The Knowledge Box: Making the Connection
Knowledge Box

Purpose:
To provide educators a forum to effectively present the petroleum industry, and to inform students of the vast career opportunities in the field.

The Knowledge Box strives to Make the connection

• Science disciplines are often taught and/or perceived as mutually exclusive
• Secondary science is deficient in earth science concepts after 8th grade.
• Many ecology/environmental topics focus on negative impacts of industrialization, not acknowledging the positive (petroleum products, technology, increased environmental standards)
Student misconceptions about oil and gas and the industry

- Oil is found in pools/puddles underground.
- We drill for gasoline.
- Major oil spills happen often.
- Spills from oil and natural gas E & P are the leading cause of oil pollution in oceans and rivers.
- Is the oil we drill for the same as the oil we cook with?

Outside of the classroom
Offshore Energy Center’s Educational Outreach Program

Teacher Workshops:

How does the Knowledge Box “work”?

*The Knowledge Box* is a traveling exhibit showcasing the many aspects of the oil and gas industry. Includes teacher resources, hands-on activities and interactive lessons correlated to state and National Science Standards.
Knowledge Box Student Objectives

• Discuss the importance of petroleum in our lives
• **List several everyday objects made from petroleum**
• Communicate connections between geology, petroleum and future careers
• **Understand economic significance of the petroleum industry**
• Explain the contributions of scientists and technology in the fields of geology and petroleum
• **Analyze the effects of faulting, folding and earth’s movement**
• Describe the origin of oil and natural gas
• **Evaluate the economic and environmental impact/issues of fossil fuels**
• Summarize the steps in locating, drilling and producing a well
• **Compare and contrast land and offshore drilling and production**

Inventory of the Knowledge Box

• 5 posters with student activities
• Student “newspapers” and booklets (40) with activities
• 11 videos
• 8 industry resource books
• 9 CD-ROMs
• 10 student resource books/booklets
Inventory of the Knowledge Box (cont.)

- 10 teacher activity/lab guides
- “Teacher Binder” with instructional activities and model descriptions
- Models of faulting and drill bit
- Oil sample(s)
- Pig
- Laptop computer (depending on location and availability)

Current Inventory by AADE Chapter

<table>
<thead>
<tr>
<th>AADE Chapter</th>
<th>Number of boxes sponsored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td>10</td>
</tr>
<tr>
<td>National</td>
<td>2 (currently used in Washoe County, Nevada)</td>
</tr>
<tr>
<td>West Coast</td>
<td>1</td>
</tr>
<tr>
<td>Lafayette</td>
<td>3</td>
</tr>
<tr>
<td>New Orleans</td>
<td>2+2 PENDING</td>
</tr>
<tr>
<td>Dallas</td>
<td>2 Pending</td>
</tr>
</tbody>
</table>

* Other Chapters have expressed great interest as well
Feedback from Student Evaluations

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I learned where oil came from</td>
<td>2.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>I learned about the petroleum industry</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td>I learned something new about petroleum</td>
<td>4.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Overall I liked the Knowledge Box</td>
<td>4%</td>
<td>16%</td>
</tr>
</tbody>
</table>

TEACHERS TRAINED

- THE OEC HAS TRAINED OVER 250 TEACHERS IN THREE STATES OVER THE PAST THREE YEARS.

- IF EACH TEACHER HAS A CLASS OF THIRTY AND 5 CLASSES OF STUDENTS PER DAY, THEN POTENTIALLY, THIS TRANSLATES TO A POTENTIAL OUTREACH OF 37,500 STUDENT CONTACTS.
Feedback from Teacher Evaluations

• 100% indicated the Knowledge Box effectively supplements existing science curriculum

  “Great tool!! Thanks for letting us use it.”

  “We hope to have the box again next year!”

As a teacher, what did you enjoy the most?
  “having supplemental materials readily available”

  “I will make sure I have this valuable learning tool in place at the beginning of our energy unit next year and for years to come”

Funding for Knowledge Box

• Each Box
  • WITHOUT LAPTOP $3300
  • WITH LAPTOP $5000

• Travel & Time expense for OEC staff $1000

• Teacher workshop(s)
  – Teachers must be trained through a workshop experience
  – before receiving the box (25 Teachers)
  – (less expensive if session is at their own facility) $1500

• Upkeep (replacement of materials, courier fees, etc.)(per box) $400-800
SPONSORSHIPS FOR KNOWLEDGE BOX

• AADE ENVISIONS GETTING SPONSORSHIPS FOR KNOWLEDGE BOXES: FOR THIS SPONSORSHIP, YOUR COMPANY OR ORGANIZATION WOULD RECEIVE

  1. RECOGNITION ON AADE WEB SITE
  2. RECOGNITION ON KNOWLEDGE BOX ITSELF WITH A SPONSORSHIP STICKER AND LOGO
  3. KNOWLEDGE OF SUPPORTING AN EDUCATIONAL ENDEAVOR.
  4. SATISFACTION OF PROMOTING THE PROPER INFORMATION TO THE YOUNGER GENERATION ABOUT OUR OILFIELD
  5. RESULT- MORE PEOPLE INTERESTED IN ALL ASPECTS OF OUR INDUSTRY

DONATIONS

• $15,000 WILL PROVIDE TWO BOXES WITH PROPER TRAINING FOR YOUR AREA. THIS INCLUDES UPKEEP, COURIER FEES, AND REPLENISHING (within reason) FOR TWO YEARS.