

# Federal Research Investment from NSF: WEST VIRGINIA

## About NSF

As the federal agency charged with the advancement of scientific progress across all of the fields of science and engineering, the National Science Foundation (NSF) is the cornerstone of America's basic scientific research enterprise. NSF's seven directorates fund research in diverse disciplines as well as interdisciplinary, cross-cutting initiatives. Support for education research comes primarily from the Education and Human Resources Directorate and also from the Social, Behavioral and Economic Sciences Directorate.

## Examples of NSF-funded Education Research in West Virginia

- Investigating Fifth Grade Teachers' Knowledge of Noticing Appalachian Students' Thinking in Science:** This Faculty Early Career Development Program (CAREER) project, based out of West Virginia University, is investigating teachers' knowledge of noticing students' science thinking in terms of what students do and say. The project will examine teacher noticing in practice, use empirical evidence to model the specialized teacher knowledge involved, and design teacher learning materials informed by the model. It will target fifth grade science teachers' noticing their students' thinking as they engage in science learning in six rural and semi-rural elementary schools in Appalachian communities.
- Collaborative Research: Developing STEM Self-Efficacy and Science Identities through Authentic Astrophysics Research in Online and Face-to-Face Environments (STEM-ID):** STEM-ID, supported by the Advancing Informal STEM Learning (AISL) program, is informed by previous work in which high school students were introduced to scientific research and contributed to the search for pulsars. The project replicates the local program into a distributed program model and investigates the degree to which authentic research experiences build strong science identities and research self-efficacies. The project will support (a) geographic expansion to institutions situated in communities with diverse populations, (b) an online learning and discovery environment for students, and (c) opportunities for deeper participation in research and advancement within the research community.



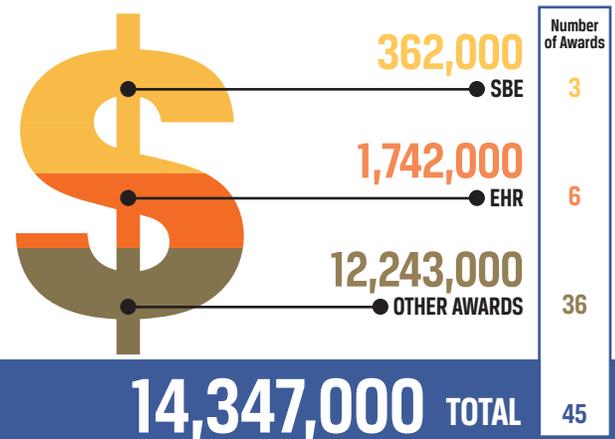
## Top 3 NSF-funded Universities in West Virginia

1. West Virginia University Research Corporation (\$9,952,000)
2. Marshall University Research Corporation (\$161,000)
3. Concord University (\$89,000)

## NSF in West Virginia

- West Virginia received 45 awards in FY 2017.
- West Virginia ranks 49<sup>th</sup> overall in NSF funding.
- West Virginia received .20% of the total NSF award budget in 2017.

## West Virginia Funding



# Federal Research Investment from IES: **WEST VIRGINIA**

## About IES

The Institute of Education Sciences (IES) is the federal research agency within the U.S. Department of Education that builds knowledge and informs understanding of education from early childhood through postsecondary to adult workforce.

Research, statistics, and evaluations funded by IES provide policymakers and practitioners with reliable information on the condition and progress of education, educational practices that support learning and improve academic achievement, and the effectiveness of education programs.

## IES Resources for Schools and Educators in West Virginia

- The West Virginia Department of Education received a \$4.8 million SLDS grant in 2012 to design, develop, and implement a state longitudinal data system (SLDS) for pre-K through 12th grade, building on the West Virginia Education Information System (WVEIS). The SLDS grant provided resources for the state to design a modern system, establish a data governance structure, and create a data dictionary for elements needed to answer policy and research questions.
- With the support of the National Center for Education Research, West Virginia pre-service teachers are included in research on instructional approaches to increase their understanding of fractions. This research is being done with the expectation that the instructional approach will help improve math outcome for elementary and middle school students.
- The Appalachia Regional Educational Laboratory (REL Appalachia) serves the research needs of districts, teachers, and students in West Virginia. REL Appalachia's Workforce Readiness Alliance works with career and technical education leaders from the West Virginia Department of Education and secondary schools to implement programs that better prepare high school students for college and careers.

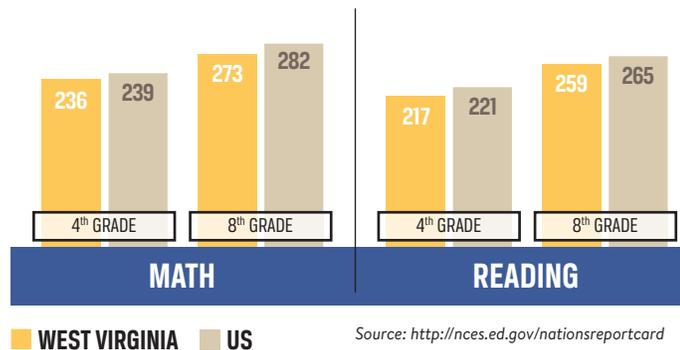
## Average Spending Per Student on Education



**NATIONAL AVERAGE: \$11,454**

Source: Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2014-15 (Fiscal Year 2015): First Look (NCES 2018-301)

## West Virginia Performance on the 2017 National Assessment of Educational Progress



Source: <http://nces.ed.gov/nationsreportcard>

## IES Online Resources

- What Works Clearinghouse:  
<http://ies.ed.gov/ncee/wwc/findwhatworks.aspx>
- Education Resources Information Center:  
<http://eric.ed.gov>