

Science Fair Kits

The Athena Group, Inc.
Dr. Roy Bolduc, PI
Dr. Ric Ledbetter

Science Fair Kits

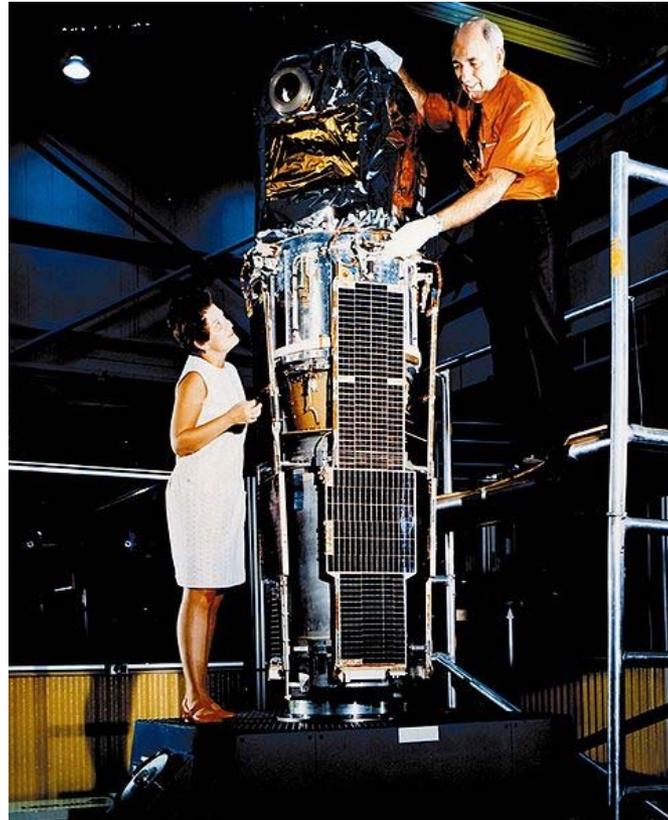
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- ▶ DHS and the Centers of Excellence
- ▶ The Athena Group, Inc.
- ▶ Orange County Public Schools



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- ▶ Did you do a science project?



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- ▶ Rejected Science Fair Project Ideas

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- ▶ Rejected Science Fair Project Ideas
 - Just how poisonous are poisonous snakes?



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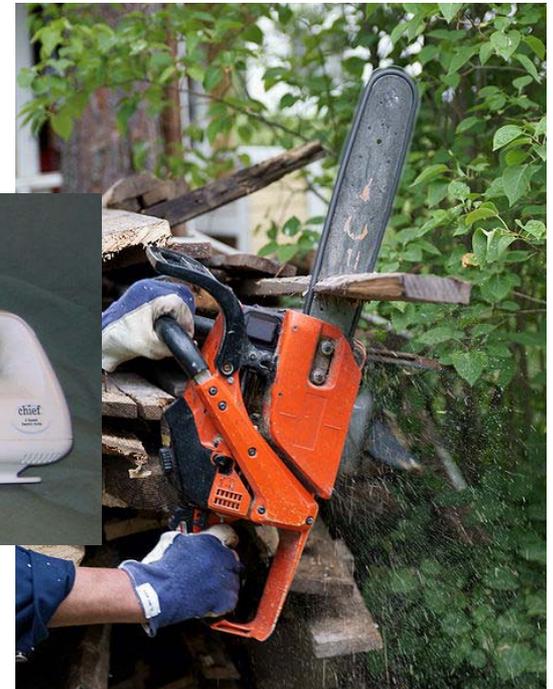
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- ▶ Rejected Science Fair Project Ideas
 - Which household products are most flammable?



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- ▶ Rejected Science Fair Project Ideas
 - Which tools are sharper: Kitchen or garage?



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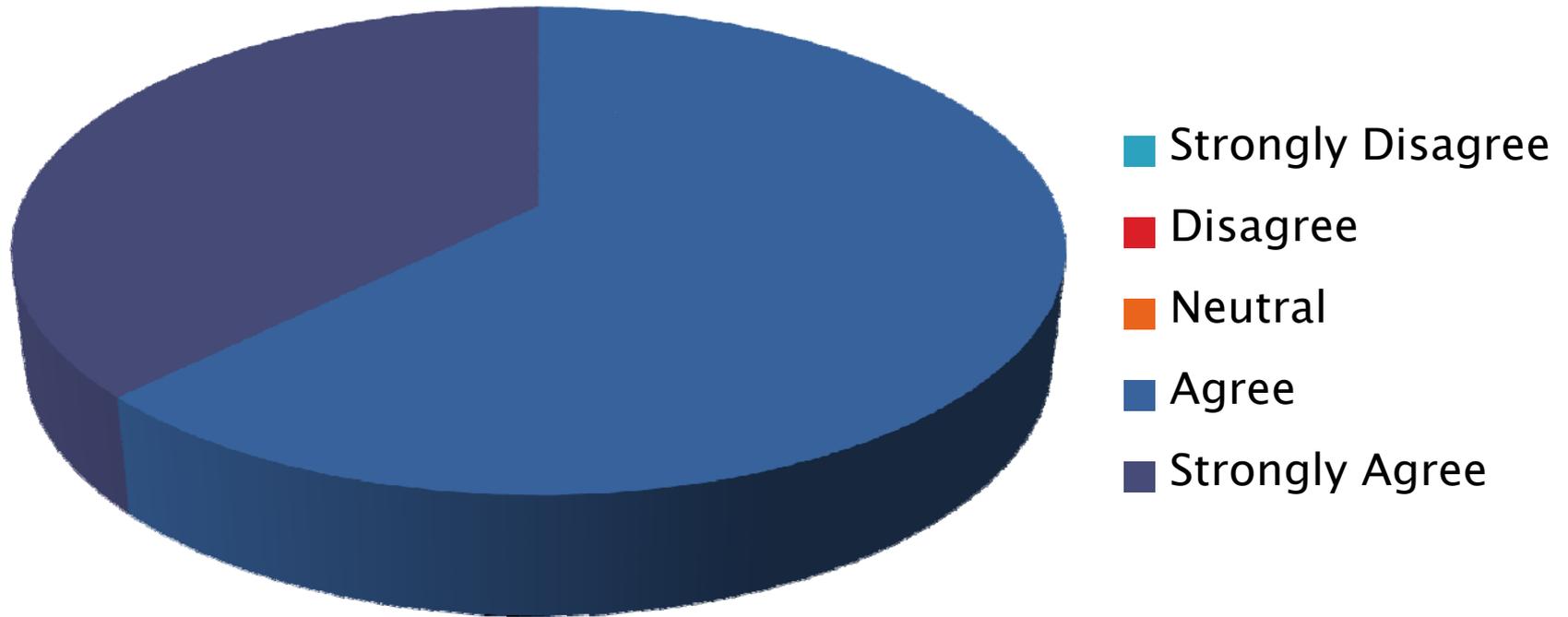
- ▶ Rejected Science Fair Project Ideas
 - What happens if I stick my hand in this?



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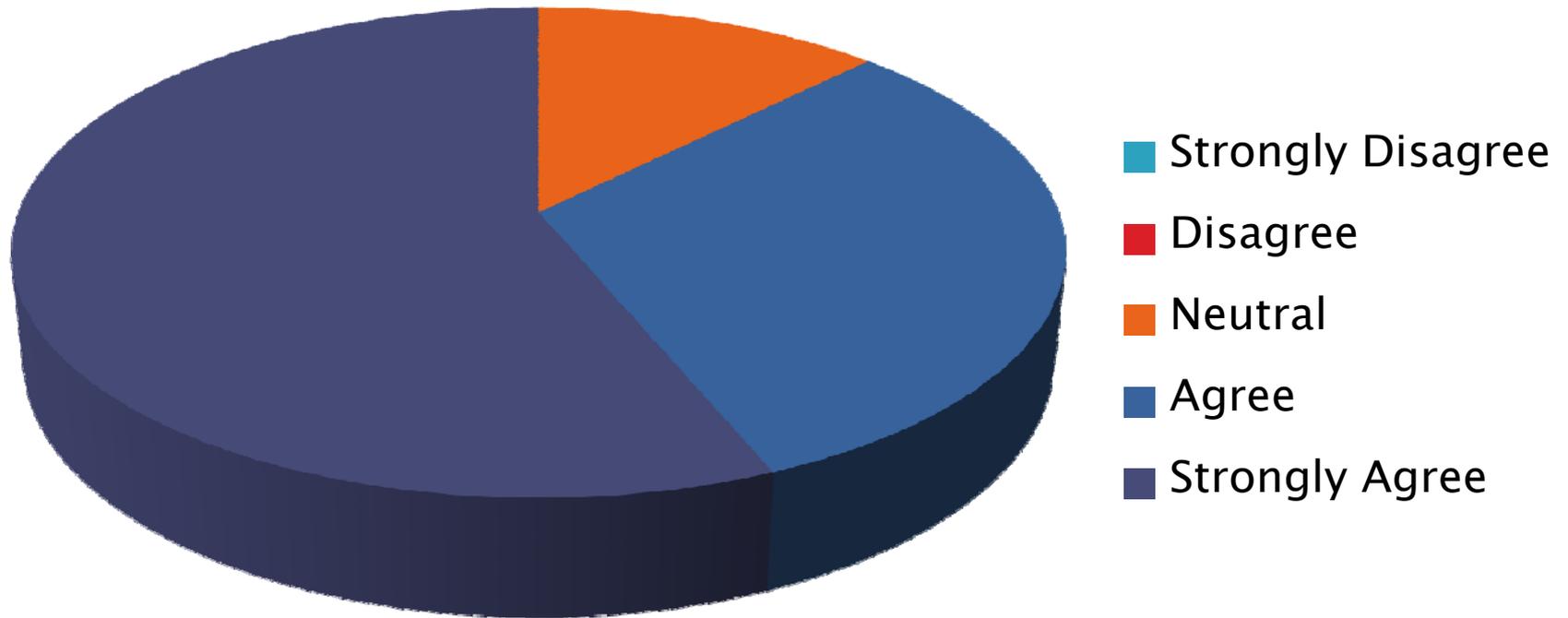
“Students need help coming up with project ideas.”



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“I need help supporting my students' projects.”



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- ▶ What teachers said about the kits:
 - “Wow! After I completed the module, I wanted to do a science fair project. I have stayed away from doing science fair projects with my students, but if I had access to something like this, I would be way more likely to attempt science fair projects with my students.”
 - *OCPS teacher*

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- ▶ What teachers said about the kits:
 - “I can see that these modules could spark interest even in those students who dare us to make them interested in science.”
 - *OCPS teacher*

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- ▶ What teachers said about the kits:
 - ▶ “When I was going through the modules, I was taking mental notes as to how I might adapt some of these activities into lessons within my classroom. Very interesting and different research topics.”
 - *OCPS teacher*

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- ▶ What we found:
 - 92% improved science fair project quality

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- ▶ What we found:
 - 92% improved science fair project quality
 - 70% increased likelihood of a finished project

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- ▶ What we found:
 - 92% improved science fair project quality
 - 70% increased likelihood of a finished project
 - 85% students could do project without parent help

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- ▶ Science Fair Kits are NOT:

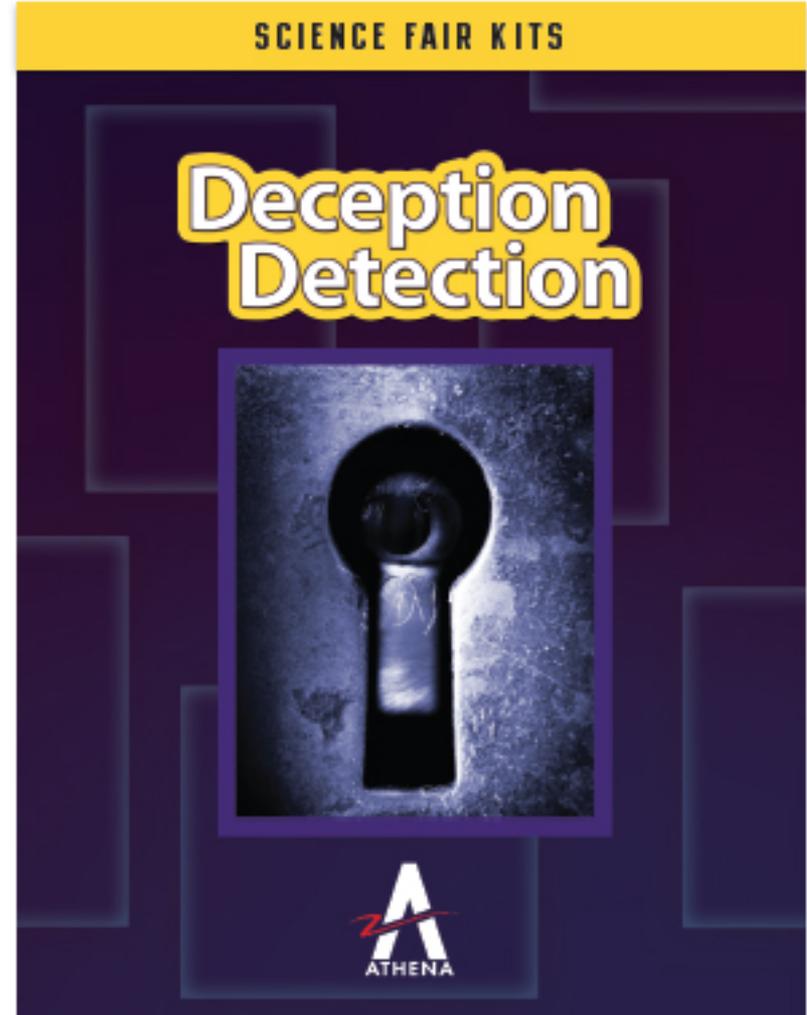


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- ▶ What's in the kits?

Brochure



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- ▶ What's in the kits?

Web site

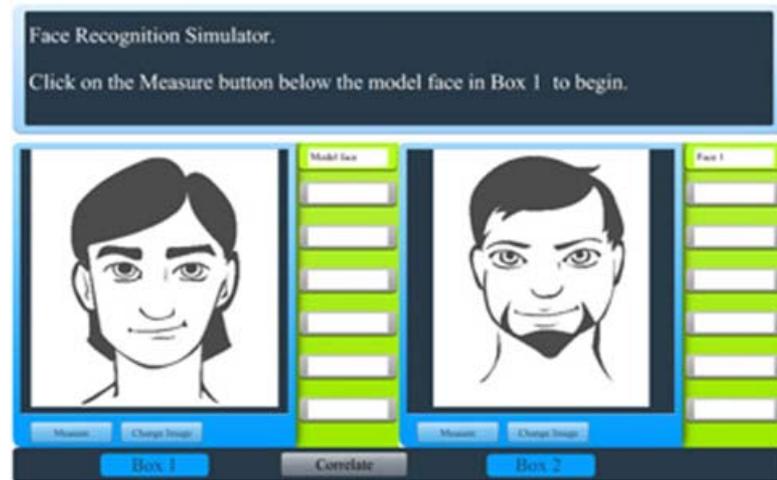


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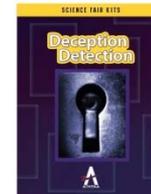
- ▶ What's in the kits?

Digital
tools



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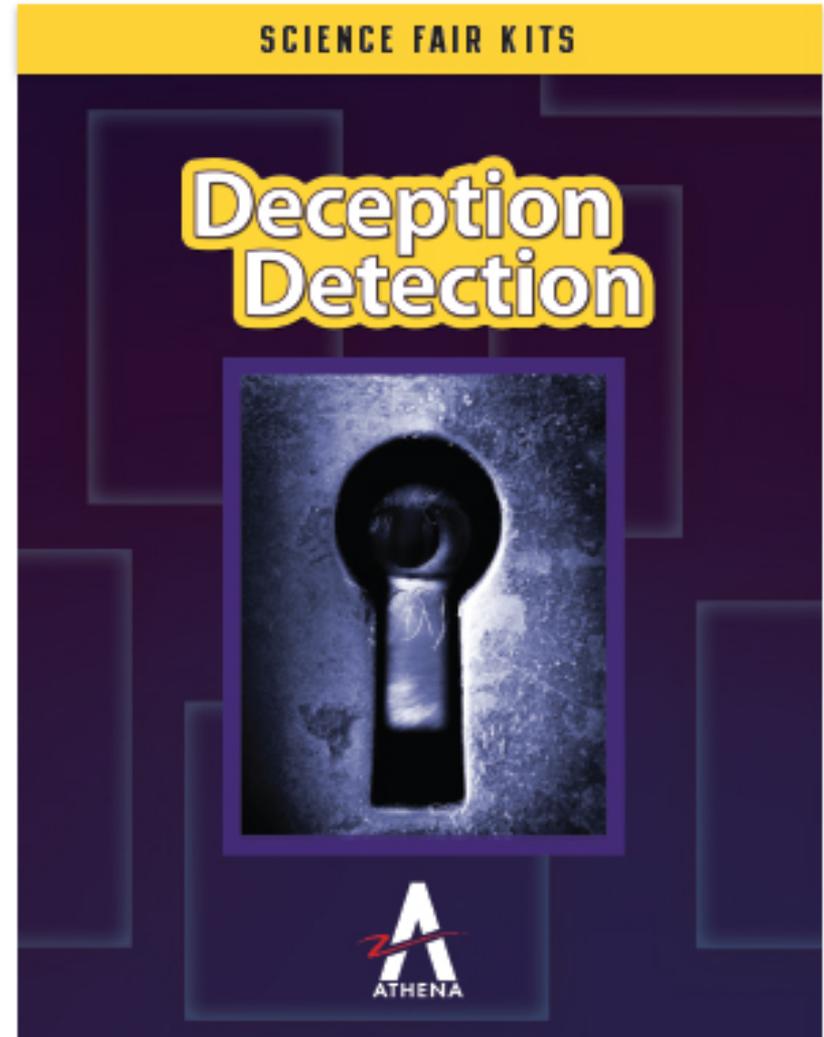
- ▶ Phase I kits developed:
 - Deception Detection
 - University Affiliate Centers to the Institute for Discrete Sciences
 - National Consortium for the Study of Terrorism and Responses to Terrorism
 - Center for Risk and Economic Analysis of Terrorism Events



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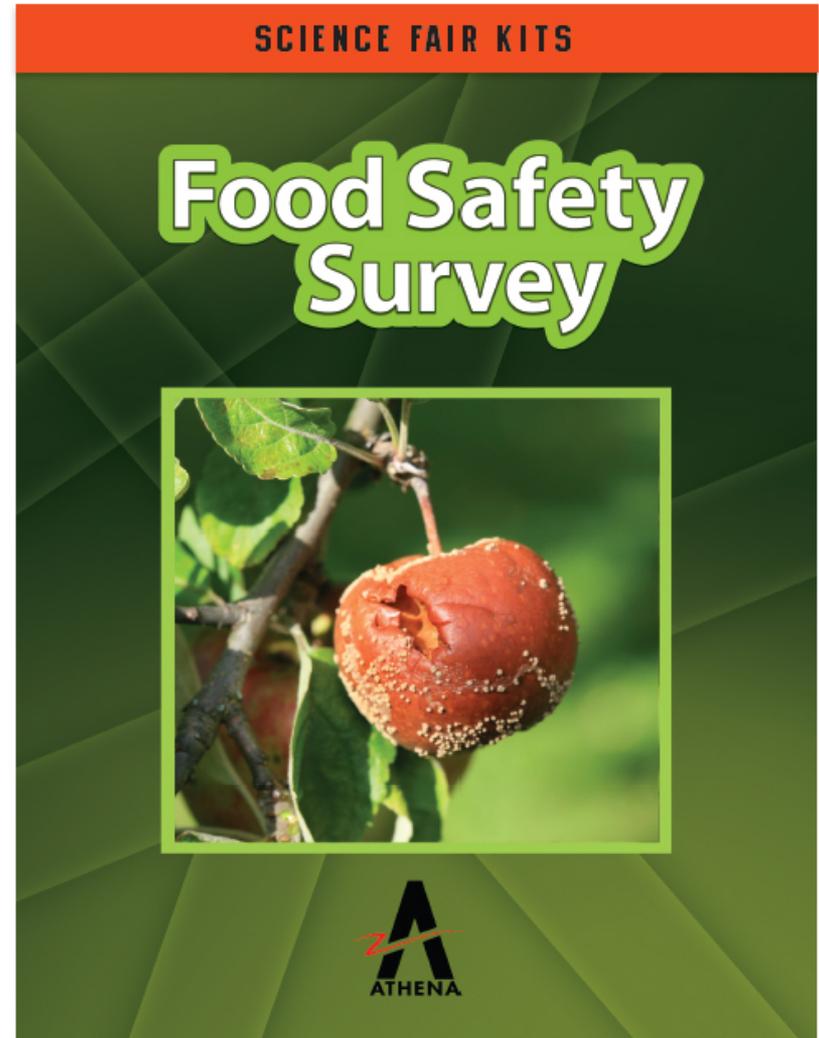
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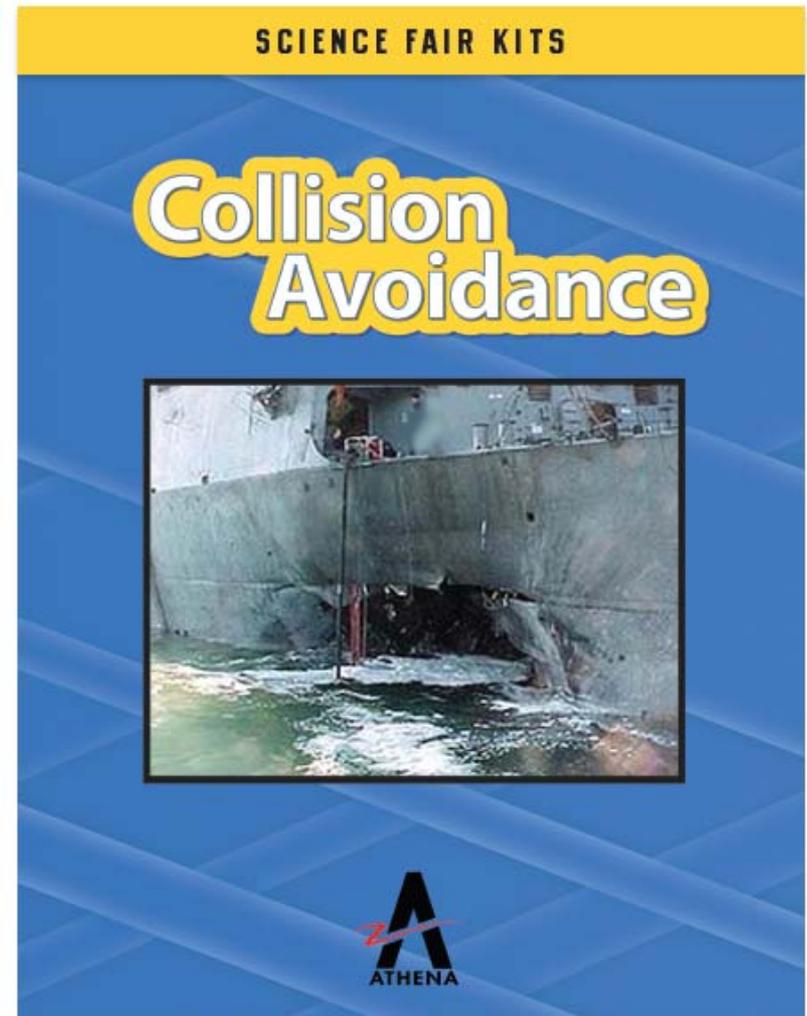
- ▶ Phase I kits developed:
 - Food Safety
 - National Center for Food Protection and Defense
 - National Food Safety & Toxicology Center at Michigan State University



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- ▶ Phase I kits developed:
 - Collision Avoidance
 - Center for Maritime, Island and Port Security



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- ▶ Phase I kits developed:
 - Face Recognition
 - Regional Visualization and Analytics Centers
 - Purdue Homeland Security Institute (PHSI) at Purdue University



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▶ Face Matches

Face Recognition Correlation: 0.987

Face 1	Face 2
81	66
45	37
126.016	97.129
72	58
59.034	57.009
35	37

Measure Change Image Measure Change Image

Correlate

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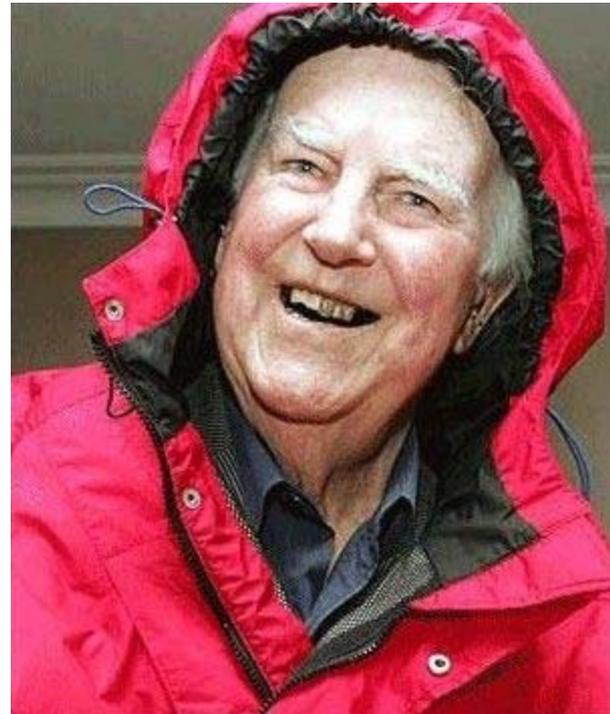
- ▶ Face Matches



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▶ Face Matches



\Edmund Hillary 61%

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- ▶ Face Matches



Mikhail Gorbachev 53%

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▶ Face Matches



\George W. Bush 51%

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▶ Face Matches



Lucy Liu 50%

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- ▶ We're back to the start...we need your message and ideas!



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