

# WELCOME PACKET

v.2  
June 17, 2010

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Watch the Defined STEM tutorial video!

Performance Tasks

- Project Director**  
Astronaut Rover Design
- Landscape Architect**  
The Mathematics Involved with the Design Process
- Entrepreneur**  
Researching and Developing a Plan to Open a Restaurant
- Wildlife Research**  
Re-introducing Endangered Animals
- Product Designer**  
The Mathematics Involved with Design

Career Explorer

Over 100 career connections preparing students to learn about careers and career paths for the 21st century.

Welcome to Defined STEM!

Enter a keyword or select a subject to start viewing our learning connections.

**Science**


**Technology**

**Engineering**

**Math**

**Social Studies**


**Language Arts**

**Career Clusters**

**Visual Arts**

**All Connections**

Featured Connections



[The Science of Lightweight Materials...](#)



[Aquariums and Life Science...](#)



[The Science of Propulsion in Space...](#)



[The Science of Guitar Making...](#)



[Human Interaction with Science at the...](#)



[The Science East 8](#)



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## WELCOME LETTER

### Who we are

Defined STEM is Defined Learning's solution for providing real world relevance to students. Defined STEM is a web-based application designed to promote effective and relevant connections between STEM classroom content and STEM career pathways. Defined STEM provides teachers a resource where they can access highly effective media content and related support materials. These resources and materials allow teachers to connect STEM career awareness to existing lessons and standards-based curriculum.



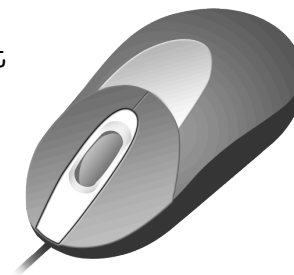
### What we do

Defined STEM offers over 1,000 video-based learning connections to stimulate student interest in STEM careers. Each connection has instant access to subject recommendations, lesson plans, related websites, teacher guides, state standards and a powerful cross-curricular search function. The students will gain perspective on how lessons learned today will help them not only in school but with their career choices as well. The teacher will have the content presented to them in a manner that will help inspire the class. The content will reside in a self-contained environment that will help the teacher, without impacting his or her workload or taking the teacher off task.



### How we do it


- Utilize career based video
- Provide guiding questions for the teacher and or student
- Supply additional resources, lesson plans, student activities, etc.
- Structure the service as a springboard to "Project Based Learning"





## User Guide

### ACCESSING THE APPLICATION

**Defined STEM**  
Bringing Relevance to the Classroom

[Learn More](#) | [Professional Development](#) | [Pricing](#) | [About Us](#) | [Contact](#) | [Our Company](#)

[Free 14 day trial!](#)

#### Login

User Name :

Password :

[Login](#)

[Forgot Username Or Password?](#)

Promo Code :  [GO](#)

[Interested in a free trial?](#)


#### STEM News

» [How to fix the STEM education 'crisis'](#)  
11/17/2009  
Experts weigh in on teacher qualification, cultural perceptions, and systemic solutions for improving U.S. math and science instruction By Meris St...

» [U.S. Department of Education Opens Race to the Top Competition](#)  
11/17/2009  
"U.S. Secretary of Education Arne Duncan today released the final application for more than \$4 billion from the Race to the Top Fund, which wi..."

» [Sharpton, Gingrich and Duncan Discuss Education Reform](#)  
11/17/2009  
"Secretary Arne Duncan, former House Speaker Newt Gingrich and civil rights leader Al Sharpton discussed their national tour to expose challen..."

» [Video and Tech Collaboration Yields Next Generation STEM Resource for Schools](#)  
08/19/2009  
Burbank, CA, August 19, 2009 -- Chicago-based Defined Learning has teamed up with The Futures Channel, the leading producer of real-world video pro...



#### The Measurement of Feeding Animals

Students will explore how measurement is used to feed animals the proper amount of food.

1 2 3 4 5 6

#### About Us

Defined STEM is a web-based application designed to promote effective and relevant connections between STEM classroom content and STEM career pathways, thus providing learning opportunities for students. Defined STEM provides teachers a resource where they can access highly effective media content and related support materials. These resources and materials allow teachers to connect STEM career awareness to existing lessons and standards-based curriculum.

We do this by:

- Utilizing career based video
- Providing guiding questions for the teacher and or student
- Supplying additional resources, lesson plans, student activities, etc.
- Structuring the service as a springboard to Project Based Learning

Defined STEM offers over 1,000 video-based learning connections to stimulate student interest in STEM careers. Each connection has instant access to subject recommendations, lesson plans, related websites, teacher guides, state standards and a powerful cross-curricular search function. The students will gain perspective on how lessons learned today will help them not only in school but with their career choices as well. The teacher will have the content presented to them in a manner that will help inspire the class. The content will reside in a self-contained environment that will help the teacher, without impacting his or her workload or taking the teacher off task.

[Click here](#) for more information about Defined STEM and to preview sample learning connections.

[Click here](#) for pricing information.

For more information about Defined STEM please call 847-850-0188 or email [info@definedlearning.com](mailto:info@definedlearning.com).

[Click here](#) to preview and see a full list of learning connections.



## Direct Access

Simply enter your username and password to the fields in the login fields, then clicking "login" you will be access Defined STEM.

## Promo Code Access

A promo code allows you to quickly set up a unique account. If you have been provided a "Promo Code" enter the code to the "Promo Code" in the login pane and click "Go." Next a form will "pop-up" in your browser. After you have entered your information and agreed to the terms of service you are ready to "create user" and begin using Defined STEM.

A screenshot of the Defined STEM login interface. The interface has a light blue header with the word "Login" in white. Below the header, there are two input fields: "User Name :" and "Password :". A blue "Login" button is positioned below these fields. Below the "Login" button is a blue hyperlink that reads "Forgot Username Or Password?". At the bottom of the login pane, there is a "Promo Code :" input field and a blue "GO" button. Two green callout bubbles are overlaid on the image: one on the left pointing to the "User Name" field with the text "Direct Access", and one at the bottom pointing to the "Promo Code" field with the text "Promo Code".



## NAVIGATION

[Home](#)Welcome Patrick (logout) | [My Profile](#) | [Help](#)



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Welcome to Defined STEM!

Enter a keyword or select a subject to start viewing our learning connections.

Search

Science

Technology

Engineering

Math

Social Studies

Language Arts

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Visual Arts

All Connections

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[Human Interaction with Science at th...](#)

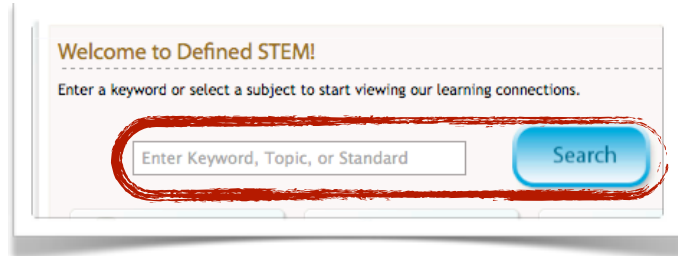
[The Scienc Fast B...](#)

Defined STEM

Welcome Packet, Page 4

## Search

You can perform a standard keyword search by entering your keyword into the search box



Welcome to Defined STEM!

Enter a keyword or select a subject to start viewing our learning connections.

Enter Keyword, Topic, or Standard

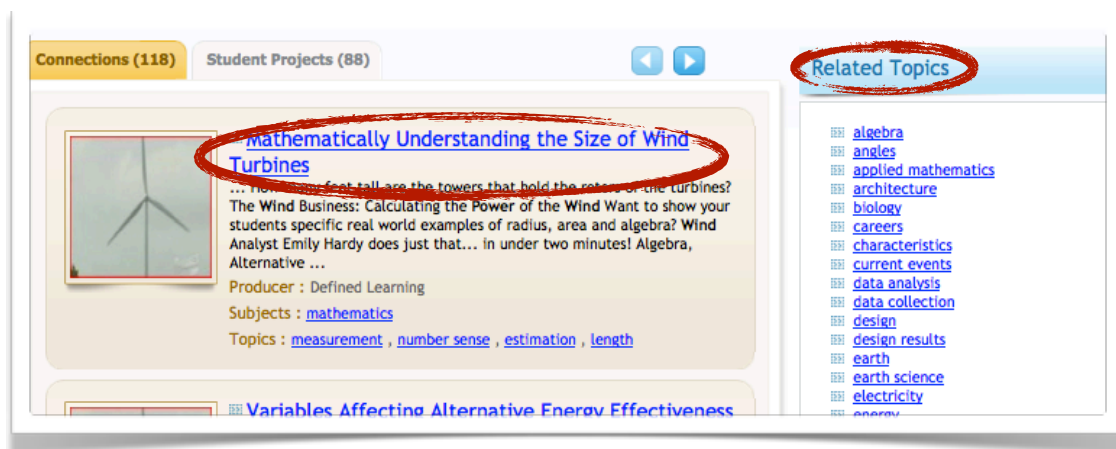


## Subject Browse

To browse by subject areas, select on the corresponding box and drill down by topic area

## Search Results Page

Once you have completed your search or browse you will be directed to the search results page. Here you can choose the connection that best suits your criteria by clicking on its link, or you can drill down even further by selecting one the related topics.





## CONTENT

### Connections

There are over 1,000 connections in Defined STEM. A Connection is a self contained unit which helps the teacher demonstrate relevance to their students through real world applications. Connections consist of:

- Careers based video that show individuals in their daily routine and demonstrates the importance of math and science
- Objectives and guiding questions for the teachers to utilize
- “Performance Tasks” that create a project based environment for the classroom where students are challenged to solve a situation using a multi-disciplinary approach.


#### Using Physical Science to Create Baseball Bats

**Objective :**  
Baseball bat creators must understand properties of motions and forces and the transfer of energy to create the largest sweet spot on the bat.


**Guiding Questions :**

1. What is the "sweet spot" on the bat?
2. How does the measure of its hitting force affect the shape of the bat?

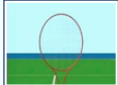
**Performance Tasks :**


 [Defined STEM : Baseball Bat Analysis](#)

**Simulation :**

 [Defined STEM : Find the Sweet Spot](#)

**Video Extension :**

 [The Physics of the Sweet-Spot](#)

 [Composite bats](#)


**Resources :**

**Video :** [Baseball Bat Technology](#)

**Student Project:** [The Best Throw](#)

**Student Project:** [Two-Ton Baseball](#)

[View Standards](#)





**Share** **Video Connect** **Citations**

**Sharing Bookmarks:**

- Email
- Print
- Facebook
- Wordpress
- Digg
- Typepad
- Favorites
- Twitter
- Google
- Buzz
- Del.icio.us
- More

**Video Downloads:**  
(Click to Save)

**Embed Link:**

<http://stem.definedlearning.com/cor>

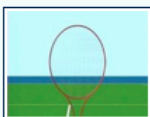


## Career Based Videos

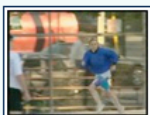
The career based videos demonstrate to students how science and math relate to their future careers.



### Video Extension :



[The Physics of the Sweet-Spot](#)



[Composite bats](#)

## Video Extension

For each career based video, Defined STEM provides a curriculum clip to reinforce the math and science used by the professionals.

## Objective & Guiding Questions

The objective and guiding connections allow teachers to easily integrate a connection into their curriculum

### Using Physical Science to Create Baseball Bats

#### Objective :

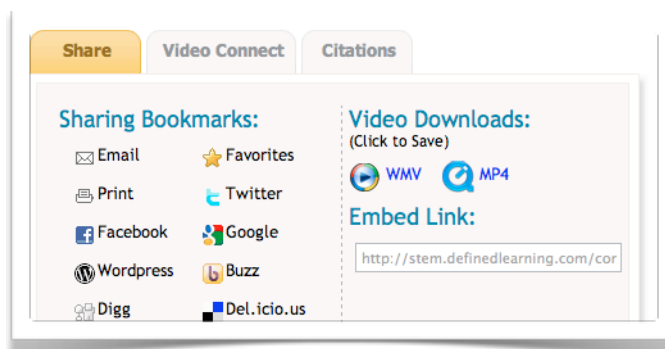
Baseball bat creators must understand properties of motions and forces and the transfer of energy to create the largest sweet spot on the bat.

#### Guiding Questions :

1. What is the "sweet spot" on the bat?
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## Connection Manager

The connection manager enables the sharing of content using Web2.0 tools. Download or embed the content into your LMS or embed into your office suite.





## Performance Tasks

Our goal with “Performance Tasks” is to help the students see the relevance and the cross curricular nature and applications in the science and math areas. The performance task also creates a project based environment to the classroom where the students are collaborating and presenting as a team.

## Performance Task: Baseball Bat Analysis

**Big Idea :**

The role material and data analysis play in the selection of the perfect baseball bat.

**Essential Questions :**

- What role does data and material analysis play in choosing the right equipment?
- How can you use math and science in the decision process?

**Overview :**

This performance task will highlight critical decision making skills through the analysis of scientific and mathematical data. Students will gather information on the different variables on the types of baseball bats and decide the optimal bat for a team.


### G.R.A.S.P.

Print View

**Goal**

Your goal is to assist a University baseball team in selecting the most optimal baseball bat for the upcoming season.

Role
Audience
Situation
Product




**Baseball Bat Technology**

From the cannon room to the bat-swinging robot to the bat handle-breaking machine, the engineers at Easton Sports are testing the latest sports equipment for durability, performance and handling.

Video Downloads: [WMV](#) [MP4](#)

[View Related Learning Connections](#)



**Baseball Bats 2: Testing with Machines**

Baseball bats are subjected to mechanical tests in the laboratory.

Video Downloads: [WMV](#) [MP4](#)

[View Related Learning Connections](#)

## Key Concepts

You can perform a standard search by entering your keyword into the search box.

### Performance Task: Baseball Bat Analysis

#### Big Idea :

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#### Essential Questions :

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#### Overview :

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## Related Connections

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### Baseball Bat Technology

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[View Related Learning Connections](#)

## GRASP Concept

The acronym GRASP stands for:

- **G**oal
- **R**ole
- **A**udience
- **S**ituation
- **P**roduct

These elements correspond to the specific elements that are to be addressed in the performance task by the student. (cont)

### G.R.A.S.P.

[Print View](#)

#### Goal

Your goal is to assist a University baseball team in selecting the most optimal baseball bat for the upcoming season.

Role

Audience

Situation

Product



**Goal:** the goal of the performance task

Example: The goal is to assist potential small businesses in conducting a market analysis.

**Role:** the role of the students as they carry out the performance task

Example: You are a consultant with an economic development corporation that has been formed by a small city in Texas.

**Audience:** the target audience to which the finished product/performance will be presented

Example: The target audience is composed of individuals who are/might be interested in starting a small business in your community.

**Situation:** the context

Example: Your community is not big enough to be attractive to large national business chains or franchises; however, the economic development corporation that employs you believes that small businesses could be successful in your community. The corporation also believes that small business start-ups could be encouraged by assisting prospects in conducting a market analysis in the community.

**Product:** the result of the performance task or activity

Example: You are responsible for designing, producing, and presenting, in an electronic format, a training session that identifies economic data sources available in the community and demonstrates how to conduct a market analysis of the community.

**G.R.A.S.P.**

Print View

**Goal**

Your goal is to assist a University baseball team in selecting the most optimal baseball bat for the upcoming season.

**Role**

**Audience**

**Situation**

**Product**

\* "Understanding by Design" *SSCED Tool Kit, Curriculum, Instruction, and Assessment* pg.10, <http://ritter.tea.state.tx.us/ssc/>.



## MINIMUM REQUIREMENTS\*

### Operating System

- Windows
  - Windows XP (Service Pack 2 or later)
  - Windows Vista
  - Windows 7
- Macintosh
  - OS 10.3.9 or later\*\*

### Hardware

- Windows
  - 800MHz or faster Intel or AMD processor
  - At least 512MB of RAM
- Apple
  - At least 512MB of RAM
  - 867MHz+ PowerPC G4 or later PPC processor
  - 1.67GHz+ Intel-based Macintosh

### Content

- Audio capabilities with either internal or external speaker configuration
- Monitor resolution of 1024x768 or higher
- Windows Media Player 9.1 or later
- Flash Player 9.1 or later
- Quicktime 7.1.3 or later
- Adobe Reader

### Browsers

- Google Chrome 2.0+\*\*\*
- Microsoft Internet Explorer 7.0+\*\*\*
- Mozilla Firefox 2.0+
- Safari 3.0+

### Additional

- Microsoft Word
- Apple Pages

\* As with all browser/online based applications it is recommended to have the latest players and hardware, but we know that this is often always possible; however based on manufacturer/developer documentation and testing the above requirements support

\*\* required for mp4 support

\*\*\* not supported in Apple Macintosh environments



## CONTACT INFORMATION

### Company Info

Address: **Defined Learning, LLC**

1161 Lake Cook Rd

Suite C

Deerfield, IL 60015

Website: [www.definedlearning.com](http://www.definedlearning.com)

[www.definedstem.com](http://www.definedstem.com)

### Tech Support

Email: [help@definedlearning.com](mailto:help@definedlearning.com)

Phone: 847-850-0188 ext. 208

### Sales Support

Email: [info@definedlearning.com](mailto:info@definedlearning.com)

Phone: 847-850-0188 ext. 101