Residents of Crimea, Cuba, Iran, North Korea, and Syria, as well as any other persons prohibited by law, are expressly prohibited. Individuals who meet the residency/age requirements and who are in Grades K-12 are eligible to enter—either as an individual or part of a team (see below), **so long as entries are submitted in connection with an authorized Submittable account (by a teacher/parent/or student account holder [if eligible]) utilizing the Challenge submission form[s] provided, including the submission of signed Parent/Legal Guardian Release form(s).** Children, immediate family members, and members of the household (whether related or not) of employees of Sponsors or its affiliates, are not eligible to participate or enter. To constitute a complete entry (“Entry”), the Challenge entry submission form must be accompanied by the following uploaded attachments: (i) a file containing the invention being entered; (ii) signed parental/legal guardian permission/release form[s], as provided; and (iii) photo of inventor(s).

As shown on the online Challenge entry submission form, there are two (2) categories of Entry as follows:

- (1) **Individual**
- (2) **Team; and**

Four (4) Age groups within each Entry category (**Individual/Team**):

- Age 5-7**
- Age 8-10**
- Age 11-13**
- Age 14-21***

(*Students ages 19-21 may only participate if they are currently enrolled in high school.)

Content/Timing of Entry

Submissions must adhere to the fundamental spirit of the Challenge and Entries be submitted for judging only during the **Entry time period (January 17, 2019-April 5, 2019)** -see also **Deadlines for Entry** below. The invention or any video contained therein cannot include any defamatory, obscene or otherwise unlawful matter, depict anyone engaged in any illegal, immoral or lewd act, or contain any violent or pornographic material or any other inappropriate content as determined by Sponsor[s].

Submissions must be original work by the inventors. By submitting, you (and the parent/legal guardian of the inventor[s]) attest that the work contained in the Entry is not copied from others and it does not violate the rights of



Smithsonian



any other person or entity, and that you have all rights necessary to submit the Entry and to grant Sponsors the rights set forth in these Official Rules.

If the submission contains any material or elements that are not owned by the Entrant and/or which are subject to the rights of third parties, and/or if any persons appear in a photograph or video contained within the submission or in audio form, the Entrant is responsible for obtaining, prior to submission, any and all releases and consents necessary to permit the exhibition and use of such third party's voice/image in the manner set forth in these Official Rules without compensation. If any person appearing in the submission is under the age of majority in their state/province/territory of residence the signature of a parent or legal guardian is required on each such release. Upon Sponsor's request, each entrant must be prepared to provide (within 7 calendar days of receipt of Sponsor's request) a signed release from all persons who appear in the Challenge submission and/or from the owner of any material that is displayed or included (i.e. audio) in the submission, which release *"authorizes the use of the releasing party's image, voice or material by Sponsors, their affiliates, and authorized distributors for any purpose, including but not limited to advertising and promotional purposes, and including without limitation display on the Sponsors' websites, in any media now or hereafter known, without any attribution or compensation."*

Each Entry **must** identify a real-world problem that deals with an issue related to the daily lives and activities of older adults and demonstrate all of the following seven (7) **Key Steps of the Invention Process**:

Think it	Have a great idea for an invention
Explore it	Investigate inventions and ideas of the past
Sketch it	Draw pictures and diagrams to figure out how your invention might work
Sell it	Market your invention to people who might buy it
Create it	Build a prototype or model of your invention
Try it	Test your invention
Tweak it	Keep improving your invention

The real world-problem that deals with the daily lives and activities of older adults may be one that all older adults in a particular area face, something that impacts people the Entrant is familiar with, or an issue affecting many older adults at various locations across the globe. Your Entry must describe how you help solve the problem by inventing something new.

For the evaluation criteria for judging, see the **Scoring Guide**, which is incorporated in these Official Rules.

How to Submit

Submission must demonstrate your solution using the **Key Steps of the Invention Process**. (For the invention, Entrant can use either the provided PowerPoint template, a Power Point, or video).

Submit by completing the required fields on the online **Submission/Entry** form provided in connection with a parent, teacher, or eligible student's creation of an authorized User account for this Challenge (through our provider, Submittable). That account holder (only) is authorized to upload the Entry and **Parental/Guardian Release** form(s).

To constitute a complete Entry for consideration, fill-out the **Submission Entry form** and submit it along with a file containing the video or slide show (a PowerPoint) being entered, and the **Parental/Guardian Permission and Release form[s]**, which form[s] must be signed by such parent/guardian who is 18 years of age or older (and attached in pdf or via a photo of the completed parental release form[s]) – the Parental/Guardian Permission form is required-regardless of whether the submission of the Entry is from a teacher, a parent, **or** from an eligible student (with a Submittable account.)

Submission is online only, as follows:

- Complete the online Entry submission form, and upload (i) the parental/guardian **Permission and Release** form, at <https://inventitchallenge2019.epals.com/submit> and (ii) upload a single digital photograph of the student(s) [the inventor(s)] being entered in this Challenge
- Uploads of the Invention must be in one of the following formats and size: Submission uploads must be under 2GB in one of the following allowed file types: ppt, pptx, avi, mov, mp3, mp4, mpg



Deadlines for Entry are as follows:

Start Date (for submission of Entries): January 17, 2019

End Date: April 5, 2019.

The timeline for determining the potential Winners and the honorary ePals Choice Award, as described below, may be subject to change.

Disclaimers; Conditions: Sponsors are not responsible for entries that are lost, late, misdirected, incorrect, garbled, or incompletely received, for any reason. If for any reason, the Challenge is not capable of running as planned by reason of infection by computer virus, worms, bugs, tampering, unauthorized intervention, fraud, technical failures, or any other causes which, in the sole opinion of the Sponsor(s) could corrupt or affect the administration, security, fairness, integrity or proper conduct of this Challenge, the Sponsor[s] reserve the right at its sole discretion to cancel, terminate, modify or suspend the Challenge and determine winners from all eligible Entries received prior to that action taken.

The Challenge is subject to federal, state, provincial, territorial and local laws and regulations. Certain restrictions may apply. By entering the Challenge, each Entrant agrees and acknowledges to be bound by the Official Rules, as well as the decisions of the Sponsors which are final and binding in all respects; to waive any rights to claim ambiguity with the Official Rules, and that the Sponsors, their parents, affiliates, and representatives ("Releasees") shall have no responsibility or liability (including, but not limited to, liability for any property loss, damage, personal injury or death) in connection with: participation or inability to participate in the Challenge; technical or mechanical error; typographical errors in the Challenge's promotional material; acceptance/possession, defects, and/or use/misuse of prizes; human error; incorrect or inaccurate transcription of Entry information; any technical malfunctions of the telephone service, telephone network, computer online system, computer equipment, software, or internet service provider utilized by the Challenge or by Entrant; interruption or inability to access the Challenge, any Challenge-related Web pages, or any online service via the internet due to hardware or software compatibility problems; any damage to entrant's (or any third person's) computer and/or its contents related to or resulting from any part of the Challenge; any lost/delayed data transmissions or mailings, omissions, interruptions, defects; and/or any other errors or malfunctions, even if caused by the negligence of any one or more of the Sponsors. Each Entrant further agrees to indemnify and hold harmless each of the Releasees from any and all liability resulting or arising from the Challenge and to release all rights to bring any claim, action or proceeding against any of the Releasees. Winners release Releasees from any and all liability/responsibility with respect to the prizes won (including any property loss, damage, personal injury, or death). Releasees shall not be liable for any injury, damage, loss, expense, accident, delay, inconvenience or irregularity that may be caused or contributed to (1) by any wrongful, negligent or unauthorized act or omission on the part of any of the Releasees, or any of its agents, servants, employees or independent contractors, (2) by any wrongful, negligent or unauthorized act or omission on the part of any other person or entity not an employee of any of the Releasees, or (3) by any other cause, condition or event whatsoever beyond the control of any of the Releasees.

Intellectual Property Rights: As between Sponsors and the Entrant, the Entrant retains ownership of all intellectual property rights (including moral rights) in and to the Entry, including associated photo submission(s). As a condition of entry, Entrant grants Sponsor[s], its parent, affiliates, and authorized distributors. Including the prize providers, a perpetual, irrevocable, worldwide, transferable, royalty-free, and non-exclusive license to use, reproduce, adapt, modify, publish, distribute, publicly perform, create a derivative work from, and publicly display the Entry, including the inventions depicted therein, the photographs, video, text, images and/or audio of Entrant and of other parties contained in or related to the Entry or Entrant, the likeness, biographical information, text, and information as contained in the Entry, and/or any statements or remarks made about the 2019 Invent It Challenge for any purpose, including but not limited to advertising and promotional purposes, including without limitation display on the Sponsors' websites, in any media now or hereafter known, without any attribution or compensation to Entrant, except where prohibited by law. Entries will not be returned.

Privacy: Entrants agree and acknowledge that personal data submitted in connection with an Entry, including name, mailing address, phone number, and/or email address, may be collected, processed, stored and otherwise used by Sponsors and their affiliates for the purposes of conducting and administering the Challenge, and as otherwise permitted by the parent/legal guardian of Entrant as described in the foregoing paragraph and authorized on the Parental/Legal Guardian Permission and Release submitted. All personal information that is collected from parents, guardians, teachers, and/or eligible students on behalf of Entrants is subject to the respective [Privacy Policies](#) of Sponsors, which Privacy Policy of Cricket Media addresses handling of Personal Data, as applicable from residents of the European Union, including children below age 16.



Publicity. By entering the Challenge, Entrants agree to participate in any media or promotional activity resulting from the Challenge as reasonably requested by Sponsor at Sponsor's expense and agree and consent to the use of their name and/or likeness by Sponsors. All or a portion of the Entry may also be used for press and media purposes and Entrant agrees to waive any rights and not assert any intellectual property rights that Entrant has or may have in the Entry. Sponsors reserve the right to publish the name and likeness of the Entrants on the Challenge Site or through other media for publicity purposes.

Determination of Winners; Notification

On or about April 6, 2019, a panel of Smithsonian Lemelson Center and Cricket Media, Inc. staff members will commence judging of all Entries. The judges will score Entries based on how the invention enhances and improves the daily lives and activities of older adults and how the key steps of invention were addressed. See [Scoring Guide](#).

All potential winners will be notified by mail, email and/or telephone using the contact information on the Entry documents. Upon notification of being a potential winning invention, each potential winner within a Category will be required to sign (and/or such inventor's parent/legal guardian if under age 18), additional documents in connection with Challenge and prize fulfillment. Honorable Mentions, if any, may be asked to sign (or entrant's parents, legal guardian sign) additional documents in connection with the Challenge.

If a potential winning Entrant cannot be contacted, does not respond within seven (7) business days from the date the Sponsor first tries to notify him/her, fails to return any Prize affidavit and release document[s], or refuses the prize, the potential winner forfeits all rights to win the Challenge and its prizes. An alternate winner may be selected.

Prizes

There will be eight (8) winners, an individual winner (4 total) and a group ("Team") winner for each of the four (4) age Categories, and potentially up to 20 Honorable Mention winners as may be determined by Sponsors (the Honorable Mentions will *not* receive the below Challenge prizes, but shall be offered a digital subscription to one of the following magazines: Ask; Babybug; Click; Cobblestone; Cricket; Dig; Faces; Ladybug; Muse; or Spider (ARV \$9.99 [U.S. dollars] per magazine). Sponsor reserves the right to substitute a prize for equal or greater value.

Upon timely completion of any requested Prize affidavit and release form and dependent upon whether the potential winner is an individual or a member of a winning Team entry, the prizing is as follows (or such substitute of the same or greater value [shown in U.S. dollars] as may be provided by Sponsor).

Age 5-7: For winners who are residents of the United States only: Hosting Challenge winners (as described in the Challenge Rules for each age category and who have executed prize releases) at the National Museum of American History during summer 2019 (exact dates are TBD). Such hosting shall include hands-on behind the scenes guided tour/experience (during a period of three days/two nights) at the Smithsonian museum(s) in Washington, D.C. (USA) including provision by Smithsonian of: coach class air transportation or rail transportation to/from the major airport nearest winner's home city and Washington, D.C. (ARV: \$2500 for individual winner and his/her parent or legal guardian; ARV \$8750 for up to five students from the winning Team and one parent/legal guardian per team member; meals (ARV: \$69 per day per person for up to three days) and hotel (standard room/double occupancy) for up to three nights (ARV: \$250 per room per night)." Winners are responsible for all ground transportation to and from their home to the airport or rail station, transportation to/from airport to hotel, transportation to / from the hotel to the museum, and any parking fees; Invitation to attend the National Invention Convention presented by United Technologies. This inspirational event will be held at The Henry Ford Museum in Dearborn, Michigan, May 29-31, 2019, and is by invitation only. Your invitation waives the \$300 registration fee. (Chaperones must register and cover their costs.) You will present your invention alongside some of the greatest inventions of all time and meet young inventors from all over the world! Winners of this prize are responsible for their own transportation, hotel, and other expenses associated with attending the event. For more information, please visit www.inventionconvention.org.

For winners in this category, regardless of residency: a DK Children's Illustrated Animal Atlas (ARV: \$15.99 for individual winner and one for the Team); and for the one Individual winner, one Creativity for Kids kit, GROW Light (by Faber-Castell) (ARV: \$29.99—each member of the winning Team will receive a Creativity for Kids kit, Grow n' Glow Terrarium (by Faber-Castell) (ARV: \$14.99 each); one Turing Tumble (ARV: \$69.95) for each individual winner and up to 10 Turing Tumbles per winning team; one 2-pack of Splats for the individual winner of the 8-10 age category (ARV: \$149); a 1-year monthly box of coding projects sent to recipient's home address by Bitsbox for each individual winner (ARV: \$300) and a one-year digital subscription to Bitsbox for each team winner (ARV: \$240).

Age 8-10: For winners who are residents of the United States only: Hosting Challenge winners (as described in the Challenge Rules for each age category and who have executed prize releases) at the National Museum of American History during summer 2019 (exact dates are TBD). Such hosting shall include hands-on behind the



scenes guided tour/experience (during a period of three days/two nights) at the Smithsonian museum(s) in Washington, D.C. (USA) including provision by Smithsonian of: coach class air transportation or rail transportation to/from the major airport nearest winner's home city and Washington, D.C. (ARV: \$2500 for individual winner and his/her parent or legal guardian; ARV \$8750 for up to five students from the winning Team and one parent/legal guardian per team member; meals (ARV: \$69 per day per person for up to three days) and hotel (standard room/double occupancy) for up to three nights (ARV: \$250 per room per night)." Winners are responsible for all ground transportation to and from their home to the airport or rail station, transportation to/from airport to hotel, transportation to / from the hotel to the museum, and any parking fees; and for the one Individual winner in the Category of Age 8-10 (and entering grades k through six), a scholarship for the camp registration fees to attend a Camp Invention® program during the summer of 2019, (ARV: \$230)-- further details and registration forms/requirements for a particular camp location shall be made available by Camp Invention®; Invitation to attend the National Invention Convention presented by United Technologies. This inspirational event will be held at The Henry Ford Museum in Dearborn, Michigan, May 29-31, 2019, and is by invitation only. Your invitation waives the \$300 registration fee. (Chaperones must register and cover their costs.) You will present your invention alongside some of the greatest inventions of all time and meet young inventors from all over the world! Winners of this prize are responsible for their own transportation, hotel, and other expenses associated with attending the event. For more information, please visit www.inventionconvention.org.

For winners in this category, regardless of residency: a DK Children's Illustrated Atlas (ARV: \$15.99 for Individual winner and one for the Team); and for the one Individual winner, one Creativity for Kids kit, Spark!Lab Inventor's Studio (by Faber-Castell) (ARV: \$19.99)—each member of the winning Team will receive a Creativity for Kids kit, Spark!Lab Invent Cool Cash (by Faber-Castell) (ARV: \$14.99 each); one Turing Tumble (ARV: \$69.95) for each individual winner and up to 10 Turing Tumbles per winning team; one 2-pack of Unruly Splats for the individual winner of the 8-10 age category (ARV: \$149); a 1-year monthly box of coding projects sent to recipient's home address by Bitsbox for each individual winner (ARV: \$300) and a one-year digital subscription to Bitsbox for each team winner (ARV: \$240).

Age 11-13: For winners who are residents of the United States only: Hosting Challenge winners (as described in the Challenge Rules for each age category and who have executed prize releases) at the National Museum of American History during summer 2019 (exact dates are TBD). Such hosting shall include hands-on behind the scenes guided tour/experience (during a period of three days/two nights) at the Smithsonian museum(s) in Washington, D.C. (USA) including provision by Smithsonian of: coach class air transportation or rail transportation to/from the major airport nearest winner's home city and Washington, D.C. (ARV: \$2500 for individual winner and his/her parent or legal guardian; ARV \$8750 for up to five students from the winning Team and one parent/legal guardian per team member; meals (ARV: \$69 per day per person for up to three days) and hotel (standard room/double occupancy) for up to three nights (ARV: \$250 per room per night)." Winners are responsible for all ground transportation to and from their home to the airport or rail station, transportation to/from airport to hotel, transportation to / from the hotel to the museum, and any parking fees; Invitation to attend the National Invention Convention presented by United Technologies. This inspirational event will be held at The Henry Ford Museum in Dearborn, Michigan, May 29-31, 2019, and is by invitation only. Your invitation waives the \$300 registration fee. (Chaperones must register and cover their costs.) You will present your invention alongside some of the greatest inventions of all time and meet young inventors from all over the world! Winners of this prize are responsible for their own transportation, hotel, and other expenses associated with attending the event. For more information, please visit www.inventionconvention.org.

For winners in this category regardless of residency: a DK: Children's Encyclopedia of American History book (ARV: \$29.99 for Individual winner and one for the Team); and for the one Individual winner, one Do Art Drawing and Sketching kit (by Faber-Castell) (ARV: \$14.99)—each member of the winning Team will receive a Do Art Color Pencil Art kit (\$14.99); one Turing Tumble (ARV: \$69.95) for each individual winner and up to 10 Turing Tumbles per winning team; a 1-year monthly box of coding projects sent to recipient's home address by Bitsbox for each individual winner (ARV: \$300) and a one-year digital subscription to Bitsbox for each team winner (ARV: \$240).

Age 14-21: For winners who are residents of the United States only: Hosting Challenge winners (as described in the Challenge Rules for each age category and who have executed prize releases) at the National Museum of American History during summer 2019 (exact dates are TBD). Such hosting shall include hands-on behind the scenes guided tour/experience (during a period of three days/two nights) at the Smithsonian museum(s) in Washington, D.C. (USA) including provision by Smithsonian of: coach class air transportation or rail transportation to/from the major airport nearest winner's home city and Washington, D.C. (ARV: \$2500 for individual winner and his/her parent or legal guardian; ARV \$8750 for up to five students from the winning Team and one parent/legal guardian per team member; meals (ARV: \$69 per day per person for up to three days) and hotel (standard room/double occupancy) for up to three nights (ARV: \$250 per room per night)." Winners are responsible for all ground transportation to and from their home to the airport or rail station, transportation to/from airport to hotel,



transportation to / from the hotel to the museum, and any parking fees; Invitation to attend the National Invention Convention presented by United Technologies. This inspirational event will be held at The Henry Ford Museum in Dearborn, Michigan, May 29-31, 2019, and is by invitation only. Your invitation waives the \$300 registration fee. (Chaperones must register and cover their costs.) You will present your invention alongside some of the greatest inventions of all time and meet young inventors from all over the world! Winners of this prize are responsible for their own transportation, hotel, and other expenses associated with attending the event. For more information, please visit www.inventionconvention.org.

For winners in this category, regardless of residency: a DK: Animal! (ARV: \$29.99 for Individual winner and one for the Team); and for the one Individual winner, a 36-count Classic Color Pencil Tin Set (by Faber-Castell) (ARV: \$27.99) and 12-count Grip Graphite Writing Pencil set (by Faber-Castell) (ARV: \$.92)—each member of the winning Team will receive a 12-count set of Metallic Colored Pencils (by Faber-Castell) (ARV: \$6.99); one Turing Tumble (ARV: \$69.95) for each individual winner and up to 10 Turing Tumblers per winning team; a 1-year monthly box of coding projects sent to recipient's home address by Bitsbox for each individual winner (ARV: \$300) and a one-year digital subscription to Bitsbox for each team winner (ARV: \$240).

Total ARV (by entry type)

Individual: \$16,126.66

Team: \$62,389.76

Total ARV: \$78,516.42

In addition, all Individual or Team winners in any of the above Age Categories, who attend the events at the National Museum of American History in Washington D.C., will participate in an informational and educational seminar and one on one consultation(s) with U.S. Patent and Trademark Office subject matter experts on the use and importance of protecting their intellectual property through patents, trademarks, copyrights, and trade secrets.

All taxes, fees and surcharges on prizes, if any, are the sole responsibility of the prize winners.

ePals' Choice Award. The eight (8) winners described above will be eligible for ePals' Choice Award. The winner with the most votes from an online poll will receive the honorary ePals Choice Award that will be announced **in May 2019**. Such award is a recognition of the popularity of a single Entry invention (Individual or Team) and no further prizing is associated with such award.

WINNERS LIST AND OFFICIAL RULES: A winners' list will be available fourteen (14) days after the announcement of the ePals Choice award and for a period of six (6) months thereafter. A copy of the Official Rules will be available during the Entry Period (all requests must be received prior to the End Date). Send a request by emailing invent@cricketmedia.com, or mail to: Invent-it-Challenge, 1751 Pinnacle Drive, Suite 600, McLean, VA 22102.

Thank you to our sponsors:

