ACADEMY FOR SCIENCE AND DESIGN
CHARTERED PUBLIC SCHOOL

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Jennifer Cava ….. Director Jessica Golden ….. Dean of Students Seth O'Mahony ….. Guidance Counselor

**2014-2015 School Profile** **CEEB Code 300118**

## Summary

The Academy for Science and Design (ASD) was approved by the New Hampshire State Board of Education in March of 2006, and opened in September of 2007. ASD is an innovative public Charter School that is part of the effort to transform the educational terrain in New Hampshire. Our school works to provide authentic learning experiences for students in grades six through twelve, fostering their curiosity and aptitude for leadership in college and beyond. The lens through which we are developing and preparing future leaders is within the framework of a STEM education. We define STEM as the preparation of students for competency in the following disciplines: Science, Technology, Engineering, and Mathematics. ASD's total enrollment has grown to 500 students. The 2014 graduating class had 22 students.

## Graduation Requirements

Students begin earning high school credit when they enter the ASD, as early as in the 7th grade.

- Applied Mathematics through Calculus (5.0)
- Applied Laboratory Science & Engineering (4.0 required plus 1 credit elective):
  - Biological Science (1.0)
  - Chemistry (1.0)
  - Physics (1.0)
  - Engineering (1.0)
  - Advanced Science Course Elective (0.5)
- Computer Science (0.5 credit)
- World Language and Cultural Studies (3.0)
- English/Literature (4.0)
- Social Science/History (3.0); world and US history, economics, civics, geography
- Visual and Performing Arts (1.0)
- Health and Fitness Personal Program (2.0)
- Electives (2.0)
- Stewardship Project (0.5)
- Junior Apprenticeship/Mentorship project (0.5)
- Senior Research Project (1.0)

**Total Credit Requirements for Graduation: 28.5**

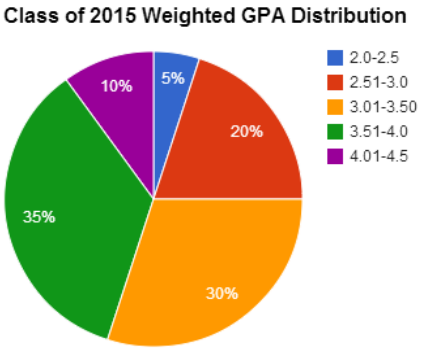
## Grades

Students need to earn a minimum of 70% to earn credit in a course. ASD students do not move into the level of a course without earning mastery which is defined as 80% or higher.

| Percentile Range | Letter Grade | Mastery Descriptor |
|---|---|---|
| 97-100 | A+ | Exemplary |
| 93-96 | A | Proficient with Distinction |
| 90-92 | A- | Proficient with Distinction |
| 87-89 | B+ | Proficient |
| 83-86 | B | Proficient |
| 80-82 | B- | Proficient |
| 77-79 | C+ | Partially Proficient |
| 73-76 | C | Partially Proficient |
| 70-72 | C- | Partially Proficient |

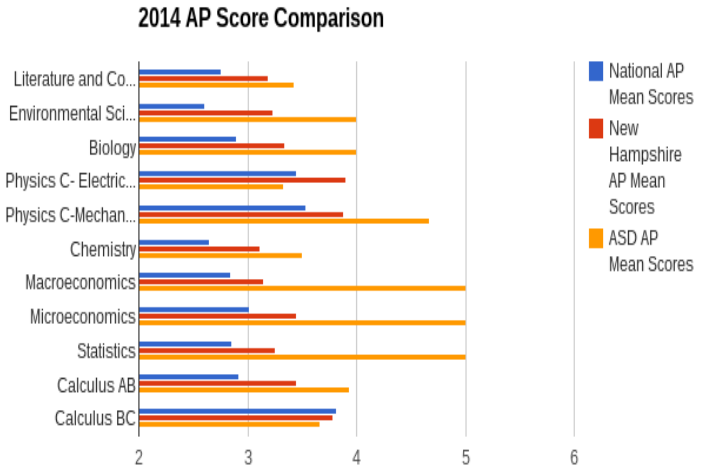
## Grade Point Average Distribution

ASD does not rank students. Please see the GPA distribution below. Student's have a weighted GPA based on a 4.0 scale.



## Curriculum

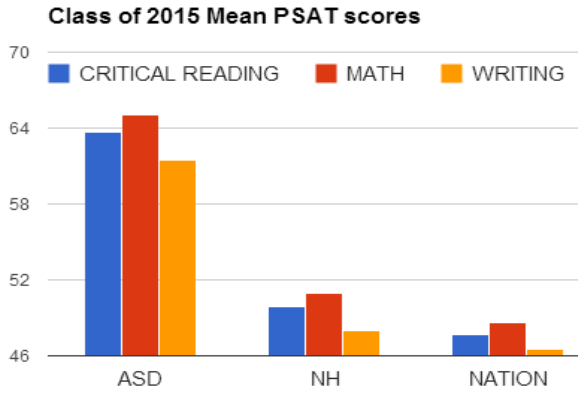
ASD focuses on STEM curriculum at an accelerated pace, offering advanced science and math courses as well as electives in the areas of aeronautics, anatomy, anthropology, computer sciences, design technology, environmental science. As the school has grown, ASD has been increasing AP course offerings. *Please note: our classes with the "Advanced" designation indicate their equivalency to Advanced Placement (AP).* In 2014-2015, ASD is offering 8 Advanced classes. All students in Advanced courses are encouraged to take the AP exams. Research methods are an important part of academic development in the STEM subject areas. ASD offers a junior course called Learning Studios, which teaches students the project management skills needed to design and implement independent science research projects, skills that ASD students require to successfully complete the Senior Research Project.




## Area of Specialty

During their second year of high school, students begin career planning in their advisory group emphasizing on one of the following focus areas:

- Engineering
- Chemistry
- Biological Sciences
- Environment & Global Sustainability
- Math & Physics
- Aeronautics & Aviation
- Computer Science




## Standardized Testing

### ACT (Class of 2015)

| ACT | ASD Mean Scores | NH Mean Scores | National Mean Scores |
|---|---|---|---|
| Math | 29.5 | 23.6 | 20.9 |
| Science | 32 | 23.2 | 20.7 |
| Composite | 30.75 | 23.8 | 20.9 |

*reported by ACT in 2013

## Awards and Distinction

Class of 2014- 3/22 National Merit Semi-Finalists
Class of 2014- 2/22 National Merit Finalists
Class of 2015- 4/20 National Merit Semi-Finalists

## Where are ASD Graduates in the class of 2014 Now?

Air Force Academy, Clarkson University, Colby-Sawyer College, Dartmouth College, Georgia Institute of Technology, Green Mountain College, Ithaca College, Letourneau University, New England School of Communication,Norwich University, Simmons College, St Catherine University, University of Maine, University of Massachusetts Lowell, University of Massachusetts Amherst, University of New Hampshire, University of Rhode Island, Worcester Polytechnic Institute

## Previous ASD students are currently enrolled at:

Northeastern University (National Merit Scholarship), , Norwich University, Roger Williams University (merit scholarship), Rochester Institute of Technology, University of New Hampshire, Worcester Polytechnic Institute