Byte-Sized

Brain Break

Maker Activity

Write a step-by-step set of instructions - an **algorithm** - for how to draw your favorite animal without mentioning the name of the animal. Give your algorithm to a friend or sibling to see if they can draw the animal. How did they do? What can you add to make the instructions more clear? Would adding colors, locations, or sizes help?

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Brain Break

Maker Activity

It's important to organize computer code. This helps anyone who looks at it to know what each section of code does, and it helps them to find things easily. Similarly, ice cream parlors have different sections for scooping, paying, waiting, etc. Design an ice cream parlor with sections for each task that make it easy for customers to have a yummy, fun experience!

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Brain Break

Maker Activity

Computers use a language made up of 1's and 0's called **binary** to "talk" to each other and store information. Different patterns of 1's and 0's stand for different things. Can you create a language that uses patterns of only a few symbols to represent words or ideas?

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Brain Break

Maker Activity

A song map separates the parts of a song into categories like verses and chorus. Verses usually have the same tune but different words, while a chorus often has both the same tune and words. The song map can tell you what order the pieces go in and how often to repeat them. Create song maps for some of your favorite songs by dividing them into parts. (Hint: you can create new types of parts to describe a section of the song that isn't quite like a verse or chorus!)

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Maker Activity

A **class** holds information about a person or thing - specifically what they are and what they do! Can you design a **class** for your favorite historical figure? What are some of his or her characteristics (name, home country, etc.)? What sorts of things did he or she do (ex. triple backflip, advocate for women's rights, design a building)?

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Maker Activity

Many great inventions start off with great ideas. When you're designing something big, it can help to make a prototype, or model, to get a better idea of what you're going to create. Create a prototype for a great idea you have. What will your invention look like? Represent it with a drawing or 3D model. Don't forget to show off all of the cool things your invention can do!

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Brain Break

Maker Activity

Art and **Computer Programming** are very much alike in that they are tools to express your creativity. With both, there are many different ways you can create! For example, there are lots of different ways to write a computer program that counts to 100. There are even more ways to create a beautiful piece of art. Pick a topic, create an art piece to represent it, and have a friend do so as well. Then compare: What about your art is similar? What's different? What other tools could you use create it?

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Maker Activity

Create your own coding-inspired activity!
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