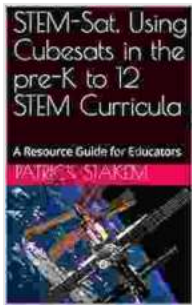


# STEM Sat: Using CubeSats in the Pre-to-12 STEM Curricula

CubeSats are small, low-cost satellites that have become increasingly popular in the past decade. They are typically used for educational purposes, but they can also be used for research and commercial applications. CubeSats are a great way to engage students in STEM (science, technology, engineering, and mathematics) and to teach them about space exploration.



## STEM-Sat, Using Cubesats in the pre-K to 12 STEM

**Curricula: A Resource Guide for Educators** by Harue Okada

★★★★☆ 4 out of 5

Language	: English
File size	: 1862 KB
Text-to-Speech	: Enabled
Enhanced typesetting	: Enabled
Word Wise	: Enabled
Print length	: 83 pages
Lending	: Enabled
Screen Reader	: Supported



## History of CubeSats

The first CubeSat was launched in 2003 by California Polytechnic State University. The CubeSat was a 10 cm cube and weighed about 1 kg. Since then, CubeSats have become much more sophisticated and powerful. Today, CubeSats can be used to perform a variety of tasks, including taking

pictures of Earth, collecting data on the atmosphere, and conducting experiments in microgravity.

## **Types of CubeSats**

There are three main types of CubeSats: 1U, 2U, and 3U. 1U CubeSats are the smallest type of CubeSat and are typically used for educational purposes. 2U CubeSats are twice the size of 1U CubeSats and are typically used for research purposes. 3U CubeSats are the largest type of CubeSat and are typically used for commercial applications.

## **Benefits of Using CubeSats in the Classroom**

There are many benefits to using CubeSats in the classroom. CubeSats can help students to:

- Learn about space exploration
- Develop STEM skills
- Work in teams
- Solve problems
- Communicate their ideas

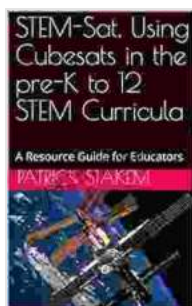
## **Challenges of Using CubeSats in the Classroom**

There are also some challenges to using CubeSats in the classroom. CubeSats can be expensive to build and launch. They can also be complex to operate. However, these challenges can be overcome with careful planning and support.

## **Case Studies of Successful CubeSat Programs**

There are a number of successful CubeSat programs in schools and universities around the world. These programs have shown that CubeSats can be a valuable tool for teaching STEM and engaging students in space exploration.

CubeSats are a powerful tool for teaching STEM and engaging students in space exploration. They can be used to teach students about a variety of topics, including the history of space exploration, the different types of CubeSats, the benefits of using CubeSats in the classroom, and the challenges of using CubeSats in the classroom. CubeSats can also be used to conduct research and develop new technologies. With careful planning and support, CubeSats can be a valuable tool for educators and students alike.



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