Lesson Plan: **Snapchat Challenge**
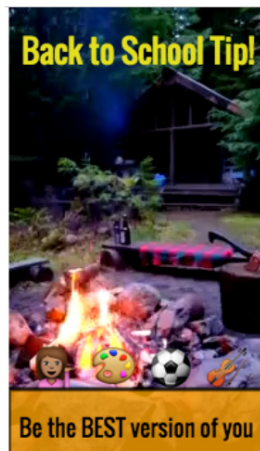
Big Idea   Code is behind the things you use in your everyday life (like Snapchat filters!)

Module   Snapchat Challenge https://app.vidcode.io/project/snapchat

Embellish video with graphics and text. Position them using the coordinate plane. Learn how to configure objects by changing their properties.

Time   45-60 minutes
15 minutes background
35 minutes coding
5 minutes sharing
5 minutes reflection

Example Projects


```
1       //My awesome Snapchat Filter
2   //Customize code here!
3
4   //top text
5
6   movie.play();
7
8   var topText = text("Back to School Tip!");
9   topText.font = "Oswald";
10  topText.x = 10;
11  topText.y = 20;
12  topText.color = "#e5df21";
13  topText.size = 25;
14
15  //emojis
16  var emoji = text("🎒⚽️🎨");
17  emoji.x = 20;
18  emoji.y = movie.height - 98;
19   emoji.size = 35;
20
21  //bottom text box
22   var bottomBox = rect(0, movie.height - 60, movie.width
23  bottomBox.opacity = .8;
24
25  //bottom text
26  var bottomText = text("Be the BEST version of you");
27  bottomText.font = "Oswald";
```



```
1       var box = rect(10, movie.height - 65, 232,60);
2   box.color = "maroon";
3   box.opacity = 1;
4   box.borderColor = "#bfa415";
5   box.borderWidth = 10;
6
7   var tip = text("just pretend you're in Hogwarts");
8   tip.font = "Oswald";
9   tip.y = movie.height - 48;
10  tip.x = 20;
11  tip.size = 17;
12
13  var emoji = text("🐀");
14  emoji.x = 180;
15  emoji.rotation = -12;
16
17
```

Background
(15 minutes)

Review: What is a function? (Something to DO)

Objects hold your data. Use yourself as an example of an object.

```
teacher
```

Properties are the elements that are about the object, or belong to the object. Here are some of your properties (have the class volunteer more once they get the pattern):

```
teacher.height = 5.5;
teacher.favColor = "blue";
teacher.name = "Ms. Miller";
```

You can think of properties as being like nouns or adjectives.

Methods are functions that belong to an object, or things the object can do. Have you been wondering about `movie.play()`? That's telling the movie object to run its play method. Here are some of your methods:

```
teacher.jump();
teacher.say("class dismissed");
teacher.walkForward(5);
```

You can think of methods as being like verbs.

You can tell a property apart from a method because methods are always followed by parentheses, just like functions. Sometimes they have arguments, and sometimes they don't.

If you have enough time, have students come up with their own properties and methods, or use a famous person as an example, like Beyonce or Stephen Curry.

Code Challenge
(20-35 minutes)

Time to make a Snapchat filter by adding words and graphics to your video! Have students complete the "Snapchat Challenge" tutorial, paying attention to the properties of the text and graphics objects. Circulate to make sure students get to try out both text and graphics.

Note, some students may ask about how objects are created and saved. This is slightly advanced for the level we're coding at now, and will be covered later. For your reference:

```
var my_graphic = graphic("create.png");
```

`graphic("create.png")` is a **function** that creates a graphic **object.**
`"create.png"` is the **argument** to that function and it sets the graphic's source **property**.
`my_graphic` is the name you gave to this particular graphic object, and `var` saves it as a **variable** you can access later.
See why we made that a draggable block?

Sample Solution

```
movie.play();
var my_graphic = graphic("science.png");
my_graphic.x = 400;
my_graphic.y = 50;
my_graphic.scale = 0.5;
my_graphic.opacity = 0.8;

var my_text = text("don't sleep in!");
my_text.font = "Oswald";
my_text.x = 100;
my_text.y = 20;
my_text.color = "yellow";
my_text.size = 100;
```

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Sharing
(5 minutes)

Share on individual computers with neighbors. Give feedback. Explain to students that the next activity will also be making memes, so they can spend some time before then thinking about how to make their next meme even better.

Reflection
(5 minutes)

- What is a property? (Something about or belonging to an object, like a noun or adjective.)
- What is a method? (Something the object does, like a verb.)
- How do you tell the difference? (Methods have parentheses and can take arguments.)
- What are two objects you used today? (text and graphic)
- Do the text and graphic objects have the same properties? (No, it wouldn't make any sense for graphics to have a color or font!)