Books & Brain Development
Creating Lifelong Learners
Dolly Parton’s Imagination Library
Arkansas
PET Scan  CAT Scan  MRI  FMRI  Genome Project
A baby is born with 100 billion brain cells – called neurons.
Synaptic Density

Human Brain at Birth

Human Brain at 4\textsuperscript{th} Birthday
Human Brain Development

Neural Connections for Different Functions Develop Sequentially

Sensory Pathways (Vision, Hearing)

Language

Higher Cognitive Function

FIRST YEAR

Birth (Months) (Years)

-8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

THE ACHIEVEMENT GAP STARTS AT BIRTH

1,100 words

Cumulative Vocabulary of a 3-Year-Old Child

Child from Professional Family

Disadvantaged Child

500 words

LEARN MORE AT HECKMANEQUATION.ORG
About Imagination Library
What is the Imagination Library?

- Book gifting program launched by Dolly Parton’s Dollywood Foundation in 1995
- High quality, age appropriate books mailed to homes of children 0-5
- FREE to all enrolled children in community
- Committee of experts select the books
- Some available in Spanish, Braille, audio
The Cost

$2.10/child/month
$25/child/year
How Do We Know It’s Working?
Parents Reading to Children Daily

- 29%
- 59%
Reading 3 times a week or more

- 59%
- 85%
Children asking to be read to
Time Children Spent Alone with Books
Des Arc Kindergarten Scores 2005

- Oral Communication
- Written Language
- Math Concepts
- Attentive behavior
- General Knowledge

Legend:
- Red: Not Developed
- Blue: Developing
- Green: Developed
Des Arc Kindergarten Scores 2013

- Oral Communication
- Written Language
- Math Concepts
- Attentive Behavior
- General Knowledge

Not Developed
Developing
Developed
Des Arc Kindergarten Scores 2005 vs 2013: Developed

- Oral Communication
- Written Language
- Math Concepts
- Attentive Behavior
- General Knowledge

[Chart showing comparison of scores between 2005 and 2013 for different categories]
The Benefit?

- 20 year study
- 27 countries
- 70,000 cases

“In homes that have many books, children average 3 more years of schooling than the children in homes without books.”

As few as 20 books = higher levels of education
Research reveals that because of Imagination Library:

- “Children develop a comfort level with books early and begin to view books and themselves differently; they begin to see themselves as readers.”
<table>
<thead>
<tr>
<th>Resources Saved</th>
<th>Resources Produced</th>
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<tbody>
<tr>
<td>&lt; special education</td>
<td>&gt; IQ</td>
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<tr>
<td>&lt; grade retention</td>
<td>&gt; graduation rates</td>
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<td>&lt; drug use</td>
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<td>&lt; criminal justice system</td>
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<td>&lt; welfare use</td>
<td>&gt; home ownership</td>
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<td>&gt; tax revenue</td>
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**ROI:** $7-$9: $1
Over 90,000 books were mailed to Arkansas preschoolers in 2013
In 2014 over 110,000 books were mailed to the homes and hands of Arkansas preschoolers
In 2015 the number of books received by Arkansas children increased by 30%
From 2005-2015 over half a million books were delivered to Arkansas families at no cost to the families.
Local champions serve over 15,000 preschool children monthly in 50 counties.
Joint project of the Pangburn Hero Within Club and Sr. Beta Club.

Launched April 1st, 2016

Available to children living in the Pangburn School District and children of faculty/staff members.

At present we have 30 children who should have received their first book this month.

Pangburn High School students at the 2015 Arkansas Imagination Library Summit
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