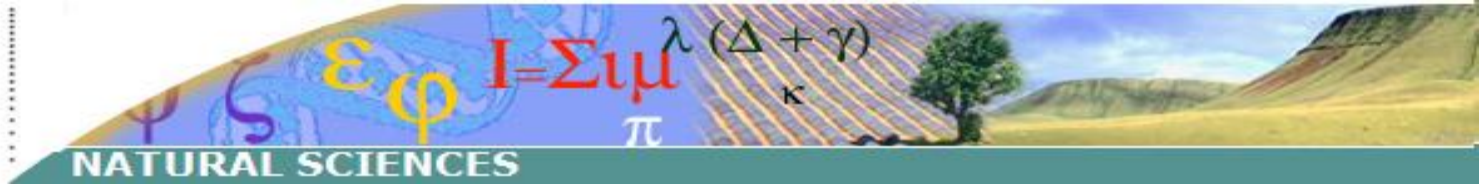


Effectively Talking to Kids About Engineering



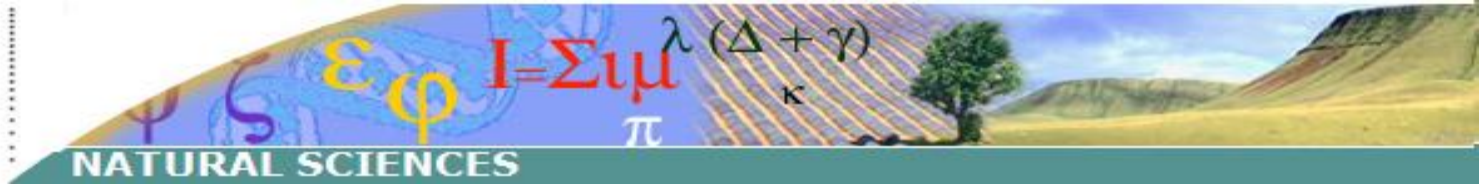
United Nations
Educational, Scientific and
Cultural Organization

With the support of
UNESCO



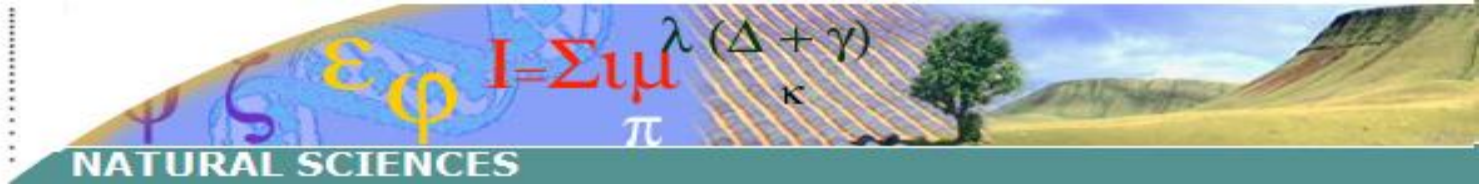
The Research

Research has shown that **effective and positive messages** about engineering can increase a student's understanding and interest in engineering.



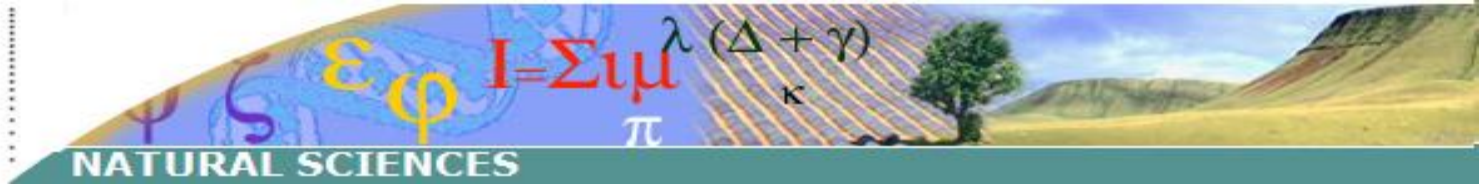
The Research

The National Academy of Engineering (NAE) developed **messages** and **taglines** to encourage greater public understanding of engineering.



The Research

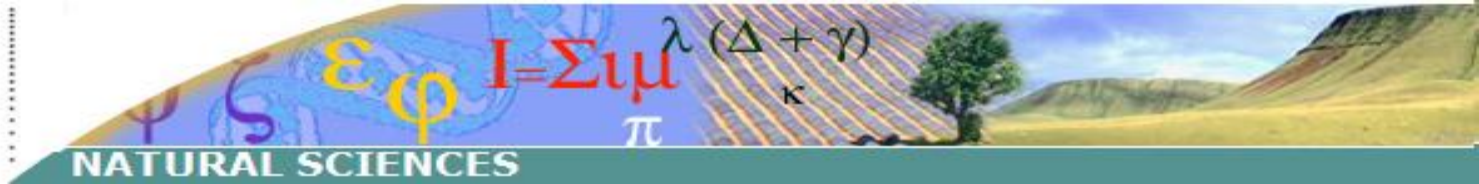
Engineer Your Life (EYL)
simultaneously worked with the
same marketing firm to develop
messages to encourage high school
girls to pursue engineering.



The Research

Read NAE's [Changing the Conversation reports.](#)

Download Engineer Your Life's reports:
[Extraordinary Women Engineers](#)
[Engineer Your Life Evaluation Report](#)



The Research

Both NAE and EYL **tested the effectiveness** of messaging in a variety of audiences.

While the specific taglines varied for each organization, **three main messages** stood out.



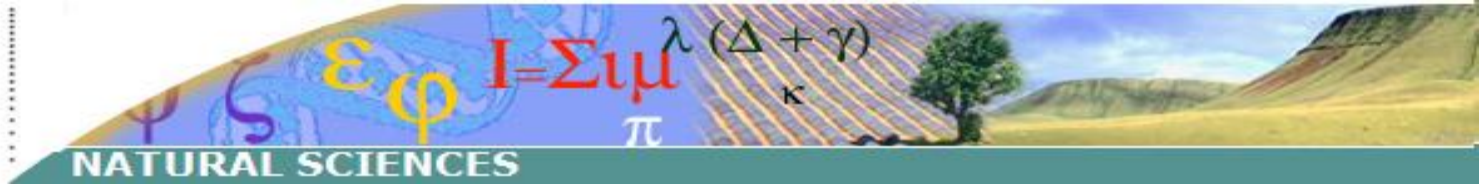
**Message #1:
Engineering is creative.**



**Message #2:
Engineering makes a
difference in the world.**

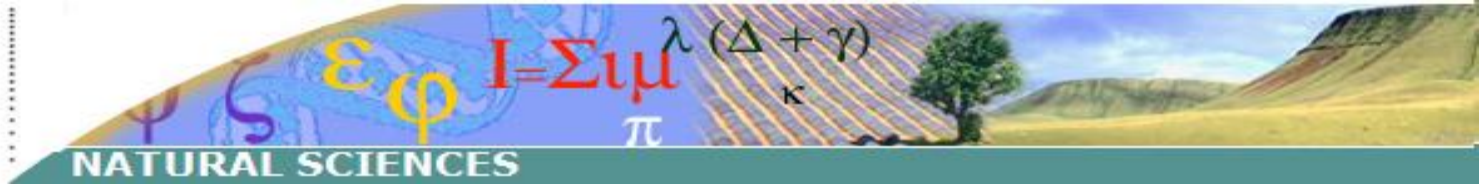


**Message #3:
Engineering is about teamwork.**



Effective Messages

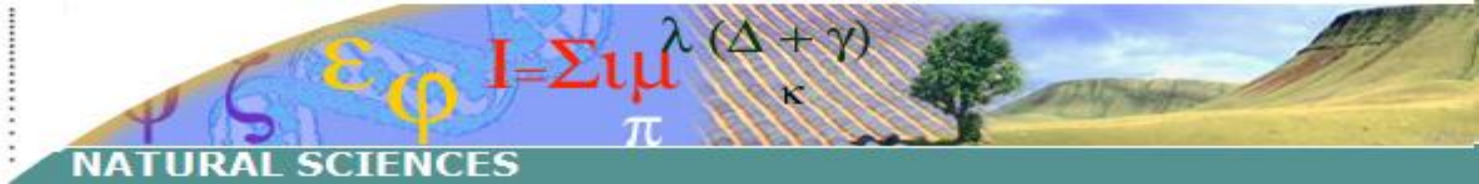
How can we **share these messages**
with kids?



Sharing Messages

#1: Incorporate messages into...

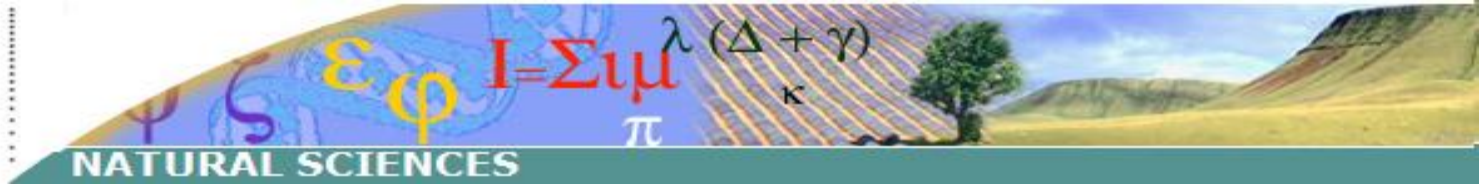
what we say about engineering.



Sharing Messages

#2: Incorporate messages into...

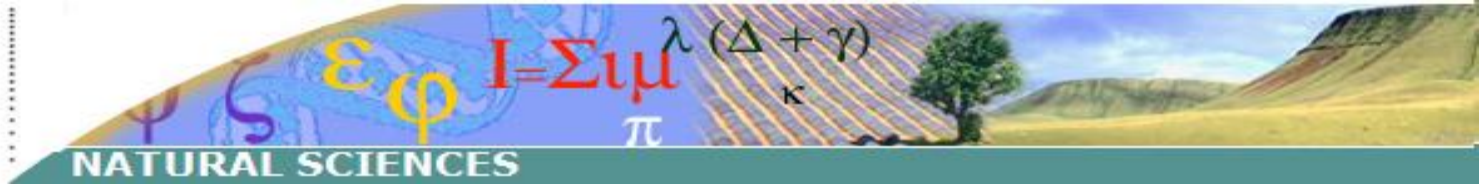
the **images** we use to present engineering.



Sharing Messages

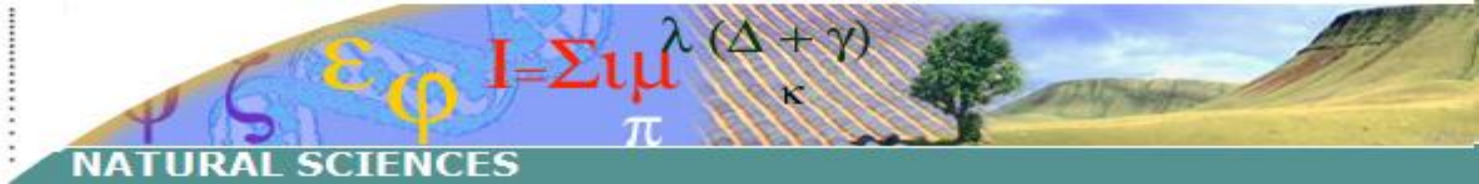
#3: Incorporate messages into...

the **hands-on** engineering activities we lead with kids in order **to add context.**



#1: What We Say

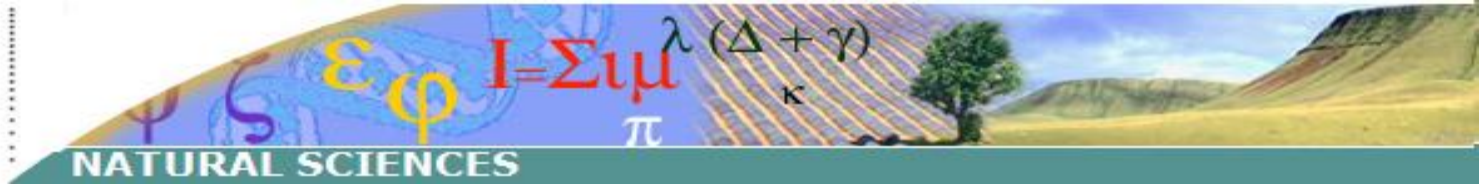
How do you **talk** about engineering?



#1: What We Say

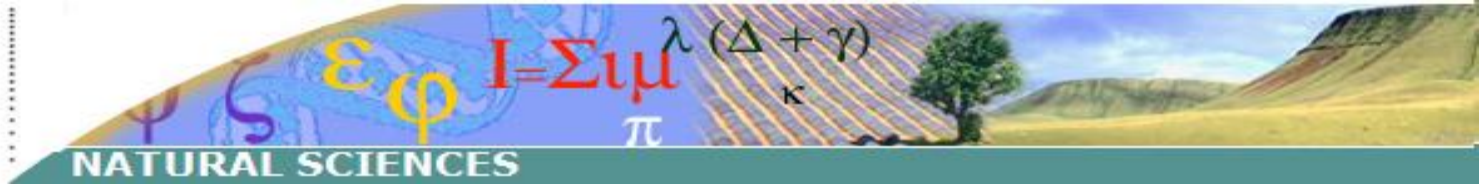
Have you heard or used this **definition** of engineering?

Engineers solve problems using math and science.



#1: What We Say

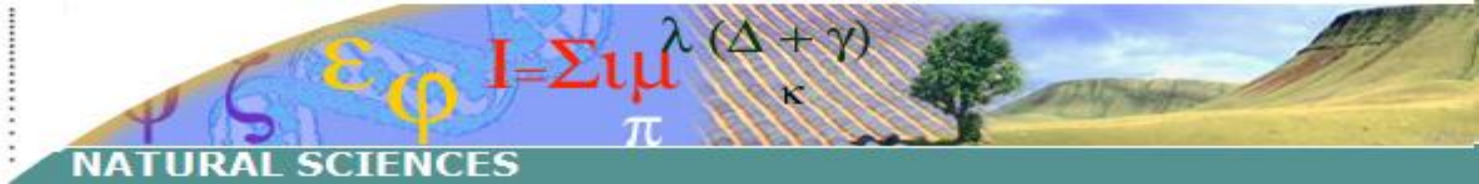
While this **traditional definition** is accurate, it is **not compelling** to today's students.



#1: What We Say

Try this instead:

*Engineers are **changing the world** all of the time. They dream up **creative, practical solutions** and work with other smart, **inspiring people to invent, design, and create things that matter.***

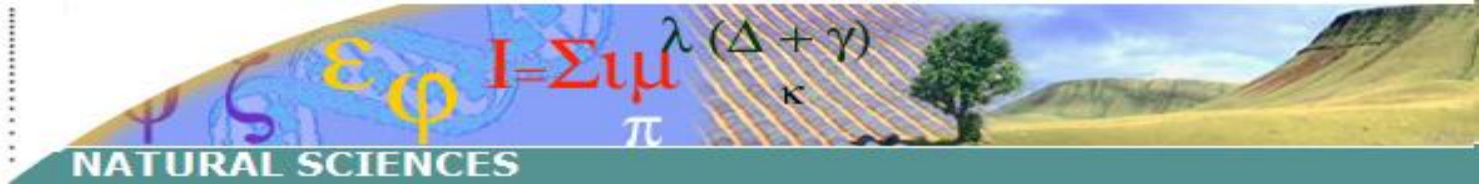


#1: What We Say

While the traditional definition of engineers isn't all encompassing, it can help kids understand the importance engineers play in local, regional, and global communities.

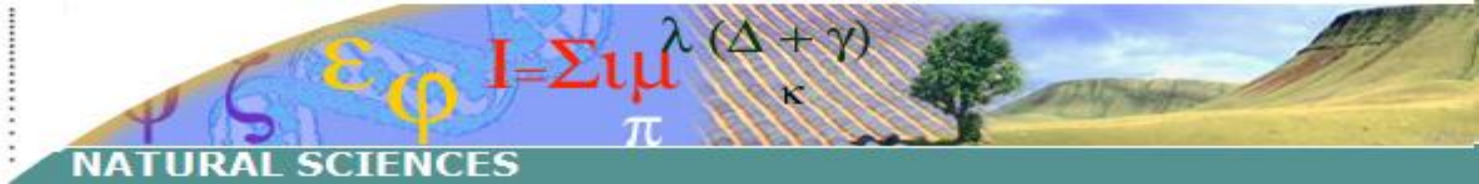
#1: What We Say

Based on your location, be sure to explain that engineers can solve problems from all levels of communities; villages to regions to countries.



#1: What We Say

By solving essential problems, like obtaining clean water or farm irrigation, more time can be spent on innovation and economic capacity building.



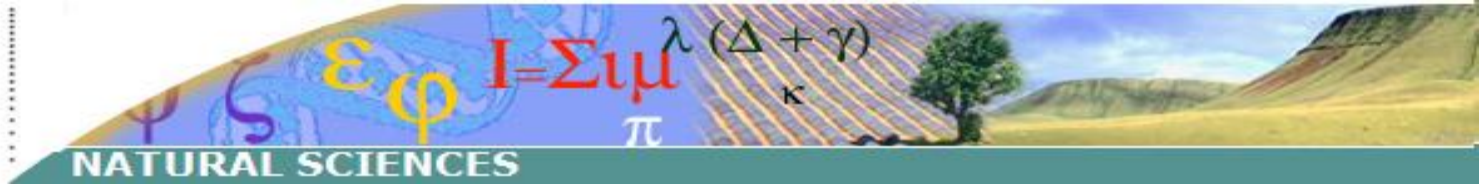
#1: What We Say

Tell kids the **top 10 reasons** to love engineering:

- | | |
|--|--------------------------------|
| 1 Love your work, and live your life too! | 6 Earn a big salary |
| 2 Be creative | 7 Enjoy job flexibility |
| 3 Work with great people | 8 Travel |
| 4 Solve problems, design things that matter | 9 Make a difference |
| 5 Never be bored | 10 Change the world |

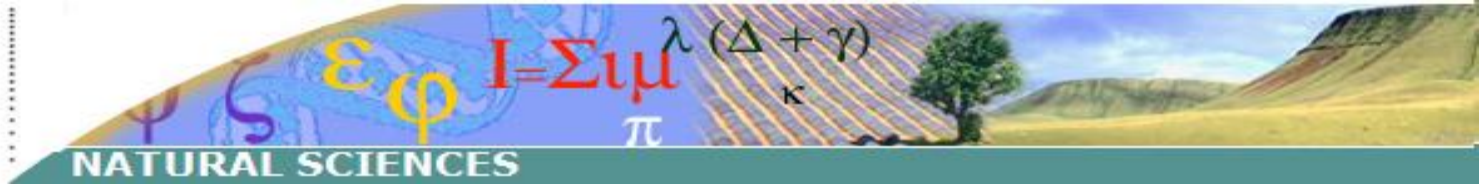
Learn more about all 10 reasons at:

www.discovere.org



#2: Images

What **images** do you see or use to **promote** engineering?



#2: Images

Here's what happens when you **google**
“engineer” images...



Mechanical



Electrical

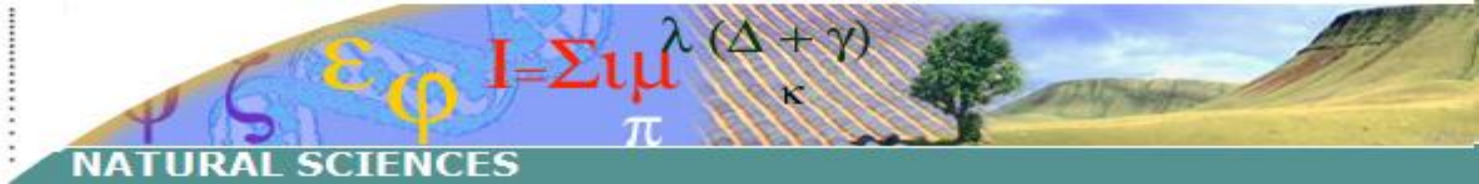


Computer



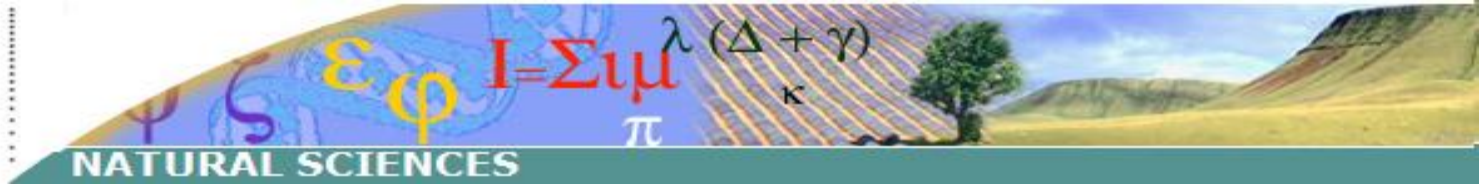
Train





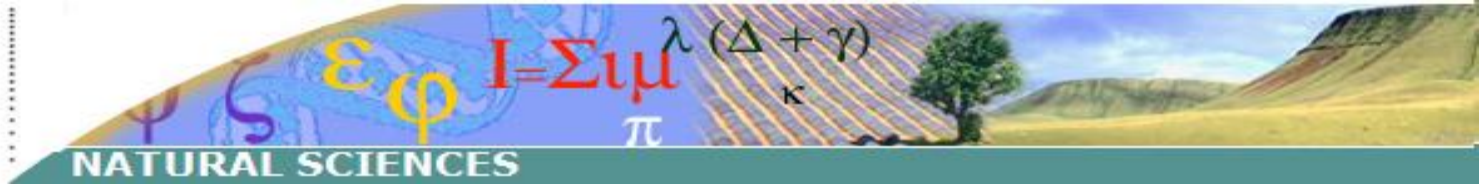
#2: Images

Why has the hard hat become the **iconic symbol** of engineering?



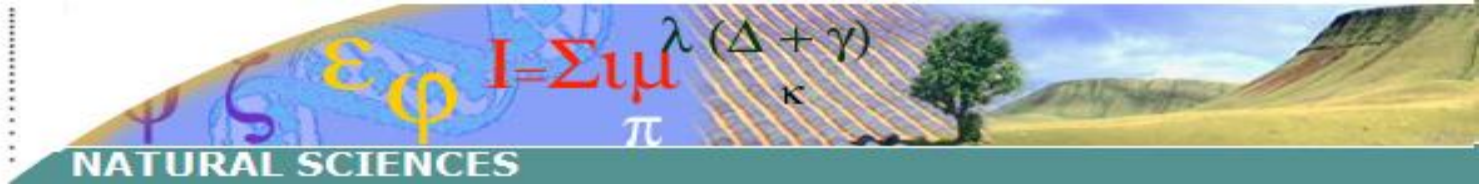
#2: Images

While the hard hat is required in many engineering jobs, and we are indebted to it for keeping our engineers safe, it is **limiting** in its overall representation of engineering.



#2: Images

Let's present the **range** of people,
disciplines and careers in engineering.



#2: Images

DiscoverE's [online photo gallery](#) includes **copyright free** photos that you can use to promote engineering activities.



A range of jobs...

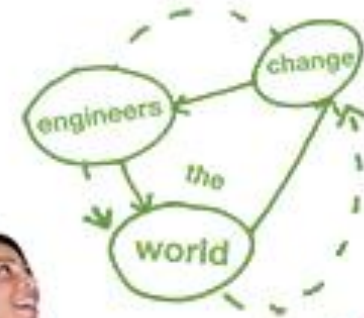
DISCOVER 
LET'S MAKE A DIFFERENCE



A range of
outreach activities...



A range of people...



Solve problems like...

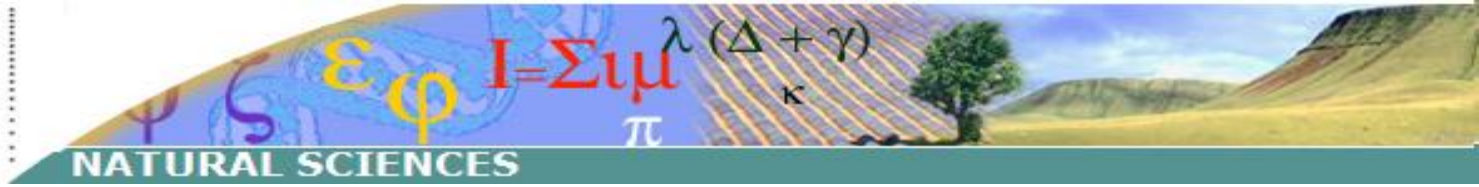


water collection



United Nations Educational,
Scientific and Cultural Organization

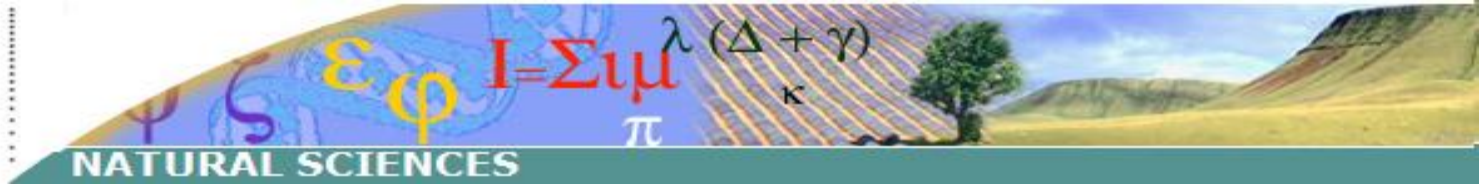
NATURAL SCIENCES



Infrastructure

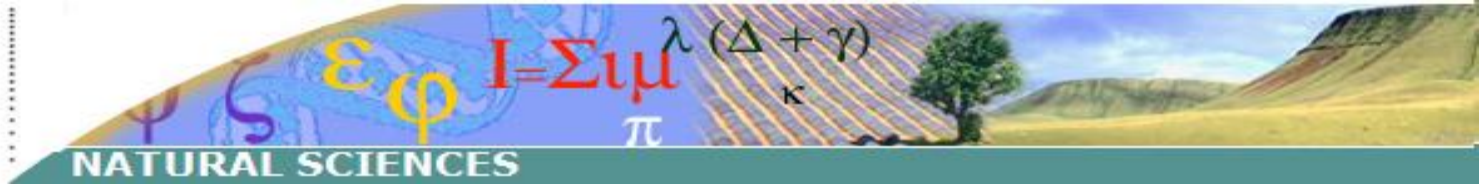


DISCOVER 
LET'S MAKE A DIFFERENCE



#3: Add Context

When you lead **hands-on activities** with kids, do you make **real-world connections**?



#3: Add Context

Here's the formula:

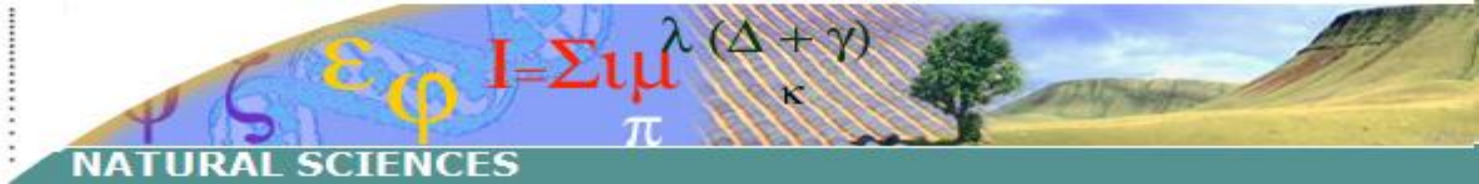
Positive engineering messages

+

Hands-on activities

=

a successful outreach
experience.



#3: Add Context

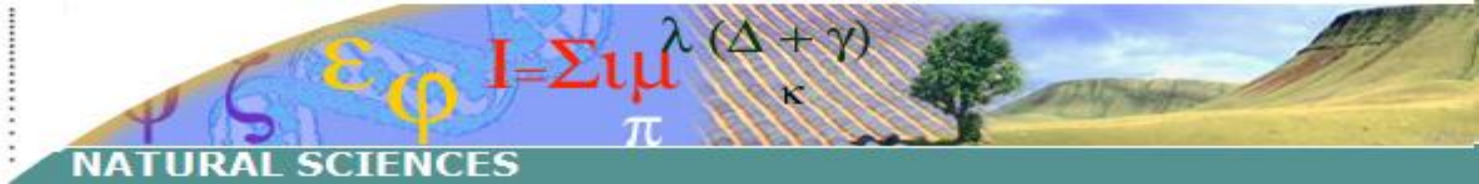
Learn more:

Take Discoverer's [online tutorial](#) on leading kids through a successful engineering experience.

#3: Add Context

Get activities:

Download [Cool Content & Activities](#) from our website.



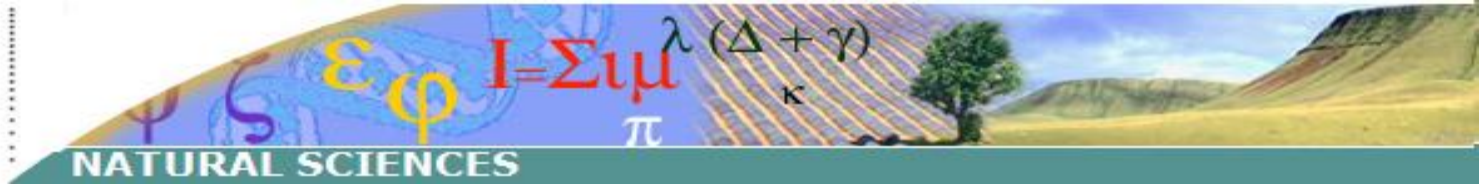
Review

We need to incorporate **effective and positive** messages into...

#1: **What we say** about engineering.

#2: The **images** we use to present engineering.

#3: The **hands-on** engineering activities we lead with kids in order **to add context**.

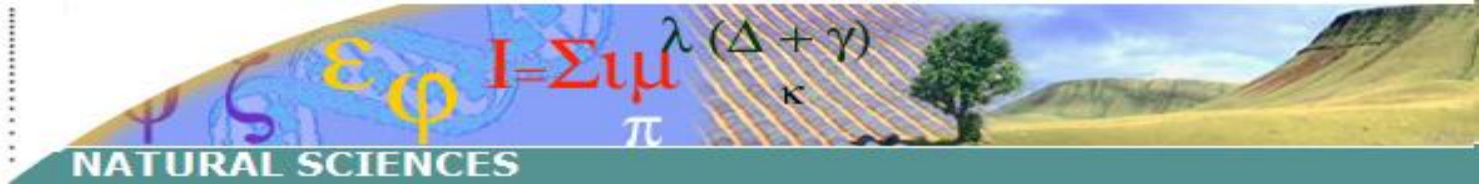


Action Steps

Think about your job...

Do you tell kids how your work or industry **makes a difference?**

Do you talk about the **people** you work with?

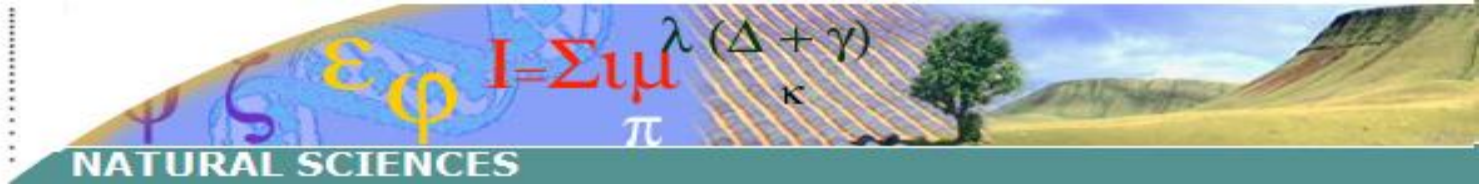


Action Steps

Use words like...



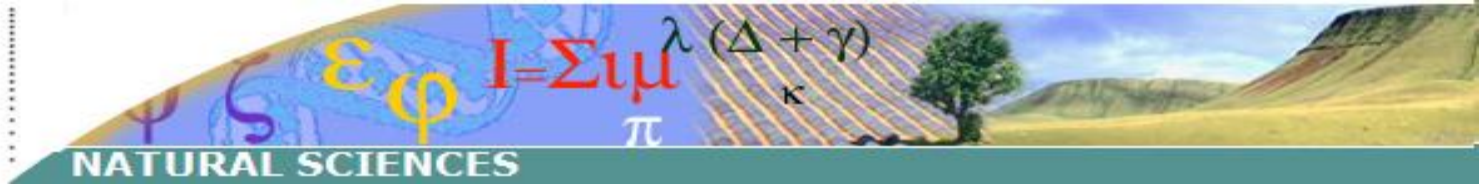
A word cloud containing the following terms: **engineers**, **innovative**, **imaginative**, **collaborative**, **contribute**, **design**, **rewarding**, **flexible**, **creativity**, **create**, **people**, **goods**, **salary**, **help**, **travel**, **change the world**, and **make a difference**.



Action Steps

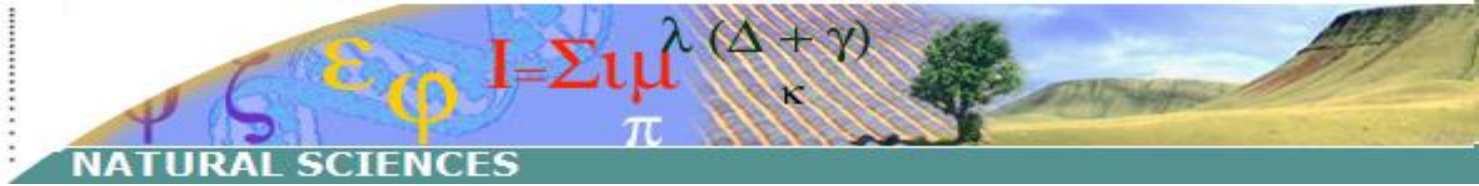
Use compelling images in your outreach efforts:

[DiscoverE's online photo gallery](#)



Action Steps

Take Discovere's [online training](#) on how to lead kids in a successful engineering experience.

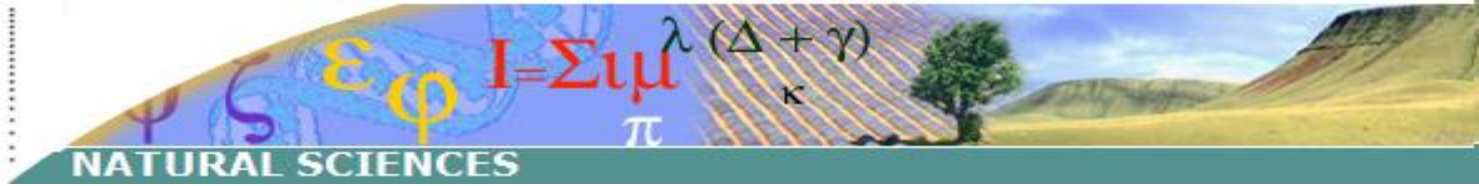


Action Steps

Explore www.DiscoverE.org to find more resources.



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Thank you!