

BNS Computer Lab and Technology Class Description:

Starting in 3rd grade (Green Room) every elementary school BNS student partakes in a Computer Lab and Technology class each year. This class includes an introduction to using the Google Drive and basic computer programs, as well as regular typing practice. Students complete lessons through Typing.com working towards a goal of touch typing consistently at a speed of at least 35 wpm by the end of 8th grade.

The Tech Ed. portion of the class uses the Standards of Technological Literacy (STLs) set forth by ITEEA for guidance. Below are highlighted goals broken up by grade:

3rd Grade (Green Room):

- Students explore the basic components of a computer and how they think.
- Students define "What is technology?".
- Students discuss how throughout history we have created tools to solve problems.
- Students begin learning to code using a drag-and-drop language.
- Students are introduced to the different fields of technology.

4th Grade (Turquoise Room):

- Students explore what an engineer is and how they work to solve problems.
- Students practice identifying and defining a problem before designing a solution.
- Students examine how technology can have positive and/or negative effects on society and the environment.



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- Students research how and why technologies are invented and how they change over time.
- Students identify reliable sources when searching for information online.
- Students begin learning to 3D model.

5th Grade (Blue Room):

- Students learn that the engineering design process involves defining a problem, generating ideas, selecting a solution, testing the solution(s), making the item, evaluating it, and presenting the results.
- Students brainstorm and design solutions to presented problems based on real world scenarios.
- Students discuss how the requirements for a design are made up of criteria and constraints.
- Students examine the differences between man-made and natural materials, as well as what it means for something to be designed to be durable.
- Students demonstrate how drawing sketches and building models or prototypes can help communicate their ideas.



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FIRST Lego League:

Students have the option to participate in the FIRST Lego League (FLL) robotics competition each year as part of an after school program. As a team, students learn to build and program an EV3 Lego robot to complete various tasks based on the year's theme. These robots can be programmed using a drag-and-drop language or with Python. Students learn how to make use of different sensors to help guide their robot around the field as they must run autonomously. Additionally, students spend time learning about a specified field of technology or engineering while working to design a solution to a provided problem based on the year's theme.