

Problem-Based Learning. Done Right. Finally.

It's an important part of an educator's job to make sure students leave the classroom fully prepared for their lives ahead and equipped with 21st century skills (i.e. skills that focus on communication, organization, technology, and problem-solving). We use these skills every day. Unfortunately, they are often overlooked as students work to absorb names and dates, facts and figures.

That's why **Problem-Based Learning** is so important. It allows students to tackle a scenario that goes beyond a "yes" or "no" answer. In doing so, students will review a variety of resources related to the topic (articles, videos, statistics, infographics, etc.), engage in classroom discussion, and organize their thoughts as they evaluate the information. After all this, they will have a chance to respond to the challenge and defend their approach.

It won't be easy, but it will be very engaging. Best of all, this process will help develop a wide variety of skills that students will use the rest of their lives!

The 1-2-3 of Problem-Based Learning





This book will walk teachers and students through the following Problem Scenario:



www.pblproject.com



Publishers

A Note to the Teacher:

If there was something about the cover or title of this book that interested you enough to pick it up and turn to this page, then you probably already know what we are going to say. The truth is that, in today's world, students must leave the classroom equipped with 21st century skills and ready to meet the challenges of real life. One of the best ways to meet these demands is through interdisciplinary **Problem-Based Learning** scenarios. This type of classroom instruction promotes communication, collaboration, curiosity, organization, and problem-solving skills . . . all major components of any reputable set of standards.

The Problem-Based scenarios in this book integrate Language Arts, Math, Social Studies, Science, and other content areas. They offer educators a chance to shift the work of learning from the teacher to the students, where it belongs. If we wish to prepare a generation of students to solve real-world problems, we simply must give them real-world problems to solve... Problem-Based Learning is the way to accomplish this task.

So, let's get ready to begin! Enjoy,

Your Friendly Editors

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A large selection of pages has been chosen for you to review (full book = 88 pages). **Why Problem-Based Learning**?

The only clearnal answer to, "Why Problem-Based Based Learning?" is to say that"Students need it." Sinnei.student to thriv'od.vcThis shift is highlighted by a few recent developments.

First, ne ader the country are ofte

indards (including the Common Core) that are being developed around around a circle mantra:

eg nd Career Ready"

areer Ready" is a moving target. Consider a It seems obvious, but there's "Co¹ rig' ار $_3$ 8 to 10). There is no telling what career he or student who is in upper elementary s she will have twenty years from now, at ar *.*0, of د here is a long list of jobs that didn't exist even 10 years ago (app designer, social ledi/ *.eacher... just to name a few).* There are certainly many career paths that don't exist 1 Jmmc in a couple of decades (perhaps wi a virtual reality tour guide, body part replacement speci *ifier*). Likewise, there are sr wer jobs that are familiar at the moment that may be on the ay out JUL il cashiers).

To try and predict the specific knowledge base and for the will need for their future careers may be like an old-timer placing his music CDs to a time the jurn he can have a good laugh twenty years later. To really drive home the point, consider a "predition" job that has existed for hundreds of years, and will certainly exist for hundreds more. I'm trustworthy **accountant** (and for this exercise, we'll just look at the "tax tion" part of the accountant's job, because taxes aren't going anywhere!). Let's see how this job changed:

The Evolution of an Accountant (during tax season)



So, the skill set has changed and the accountant has gone from a quiet, detail-obsessed math guru to a software expert who is willing to empower the customers to do a job that once only he or she could do. And every job is going through similar transitions. One of the main reasons for this development is technology, which brings us to the question raised on the next page.

9 - General Information

And what about technology?

He thing to think about: What do you teach a student who has accress 'll the information in the world?

*'s auestion. You'd be hard-pressed to find a fact, statistic, quotation, formula, or tinydetail t.erage 5th csoon, wearable technolr can't find in less than a minute with a Smart Phone (or, coming
are armed with the right technology, students will react like so:

- "Who wrote 's C " "No problem."
- "What is the formula volume "ctangular prism?" "Piece of cake."
- "What is the diet of the pilled p'

Consider this visual:



"Coming right up."

Technology is a game changer. The above illustration snows *e* hat has been true for quite some time, and the age of "instant information" only makes li emorization" square smaller. Yes, there is baseline knowledge every student should. or example: Should elementary school students be able to name the first president of the United State course. Should r "e school students be able to graph a simple formula? Absolutely. The issue is that the amount of information that is labeled "au lelv keeps emo. shrinking and, frankly, gets less critical to a student's success. For example nts 1. .ntly know the capital of Alabama? It's hard to say. After all, it's only a click away.

So, we've established that what students need to know is changing. That lea one question...

Well, what do they need to know?

We hate to be repetitive (not really), but **it all comes back to the skills of Problem-Based Learning.** These skills will be vital to students regardless of the inevitable changes that the future brings.



The Main Problem:

Here is the Problem-Based Learning scenario that is the focus of this guide:

You are moniber of the school board in a district he sconsidering the option of eliminal light school football throughout the district. When we smight be given on both sides of the lose of continue or eliminate the football program. When the correct course of action?

Of course, every significant challenge in l' eds +oked at from severalpoints-of-view. For the Problem-Based Scena.thisthisview" have been divided into a math angle, a scienceind'ferent "points-of-Then, in Language Arts, all points-of-view are eval.cin.e ap `roach.

Obviously, life isn't so cleanly divided into subject areas. Remember the visual that you saw on page 12: School

It's certainly a challenge – impossible, actually – to have "real life the total of the academic schedule. Still, having students review a proble. The several angles (even if they are neatly divided along subject lines) helps them that problems are multi-dimensional, made up of pieces so complex that they must be evaluated on their own. Only after all of the pieces have been individually examined can the problem be properly approached as a whole.

So, each "subject angle" is one piece of the puzzle. That's not to say they aren't plenty challenging in their own right. In fact, they are wonderful exercises for math, or science, or social studies class, even if you never have a chance to get into the other subject points-of-view.

Now we're ready to begin. The page to the right outlines the "subject angles" that we've created for the Problem-Based Scenario in this book.

The "Subject Angles":

In order to properly respond to the Main Problem, it is important to consider multiple points-of Below are several angles from which to approach the problem.





Language Arts serves as the hub for the entire exercise. It is in ELA that all of the other "subject angles" are evaluated and measured against one another, and a final decision about how to approach the Main Problem Scenario is made based on all of the available information.

A large selection of pages has been chosen for you to review (full book = 88 pages).

A Note to Parents

Of course parents like to be kept in the loop, so they will appreciate a note home to tell them about the Problem-Base students. But there's a son (perhaps a bit more sneaky) why we like to send the letter home. It helps se' a to a level of serious IL fees any that when you send the "letter home", you mean business.

We've write a second eletter below that can be a model for your Parent Letter. Obviously, you can add your ov.

Dear Parents,

Our class is preparing to engage in the m-Bar prining exercise. The term "Problem-Based Learning" (or PBL) is being used more frequencies of the term "Problem-Based of a light want to take a moment to explain what we will be doing and what the goals are.

For example, let's say you have to go to the bank in the after scho may have a lesson on map reading and ask the students to find the best route to the bar. on incomplete look at the challenge of actually going to the bank. In real life, getting directions the bank of the bank of the bank of the bank of the bank. In real life, getting directions the bank of the bank.

• What time do I need to go? What are the banking hours? What will traffic br

- Why am I going? What do I need to bring? Is this a drive-through visit or c
- What else do I need to do this afternoon? How will my bank visit work into my

And so on... The ability to answer (and know enough to ask) these questions an sporting, enables you to use your time and resources in the best way (even with something as simple bank). Students need to learn to do the same. Allowing students to work through Problem-B. scenarios will help them develop the skills that go beyond simple memorization.

For our problem-base scenario, we are going to fast-forward to the day when the students are ...orking citizens, and they will have to address a real problem that has no easy answer. Here's the specific task:

You are a member of the school board in a district that is considering the option of eliminating high school football throughout the district. What reasons might be given on both sides of the issue to continue or eliminate the football program? What is the correct course of action?

Obviously, this is not a "yes or no" problem. To come up with a logical approach, students will review different "stimulus items" related to the topic (articles, videos, statistics, infographics, etc.), engage in classroom discussion, and organize their thoughts as they absorb information. They will look at the problem scenario from several points-of-view across multiple subject areas. Next, they will work in groups to come up with the best approach or method, and they will present their findings in a simulated "real-life" situation. It will be challenging, but very enjoyable and it will ultimately result in a tremendous sense of accomplishment. Best of all, this exercise will help develop a wide variety of skills that students will use the rest of their lives!

Your Friendly Teacher

J to go inside?

Il schedule?

The Intro to Students

This is the fun part! The success of this exercise greatly depends on the excitement and engage of the students. As you know, it's best if you can hook them right from the start. We are points in the original transformation when creating this Problem-Based Scenario, and these minimum be worthwhile to stress when introducing the Main Problem:



The Main Froburn

The students are participants in the problem, so the will be approaching it from a **first-person** perspection.



This scenario is a very **real-world** situation that is discussed by school districts around the country. Students can see that it may have an impact on their daily lives, and that will help their engagement. You are a member of the school board in a district that is considern the option of <u>eliminating high school</u> <u>football</u> throughout the district. What reasons might be given on both sides of the issue to continue or eliminate the football program? What is the correct course of action?

By definition, a problem should have a **sense of urgency** (otherwise, it's not a problem at all). The wording of the Main Problem was chosen to stress that it is something that must be addressed. Students will become more engaged if they, too, feel the pressure of the situation.



As students work through the problem, they will be exposed to many details and related resources. For the introduction, though, it's best to keep it "**short and sweet**" as shown above. This not only grabs students' attention, but it actually makes it easier to understand the final goal of the problem scenario.

A large selection of pages has been chosen for you to review (full book = 88 pages).

> Student Handout

hers.

Math Standards

As sturnts kt ugh this section of our Problem-Based Scenario, they'll be focusing on s all entitical content areas. This includes:

- Measurement (time
- Data Analysis
- The Number System

In addition – and perhapinore or dy – students will need to take on a mathematical frame of mind (in ace c c es, +' referred to as the "Standards for Mathematical Practice"), which is a ke of Jem-Based Learning. This means that students will need to:

- Make sense of problems and persevere in vt
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning

You may want to share the goals listed above with you. 'ents prior to beginning the exercise, but the best part is that they'll be develop. 'ese ski' whether they realize it or not!

The most important thing to remember when introducing the Pro. -Bas Scenario is to grab student interest right away. It is a fun and challenging e. 'se, and you certainly want students to approach it that way.

To make this easy for you, we have created a handout to introduce the "math angle" to your students for this Problem-Based Scenario. This will help them see that they will be looking at the Main Problem Scenario from a specific point-of-view, in this case with a mathematical focus.

Make photocopies of the next page to introduce the "Math Angle" of this Problem-Scenario to your students



Are you ready to tackle the problem?

The ? ario:

Yc rc member of the school board in a district that is c sic ng the option of eliminating high school football thrc at the vict. What reasons might be given on both sides of the are continue or eliminate the football program of the correct course of action?

Jmplicated problem like the one poir f-view. In this case, we will

Something to think about:

Is football "worth it," c jes it cost too much money an ime?

0

Prior to giving your response, you will review multiple resources, engage in classroom discussion, and take time to organize your thoughts.

In this exercise, you will review logistical factors of the football program, such as the cost and revenue, time factors, and student participation. You will then decide if the sport is a boost or a drag on the district.

As you work on this exercise, remember that this is primarily a **mathematics question**. This means that numbers, statistics, and calculations will be needed to support your ideas!

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It's a fancy term, but the "Stimulus Review" is simply t . step in Problem-Based Learning where students review a variety of information. ounding th specific problem or challenge.

In our Problem Scenario, all of the Stimulus Items have been pro tor We have intentionally gathered a variety of different types and sources. The important in today's modern world where information comes from all directio and also sets the stage for Step 2 (Evaluating the Information).

A few examples of the types of Stimulus Items you might see in a Problem-Based Scenario include:

- Articles
- **Statistics**
- Videos
- Infographics
- Blogs

- Lists
- Websites
- **Editorials** •
- **Audio Recordings**
- Cartoons
- **Primary Sources**
- **Advertisements**
- ...and much more!

For your convenience, we've placed all of the Stimulus Items for this Problem-Based Scenario on a special website where **both you and your students** can have full access to them. To access these resources, you will go to:



A Few Notes:

There are a few things we'd like to highlight as your students get ready to dive into the Stimulus Items. First, these are actual sources that have been gathered for the topic at hand, even if they have been edited or adapted at times due to length, format, or readability. That means that they don't necessarily reflect our personal opinions, and we certainly don't want to take credit for the hard work of others (all source information will be provided). It does, however, provide a nice mix for your students.

Next, the Stimulus Items should give your students the background information they need to generate their responses to the Problem-Based Scenario. There is no need for you to seek out other resources or for students to do their own research.

With that said, it is always great if there is an opportunity for students to get on a computer or head to the library to find their own background information. Being able to conduct your own research is a vital skill to have, and it is referenced throughout Language Arts standards.

Again, this extra step is not necessary to successfully go through the exercise (we know you're already crunched for time!), but we figured it was worth mentioning!







So, by this point, you've had students review Stimulus ItLated to theProblem Scenario. That led to a stimulating (we hope) classroon.Tussion on the

Often times, there is a feeling of "information overload" at this stag 's have enough information to generate their constructed responses and/or 'then product options (we'll talk about these on the upcoming pages), but their thouse may be all over the place. They may still have to pick their position, refine their arguments, focus their proposal, perfect their design... and so on.

That's where the **"Thought-Gathering" Sheet** comes in. This isn't to be confused with any "note-taking sheets" your students may have written while they were looking through the Stimulus Items or listening to the discussion. Rather, this is a final stage where they sort everything (including their own notes) to prepare for their response. It is a chance to tie together Step 1, Step 2, and Step 3 (shown above).

We have provided a "Thought-Gathering" sheet that works with this exercise and is a good chance for students to organize their ideas prior to creating their responses.



 $-\infty$ How could you assess how people in the community view the issue?

Teacher Instruction Sheet

A large selection of pages has been chosen for you to review (full book = 88 pages).



After you divide your students into teams, photocopy the next page to outline the Product Option for this scenario.

The task at hand...

Working to the something as a team can help you gain a better under tar. The problem-scenario. Please work together on the exercise belo

What's the

Problem?

You, of the **Athletic Office** for a school district. As pay you ties, you must conduct an **analysis of the formal promam** at a sample school. This analysis will health and revenue of the games, the time factors in fixed hecifically whether the program is taking time as any fixed hecifically whether the overall student participation. Our disc data from the Stimulus Items, as well as your best end ates from a local school.

Using this analysis, decide whether the that program is a good investment, at least fron. "nu. Joers" perspective. Prepare a chart, table, graph, or ther visual aid that defends your position. You must **present your findings** to the school board (i.e. your classmates).

Consider what other factors (tradition, sportsmanship, school spirit, etc.) might be difficult to measure, but should be factored into the decision as to whether the football program should be continued.

Teacher Instruction Sheet



A large selection of pages has been chosen for you to review (full book = 88 pages).

Grading Rubric (Product Option)

The Grading Rubric is **Section 3** on your *Teacher Instruction Sheet.*

> Student Handout

We mention this time any e agair is this book, and it's worth saying another time:

It's ah sor .

Without a doubt, your students will remind ne. about the process" when they try to convince you to be gentle during the grading Process er all, they've been brought up to bubble in the correct circle with a #2 pencil, so ing asked to "produce" something from a variety of information can be tric¹ of they'll do just fine.

As students work through the process, they will learn subject or cific and cover a few important standards. Yet they'll also be developing those 21s' kills and lifelong traits that we mention throughout this book (a few are listed v).

٠	Critical Thinking	٠	Collaboration	٠	Entrepreneurialism	٠	Patience / Pe rance
٠	Researching	٠	Leadership	٠	Self-Direction	٠	Listening
٠	Creativity	٠	Technological Ability	٠	Internet / Media Literacy	٠	Healthy Skepticism
٠	Planning	٠	Social Awareness	٠	Data Analysis	٠	Imagination
٠	Communication	٠	Scientific Literacy	٠	Personal Expression	٠	Flexibility / Adaptability

It's difficult to put a hard grade on any of those, and it isn't the final goal. If you live by the mantra, *"It's all about the process,"* these skills will indeed be developed. With that said, you do want to provide worthwhile feedback to your students. We use a simple – but sound – rubric to help students "ace the **TEST**" (a clever acronym to help them remember the key steps). The rubric is provided to the right for your convenience.



Shown above are general areas that your teacher will be evaluating as he or she scores the products you create with your team. You may be provided more details about what it takes to receive the full value in any one of these areas.

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> Student Handout

Science Standards

As sturnts kt ugh this section of our Problem-Based Scenario, they'll be focusing on stals centent areas. This includes:

- Forces and Moτιon
- The Human Bod .s i ies)

In addition – and perhar ore in y – students will need to take on a scientific frame of mind (in acachic c'), se are referred to as the "Science and Engineering Practices"), which is a ' en of P m-Based Learning. This means that students will be:

- Asking questions and defining prob.
- Constructing explanations and designing
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information

You may want to share the goals listed above with you. 'ents prior to beginning the exercise, but the best part is that they'll be develop. 'bese ski'' whether they realize it or not!

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Are you ready to tackle the problem?

<u>The S</u>rio:

ou e member of the school board in a district that is cuided gethe option of eliminating high school football throughout the t. What are the reasons that might be given of side of the issue to continue or eliminate the football program (Vhat is the correct course of action?

10'

JIP

nplicated problem like the one sints of-view. In this case, we will

Something to think about:

Is football too dangerou. If a sp ??

Prior to giving your response, you will review multiple resou. eng ,e in classroom discussion, and take time to organize your thoughts

In this exercise, you will review the safety issues dealing with football and compare it with other sports, and then decide if football is safe or too dangerous to be played by high school students.

As you work on this exercise, remember that this is primarily a science question. This means that scientific facts will be needed to support your ideas, and you'll also want to maintain a healthy skepticism throughout the exercise!

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Blogs

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- Videos
- Infographics
- Websites

Lists

- Editorials .
- **Audio Recordings**
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- **Primary Sources**
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With that said, it is always great if there is an opportunity for students to get on a computer or head to the library to find their own background information. Being able to conduct your own research is a vital skill to have, and it is referenced throughout Language Arts standards.

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A large selection of pages has been chosen for you to review (full book = 88 pages).



Now that your students have reviewed the Stimulus Iter s a fitting time to cally, the "s have a **class discussion** about the Problem-Based Scenario (s_b, angle" that you're working with).

At this stage, there will be a limited amount of new information b. at to table (Step 1), although you might want to introduce ideas not covered in the mulus, and perhaps students will share original thoughts and experiences. For the mo. though, the classroom discussion is where you want students to evaluate the information (Step 2) to which they've been exposed. It is now that they will begin to organize it all and decide how it will fit together in their response.

The key to a classroom discussion, of course, is keeping everything focused and moving it in the direction you want, and at the same time creating a free environment for students to share and build on ideas. This is certainly where teachers earn their pay! One way we've tried to help (a little bit, at least) is to provide you with the talking points that work well for this scenario. The bold questions are what you will ask your students, and each has bullet points that you can use to guide the discussion.

Leading Questions for Classroom Discussion The Football Program (science angle)

Footba i. he reputation of being a "dangerous" sport. In where i. dangerous?

- Cuider football is a contact sport, which means that certain injuries (most of them evitable when proper safety precautions are taken
- Consider the spr are very safe (golf, track & field, tennis, etc.) but other sports oarding etc.) have high injury rates that can be closely ol foother
- Consider that the najo ball injuries are minor, which is true with most other sports played a the state of level.

How can the study of forc and in science be used to reduce injuries on the footba'

- Consider that most injuries in football are due to impact, means that it is simply two people colliding (a combination of force and motion
- Consider that understanding the exact nature of hcores and motion cause injuries on the football field can result in better safety equilibrium of the form constrained and pads
- Consider how players understanding the basic element of force in a polied on a football field can lead to better—and safer—football technique

What measures can be taken to reduce injuries on the football field? What precautions might be too drastic?

- Consider that proper safety equipment has drastically lowered the number of sports injuries, and the equipment continues to improve
- Consider that many injuries occur during certain parts of the game (for example, a high number of injuries occur during punt returns), so perhaps rule changes can be used to reduce injuries
- Consider that many injuries can be avoided by using correct techniques and making sure that teams are relatively balanced in age, skill, and size
- Consider that there is a point where precautions become too drastic, such as when they interfere with the flow of the game (such as a player wearing so many pads that he can't move, or new rules that don't allow players to make any contact)



A large selection of pages has been chosen for you to review (full book = 88 pages).



On your Teacher Instruction sheet, you'll see that each scer rovides two types of response options for your students – Extended Resporended the Product Option. Let's look at the **"Extended Responses"** first.

As you would expect, the Extended Responses are simply que. ion one of around the Problem-Based Scenario that the students answer through the citing

Most likely, the Extended Responses are similar to what you might see ing a Performance Task of a comprehensive assessment (where students are given a range of information to review, and then must give their conclusions based on the evidence). The "test prep" benefits alone make it worthwhile for students to complete the Extended Responses, but the broader benefit is their ability to take the information they've been exposed to and generate a logical response to a problem scenario.

The rubric and process for grading Extended Responses is on the following pages. Also, we will leave it up to you whether you want to allow students to use notes they have taken throughout (we think it's fine for them to do so), and also how strict you want to be with time limits (a half hour or so should be fine).



What do you think?

The queIow are centered around the Problem-Based Scenario you'vebee revinglease answer the questions on separate sheets of paper.

1) How it is study of forces and motion iscing to be used to reduce injuries on if for hall field?

2) Based on the statistics, Sotball more dangerous than other Sorts? 'Sit too dangerous to play? What crowe one to reduce the injuries?



Remember to support your answers with evidence that you've gathered from what you've read and discussed in class!

Teacher Instruction Sheet

	Problem-Based Scenario					
Section (1) -	Stimulus Review					
Section (2) -	Classroom Discussion					
Section (3) -	Student Response					
Section ④ -	Grading & Analysis					

Grading Rubric (Extended Responses)

A large selection of pages has been chosen for you to

review (full book = 88 pages).

Student Handout

The Grading Rubric is **Section 3** on your *Teacher Instruction Sheet.*

One thing that your stunts r our stand about these Problem-Based Scenarios is that the answer is never set r while you guide the muddy waters of difference at and challenges, while you guide them along the journey.

Of course, the end result needs to be more *t* tor back – and that's why proper grading is so important. While stude may at gr tes exist only to cause stress and fill the blank spaces on a report card, the broader at is that when students are graded in a clear and fair way, it enables them to ally improve their approach and response.

The Extended Responses for this scenario can be graded us. the to tr. right. It is divided into four sections:

- 1) Science Content (What do you want students to bring to the table based on prevelessons?)
- 2) Writing Focus (Was it clear what point the students were trying to make?)
- **3) Use of Evidence** (Did the students back up their position with evidence, quotes, statistics, and facts?)
- 4) Language & Conventions (Did students limit mistakes and respond in a thorough and professional manner?)

Here is a copy of the rubric for your students to review.



How do I get an A?

Listed below are the four different areas that will be evaluated as your responses are graded. Be sure to consider each area as you write.

Rubric Se knowledg d g **in () () ().	ral understan؛	ntent – you must s ding of the topic <i>ing to the table based o</i>	C C	f background
1	3	2	1	NS
You proved your response to nave a high level of backgro knowledge of the subject.	You sho und iedge 'h m your res,	level of background knowledge, and only in	You showed barely any background knowledge of the subject throughout your response.	Your response was incoherent, off-topic, or unable to be read.

Rubric Section #2: **Provur** and sustain your writing bac or **in other words: Was it clear whe

istr'' 'tion of Writing – you must organize

ying to make, and did you focus on that point?

4	3	2	1	NS
defined purpose, and it was organized with a clear focus on that	although it lacked organization and a clear	1. purpor respone vague, 2re w limited or _b anization and focus.	se or organization ur resonse.	Your response was incoherent, off-topic, or unable to be read.

JF'

JUV

Rubric Section #3: Integration of Knowledge

deas (use 🗸 "evidence") –

you must support your arguments and positions with ou. **in other words: Did you back up your position with evidence, qu

informa⁺ stati "etimulue iteme"

"stimulus items")

4	3	2		IN S
your main idea and included appropriate	support/evidence for your main idea and only limited sources, facts, & details.	modest support/ evidence for your main	support/evidence t	You, response was 'ncoherent, off-topic, or unable to be read.

Rubric Section #4: Language & Conventions – you must use proper grammar,

spelling, vocabulary, and other conventions of the English language

**in other words: Did you limit mistakes and respond in a thorough and professional manner?

4	3	2	1	NS
professional and you demonstrated a	mostly professional with limited errors related to language conventions.	rather sloppy with multiple errors related to language	completely sloppy and	Your response was incoherent, off-topic, or unable to be read.

A large selection of pages has been chosen for you to review (full book = 88 pages).

Social Studies Standards

As studen we bre this section of our Problem-Based Scenario, they'll be focusing on se all sections content areas. This includes:

- History (local tradition
- Social Responsibil son ught by team sports)
- In addition and perhaps n e im a students will need to understand basic principles of social studies, while a 'ber 'Problem-Based Learning. This means that in addition to the basic directory ards, students will become familiar with the broader themes of social areas examine:

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Global Connections

Civic Ideals and Prac

d Governance

and Society

on, and Consumption

er, A

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Scie.

- Culture and Cultural Diversity *
- Time, Continuity, and Change
- People, Places, and Environments
- Individual Development and Identity *
- Individuals, Groups, and Institutions *
 - *an asterisk has been placed beside each theme that is a major part of this PBL e

You may want to share the themes listed above with your stude prior beginning the exercise, but the best part is that they'll be developing that by understanding whether they realize it or not!

The most important thing to remember when introducing the Problem-b. Scenario is to grab student interest right away. It is a fun and challenging exercited, and you certainly want students to approach it that way.

To make this easy for you, we have created a handout to introduce the "social studies angle" to your students for this Problem-Based Scenario. This will help them see that they will be looking at the Main Problem Scenario from a specific point-of-view, in this case with a focus on society and historical trends.

Make photocopies of the next page to introduce the "Social Studies Angle" of this Problem-Scenario to your students





Are you ready to tackle the problem?

The sario:

A are a member of the school board in a district hat considering the option of eliminating high school at three out the district. What are the reasons that mi = c on on both sides of the issue to conting e' nate the football program? What is the correct coupled are of are

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In order to properly re above, you must view it fro. Life consider the following: mplicated problem like the one poir of-view. For example, we will

Something to think about:

How valuable are footbal. 'adition and the lessons taught by the Larr 40. '

Prior to giving your response, you will review multiple resource. gage in classroom discussion, and take time to organize your thoughts.

In this exercise, you will review social elements of football, such as the lessons learned on the field and the longstanding traditions that are created. You will then determine the value of these abstract benefits.

As you work on this exercise, remember that this is primarily a **social studies question**. This means that you must consider historical and current trends in our society, along with other political and economic factors, when providing your response.

A large selection of pages has been chosen for you to review (full book = 88 pages).



It's a fancy term, but the "Stimulus Review" is simply the st step in Problem-Based Learning where students review a variety of information should be unding the specific problem or challenge.

In our Problem Scenario, all of the Stimulus Items have been provide or y. We have intentionally gathered a variety of different types and sources. This important in today's modern world where information comes from all direction. and also sets the stage for Step 2 (Evaluating the Information).

A few examples of the types of Stimulus Items you might see in a Problem-Based Scenario include:

- Articles
- Videos

- Statistics
- Infographics
- Blogs

- ListsWebsites
- Editorials
- Audio Recordings
- Cartoons
- Primary Sources
- Advertisements

...and much more!

For your convenience, we've placed all of the Stimulus Items for this Problem-Based Scenario on a special website where **both you and your students** can have full access to them. To access these resources, you will go to:

http:// v.pblproject.com/students	I What's the Problem?
Logir tr , I Passw 1. ' B	Login: Password: Login
The Stime	include:
Stimulus Iter /1	
- "Football - ag'	' (article)
Stimulus Item #2	
— "Is high school football signifized a	?" (online forum)
Stimulus Item #3	

— "Why Sports are Important" (vide

A Few Notes:

There are a few things we'd like to highlight as your students get ready to dive into the Stimulus Items. First, these are actual sources that have been gathered for the topic at hand, even if they have been edited or adapted at times due to length, format, or readability. That means that they don't necessarily reflect our personal opinions, and we certainly don't want to take credit for the hard work of others (all source information will be provided). It does, however, provide a nice mix for your students.

Next, the Stimulus Items should give your students the background information they need to generate their responses to the Problem-Based Scenario. There is no need for you to seek out other resources or for students to do their own research.

With that said, it is always great if there is an opportunity for students to get on a computer or head to the library to find their own background information. Being able to conduct your own research is a vital skill to have, and it is referenced throughout Language Arts standards.

Again, this extra step is not necessary to successfully go through the exercise (we know you're already crunched for time!), but we figured it was worth mentioning!

A large selection of pages has been chosen for you to review (full book = 88 pages).





So, by this point, you've had students review Stimulus I elated to the Problem Scenario. That led to a stimulating (we hope) classroom 'ssion on '

Often times, there is a feeling of "information overload" at this state and have enough information to generate their constructed responses and/or fu. "heir product options (we'll talk about these on the upcoming pages), but their thous may be all over the place. They may still have to pick their position, refine their arguments, focus their proposal, perfect their design... and so on.

That's where the **"Thought-Gathering"** Sheet comes in. This isn't to be confused with any "note-taking sheets" your students may have written while they were looking through the Stimulus Items or listening to the discussion. Rather, this is a final stage where they sort everything (including their own notes) to prepare for their response. It is a chance to tie together Step 1, Step 2, and Step 3 (shown above).

We have provided a "Thought-Gathering" sheet that works with this exercise and is a good chance for students to organize their ideas prior to creating their responses.



What lessons can you learn while playing on a football

Lessons of Football

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Teacher Instruction Sheet

A large selection of pages has been chosen for you to review (full book = 88 pages).



After you divide your students into teams, photocopy the next page to outline the Product Option for this scenario.

Crossword Puzzle

Database / Spreadsheet

Oral Report

Rebus Story

Slide Show

Recipe / Instructions

Poem

Rap Song

Webpage

Instruction Manual

Petition

Game

Experiment

Mosaic

Argument

Proposal

Illustrated Story

Radio show

Diary Entry

Editorial Essay

Map

Lesson Plan

Fiction Story

Interview

Costume

Newspaper Article

Diorama

Display

Mock Interview

Survey

The task at hand...

Working ce something as a team can help you gain a better undertaine ce problem-scenario. Please work together on the exercise belo

What's the

Problem?

You are a **Writers' Group**, which is a support neaw 's aspiring writers who work to develop their craft. For me ent project, your group wants to use writing to cour the citement, competiveness, and other emotions the part of high school football.

One of the best ways to fath his wide range of feelings is through poetry or anort martation. Work with your group to write a poem or short of y about some of the abstract elements of football (substract sports hanship, teamwork, school spirit, confidence bulling, in his wide range of tradition, etc.).

Be prepared to share your work with the class. Discuss whether these abstract elements should be considered when deciding whether or not a school district should have a football program. Consider that many schools have rivalries and football traditions that go back generations. Should these traditions be considered when deciding the future of the sport at the school?



A large selection of pages has been chosen for you to review (full book = 88 pages).



٠	Critical Thinking	٠	Collaboration	٠	Entrepreneurialism	٠	Patience / Perrance
٠	Researching	٠	Leadership	٠	Self-Direction	٠	Listening
٠	Creativity	٠	Technological Ability	٠	Internet / Media Literacy	٠	Healthy Skepticism
٠	Planning	٠	Social Awareness	٠	Data Analysis	٠	Imagination
٠	Communication	٠	Scientific Literacy	٠	Personal Expression	٠	Flexibility / Adaptability

It's difficult to put a hard grade on any of those, and it isn't the final goal. If you live by the mantra, *"It's all about the process,"* these skills will indeed be developed. With that said, you do want to provide worthwhile feedback to your students. We use a simple – but sound – rubric to help students "ace the **TEST**" (a clever acronym to help them remember the key steps). The rubric is provided to the right for your convenience.



Shown above are general areas that your teacher will be evaluating as he or she scores the products you create with your team. You may be provided more details about what it takes to receive the full value in any one of these areas.

Student Responses Language Arts

In previous ion f this book, students have only concentrated on one piece of the puzzle w look at the Main Problem Scenario as a whole, incorporating rytl that has been researched and discussed along the way.

To respond to the a construction of a prompt has been provided (shown to the right). Your students' version and the end of a prompt has been provided (shown to the end of the e

• Show the ability to compress do or the texts and resources

۱g

- Explain their position and ove as
- Support their positions with evider from research
 Articulate clear opinions (stressed at the research
 Form compelling arguments (stressed at the research
- Demonstrate speaking and listening skills

The skills above will only be demonstrated if students are to absorb Stimulus Items, organize their thoughts, and approach the Problem hari logical way. If they fail in these tasks before a single word is written on the never be able "write their way out of it" at this stage of the game. To put here way:

The 1-2-3 of Problem-Based Learning



This is not merely a writing exercise! Student responses will never satisfy all of the requirements listed above if Steps 1 and Steps 2 are incomplete.

Here is the Language Arts prompt for this Problem Scenario.



What do you think?

The prorw is centered around the Problem Scenario you've beenreviewin'leprovide your response on a separate sheet of paper.

After rev² in the evidence, decide whether on cyc^{-1} school district should have a foot a^{μ} if gram at the high school level.

When your decision is made, white an **informative essay** to shar our viewpoint with the general public within, the second district. The essay should clear station reasons and evidence that were used to make your decision, and why it is in the best interest of the students.

A large selection of pages has been chosen for you to review (full book = 88 pages).

How long will it take?

Without a d

most common question we are asked is:

Student Handout

"H long is this going to take?"



In the end, if you can take a Problem Scenario all of the way from beginning to end, including each "subject angle", as well as the products, group work, and presentations that go with each one, your students will have accomplished quite a bit. For that reason, we have included a **"Certificate of Accomplishment"** that you may want to provide to show students that their efforts are appreciated. Remember, you want them to enjoy the whole experience!

