Beat Builders
UNIT OVERVIEW

The Beat Builder Unit is an online, project-based learning curriculum designed by CompTIA Spark. Each of the included lessons asks students to learn and actively apply digital skills to help them solve real-world problems. Each of these lessons is connected by a shared theme: Music!

This unit is designed with a unique structure that both exposes students to a variety of technology, applications, careers, and CTE clusters while also giving each student an opportunity to specialize and develop relative expertise (expertise as compared to the skill level of their classmates) in the areas that are most interesting to them.

UNIT DETAILS

- Grade level: 5th-8th grade
- Length: 10-15 hours of class time
- Cost to implement: Free

MATERIALS

- Enough computers for 1:1 ratio during class
- Internet connection strong enough to stream videos from multiple devices at the same time.

HIGH-LEVEL LEARNING OBJECTIVES

By the end of this unit students will:

- Learn how to use every day digital tools to stay organized, share work, and complete tasks.
- Be able to use a variety of applications to accomplish tasks including Word/Docs, Scratch, Sheets/Excel, and Slides/PowerPoint
- Demonstrate and identify interests in a tech or career pathway.
- Have developed 21st century skills.

STANDARDS ALIGNMENT

- [ISTE Standards Alignment with Tech Exploration Units](#)

HOW THE CURRICULUM WORKS

PROJECT-BASED LEARNING IN WEB CREATIVITY AND PRODUCTIVITY APPS

- Each lesson will ask students to create a project in a popular web-based creativity or productivity app.
- Each project is designed to be highly engaging and rigorous and expose students to a variety of important tools and functions in the application.
- Projects are all based on real-world work that happens within these applications.

SELF-PACED ONLINE INSTRUCTION

- Each lesson includes a series of steps and instructional videos that help students build a project from scratch.
- Students will access these help resources through the CompTIA Spark learning application where they can choose to watch and rewatch the videos at their own pace.

STUDENT CHOICE TO BUILD A COMMUNITY OF ENGAGED LEARNERS

- Throughout the unit, students are offered many choices about the products they create. They will create their own song, choose positive feedback to give to a classmate, and they will choose how to level up their song in Scratch. They will choose words for their random band name generator and will choose images and formatting for their band app prototype.
- ● Student choice and project-based learning increase student engagement
  https://docs.lib.purdue.edu/ijpbl/vol11/iss2/9/

FACILITATION: YOUR CRITICAL ROLE

- This unit is designed to be taught by anyone with little to no prep.
- Teachers do not need to be experts (or even familiar) with the technologies used in the projects.
- It is recommended that students work in pairs to help each other and practice collaboration, but they will submit their own individual products and assignments.
- Students should learn to rely on themselves and their peers for help and expertise instead of their teachers.
- Instead of providing instruction, teachers play the critical role of facilitator and coach and should spend the bulk of their time in class circulating among the students and providing 1:1 support and coaching as needed.

UNIT PLAN

LESSONS:

Lesson #	Lesson name and details	Resources
1	Make and Share Music! Students will create a song in Chrome Music Lab's Song Maker, share their song with a classmate, and give and receive feedback on the song using Google Docs or Word.	Lesson plan with assessment and rubrics
2	Level up your music in Scratch Students will import their song into Scratch and will enhance their song using code.	Lesson plan with assessment and rubrics
3	Random Band-name generator Students will use Google Sheets or Excel to create a random band name generator	Lesson plan with assessment and rubrics
4	Band App Prototype Students will use Google Slides or PowerPoint to create a band app prototype.	Lesson plan with assessment and rubrics
5	Extension Activities Students will connect the interests they have developed with potential careers and identify next steps that may interest them	Lesson plan with assessment and rubrics
6	Career Connections Students will connect with several careers based on their favorite lessons and activities within the unit.	Lesson plan with assessment and rubrics
7	Show what you know Students will make a presentation to highlight what they created/learned and applicable careers	

ASSESSMENT

Each lesson has several opportunities for assessment, including:
● A short, auto-graded multiple-choice assessment after each lesson
● A reflection question after each lesson to highlight 21st century skills
● A product rubric to assess the artifact that was created with the lesson.
● A process rubric to assess 21st-century skills demonstrated with the lesson.

DIFFERENTIATION

- Each lesson contains robust extension activities for students who finish early or need more of a challenge.
- Each lesson contains self-paced videos with closed captioning to help students who are more visual/auditory learners, and learners who may need to replay the videos more than once.
- The unit can be spread out over a longer period for students who need more time, or for students who wish to explore all the extension activities.
- Student choice is embedded throughout the unit to appeal to a variety of interests.

WEBSITES/APPS USED IN THIS UNIT

- Google Drive or Microsoft Office online
- Google Docs or Word
- Chrome Music Lab's song maker https://musiclab.chromeexperiments.com/Song-Maker
- Limited version of Scratch https://safescratch.netlify.app/
- Google Sheets or Microsoft Excel
- Google Slides or Microsoft PowerPoint