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CSC106 CourseContent Modul... DTL Week 1A Course Material - CS... Challenge: Simple snowman | CSC106 JTerm Notes - Google

khanacademy.org/computing/computer-programming/programming/drawing-basics/pc/challenge-simple-snowman

Courses Search Khan Academy Donate edwinzanella

Computer programming

UNIT 1: LESSON 2
Drawing basics

- Making drawings with code
- Quick tip: number scrubbing
- Challenge: Simple snowman**
- Drawing more shapes with code
- Challenge: Waving snowman

Computing > Computer programming > Intro to JS: Drawing & Animation > Drawing basics

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```

1 ellipse(200, 300, 150, 150);
2 ellipse(200, 200, 100, 100);
3 ellipse(200, 135, 75, 75);
4

```

Undo Start over

Step 3/3 Spin-off

All changes saved.

Up next: talkthrough

1.

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DTL Week 1A Course Material - CS... Challenge: Waving snowman | CSC106 JTerm Notes - Google

khanacademy.org/computing/computer-programming/programming/drawing-basics/pc/challenge-waving-snowman

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Computer programming

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Computing > Computer programming > Intro to JS: Drawing & Animation > Drawing basics

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front of the snowman.

```

1 rect(0, 350, 400, 50);
2 ellipse(200, 300, 150, 150);
3 ellipse(200, 200, 100, 100);
4 ellipse(200, 120, 75, 75);
5 line(160, 200, 100, 100);
6 line(240, 200, 300, 100);
7

```

Undo Start over

Step 2/2 Spin-off

All changes saved.

Up next: Lesson 3

2.

3.

The screenshot shows the Khan Academy interface for the 'Sunny snowy day' challenge. The sidebar on the left lists 'UNIT 1: LESSON 3 Coloring' with 'Coloring with code' selected. The main content area features a code editor with the following P5.js code:

```

1 background(0, 255, 251);
2 // The ground
3 fill(0, 255, 34);
4 rect(0, 300, 400, 100);
5
6 // The sun
7 fill(255, 247, 0);
8 ellipse(80, 64, 100, 100);
9
10 // The snowman
11 fill(255, 255, 255);
12 ellipse(200, 300, 150, 150);
13 ellipse(200, 200, 100, 100);
14 ellipse(200, 120, 75, 75);
15
16

```

The preview window on the right shows a snowman on a green ground with a yellow sun in a blue sky. A congratulatory message says 'Congratulations! You earned 1050 points!' with a small cartoon character. The bottom right has a 'Spin-off' button and a 'Up next: video' button.

4.

The screenshot shows the Khan Academy interface for the 'Bucktooth Bunny' challenge. The sidebar on the left lists 'UNIT 1: LESSON 4 Variables' with 'Intro to Variables' selected. The main content area features a code editor with the following P5.js code:

```

1 var eyeSize = 20;
2 var toothHeight = 15;
3 ellipse(150, 70, 60, 120); // left ear
4 ellipse(240, 70, 60, 120); // right ear
5
6 ellipse(200, 170, 150, 150); // face
7
8 fill(0, 0, 0);
9 ellipse(170, 150, eyeSize, eyeSize); // left eye
10 ellipse(230, 150, eyeSize, eyeSize); // right eye
11
12 line(150, 200, 250, 200); // mouth
13
14 noFill();
15 rect(185, 200, 15, toothHeight); // left tooth
16 rect(200, 200, 15, toothHeight); // right tooth
17
18

```

The preview window on the right shows a bunny face with two buckteeth. A hint says 'Hint: What's this?' and explains that the teeth are rectangles. A congratulatory message says 'Congratulations! You earned 1500 points!' with a small cartoon character. The bottom right has a 'Up next: talkthrough' button.

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Week 1A Course Material - CS: x Challenge: Funky Frog | Variab: x CSC106 JTerm Notes - Google: x +

khanacademy.org/computing/computer-programming/programming/variables/pc/challenge-funky-frog

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Computer programming

UNIT 1: LESSON 4
Variables

- Intro to Variables
- Using variables 100%
- Challenge: Bucktooth Bunny
- More on Variables
- Challenge: Funky Frog**
- Review: Variables

Computing > Computer programming > Intro to JS: Drawing & Animation > Variables

Draw them using two rectangles, and use the x and y coordinates to position them inside the eyeballs (adding or subtracting as necessary).

Hint: Take a look at the code for the eyeballs and do something similar to position the pupils.

Your frog is so cute! You can now play with the values of x and y and verify that the whole face moves along.

```

1 noStroke();
2 fill(30, 204, 91); // a nice froggy green!
3
4 ellipse(x, y, 200, 100); // face
5 ellipse(x - 50, y - 50, 40, 40); // left eye
6 socket
7 ellipse(x + 50, y - 50, 40, 40); // right eye
8 socket
9
10 fill(255, 255, 255); // for the whites of the
11 eyes!
12 ellipse(x - 50, y - 50, 30, 30); // left eyeball
13 ellipse(x + 50, y - 50, 30, 30); // right eyeball
14
15 //mouth
16 fill(255, 0, 0);
17 ellipse(x, y, 100, 30);
18
19 //pupils
20 fill(0, 0, 0);
21 rect(x-55, y-55, 10, 10);
22 rect(x+45, y-55, 10, 10);

```

Undo Start over

Step 2/2 Spin-off

Up next: article

5.

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Week 1A Course Material - CS: x CSC106 JTerm Notes - Google: x Challenge: Exploding Sun | Ani: x +

khanacademy.org/computing/computer-programming/programming/animation-basics/pc/challenge-exploding-sun

Courses Search Khan Academy Donate edwinzanella

Computer programming

UNIT 1: LESSON 5
Animation basics

- What are animations?
- Making animations
- Challenge: Exploding Sun**
- Incrementing shortcuts
- A shorter shortcut
- Challenge: Parting Clouds
- Project: Shooting star

```

1 noStroke();
2 // the beautiful blue sky
3 background(82, 222, 240);
4
5 // the starting size for the sun
6 var sunSize = 30;
7
8 draw = function() {
9 // The sun, a little circle on the horizon
10 fill(255, 204, 0);
11 ellipse(200, 298, sunSize, sunSize);
12
13 // The land, blocking half of the sun
14 fill(76, 168, 67);
15 rect(0, 300, 400, 100);
16 sunSize = sunSize + 1;
17 };

```

Undo Start over

Restart Step 2/2 Spin-off

All changes saved.

About Documentation

Make the sun get bigger and BIGGER!

Up next: talkthrough

6.

[Courses](#)

[Google Classroom](#)

Computer programming

UNIT 1: LESSON 5
Animation basics

- What are animations?
- Making animations
- Challenge: Exploding Sun
- Incrementing shortcuts
- A shorter shortcut
- Challenge: Parting Clouds**
- Project: Shooting star

Grow the sun!

Let's make it so the clouds are running away from a sun that's getting bigger and BIGGER. Increment the sun radius by 2 pixels in each frame.

Hint [What's this?](#)

```
..... += .....;
```

```

6 draw = function() {
7   background(184, 236, 255);
8
9   fill(255, 170, 0);
10  ellipse(200, 100, sunRadius, sunRadius);
11
12  // clouds
13  fill(255, 255, 255);
14  // left cloud
15  ellipse(leftX, 150, 126, 97);
16  ellipse(leftX+62, 150, 70, 60);
17  ellipse(leftX-62, 150, 70, 60);
18
19  // right cloud
20  ellipse(rightX, 100, 126, 97);
21  ellipse(rightX+62, 100, 70, 60);
22  ellipse(rightX-62, 100, 70, 60);
23
24  leftX--;
25  rightX++;
26  sunRadius += 2;
27 };
  
```

All steps complete!

Up next: project

The screenshot shows the Khan Academy interface. At the top, there's a navigation bar with 'Courses' and a search bar. The main header displays 'Khan Academy' and links to 'Donate' and 'edwinzanela'. Below this, a breadcrumb trail reads 'Computing > Computer programming > Intro to JS: Drawing & Animation > Interactive programs'. The left sidebar lists 'UNIT 1: LESSON 6 Interactive programs' with items like 'Mouse Interaction', 'Challenge: Tasty Tomato' (highlighted), and 'Challenge: Mouse movement mania'. The main content area is titled 'Eat it!' and contains a paragraph explaining the challenge: 'Now, to make it so that we can make more bites when we move the mouse, you need to change the x and the y coordinates of the bite to be based on mouseX and mouseY instead. To check that it works, just move your mouse!'. It includes a 'Hint What's this?' section with code snippets: `draw = function() { // take a bite out of the tomato! fill(.....); ellipse(mouseX, mouseY,,); };`. A code editor shows the full P5.js code for drawing a tomato and responding to mouse clicks. On the right, a visual feedback shows a red tomato with a green stem and a bite taken out, accompanied by a 'Congratulations! You earned 1500 points!' message from a cartoon character. At the bottom right, a button says 'Up next: challenge'.

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Week 1A Course Material - CS Challenge: Mouse movement CSC106 JTerm Notes - Google

khanacademy.org/computing/computer-programming/programming/interactive-programs/pc/challenge-mouse-movement-mania

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Computer programming

UNIT 1: LESSON 6
Interactive programs

Mouse Interaction

Challenge: Tasty Tomato

Challenge: Mouse movement mania

Computing > Computer programming > Intro to JS: Drawing & Animation > Interactive programs

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Outline the Outlines!

Now, add a stroke color to the ellipses. Remove the noStroke() call and call stroke() inside the draw function.

Hint What's this?
Report a problem

```
draw = function() {
  fill(.....);
  stroke(.....);
  ellipse(.....);
};
```

```
1 stroke(0, 0, 0);
2
3 draw = function() {
4   fill(mouseX, mouseY, 0);
5   ellipse(mouseX, mouseY, 15, 15);
6 };
7
```

Congratulations!
You earned 1500 points!

Up next: Lesson 7

9.

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Week 1A Course Material - CS Challenge: My Favorite Foods CSC106 JTerm Notes - Google

khanacademy.org/computing/computer-programming/programming/text-basics/pc/challenge-my-favorite-foods

Courses Search Khan Academy Donate edwinzanella

Computer programming

UNIT 1: LESSON 9
Text and strings

Terrific Text: Part One

Challenge: My Favorite Foods

Terrific Text: Part Two

Challenge: Mouse Tracker

Review: text and strings

Project: Ad design

Computing > Computer programming > Intro to JS: Drawing & Animation > Text and strings

If Oh Noes points out a problem with a text command, make sure that command has:

- Quotation marks around the entire message, like so: "1. Broccoli";
- Commas in the right places, between every argument - check the hint code;
- Exactly 3 arguments: the message, the x position and the y position.

2. cheese!
3. what's yours??

```
text("1. ... ", 50, 50);
text("2. ... ", 50, 75);
text("3. ... ", 50, 100);
```

```
1 fill(0, 0, 0);
2 textSize(20);
3 text("My Favorite Foods: ", 50, 50);
4 text("1. Chicken", 50, 75);
5 text("2. Rice", 50, 100);
6 text("3. Salmon", 50, 125);
```

My Favorite Foods:

1. Chicken
2. Rice
3. Salmon

Congratulations!
You earned 1500 points!

Undo Start over

Step 3/3

Up next: talkthrough

10.

11.

Question 1: B

Question 2: C

Question 3: D

Question 4: D

12. There is a left hand, a right hand, and a row of cards. The left hand will flip over the first card in the set and keep that card in its hand. The right hand will flip the next card to the right of the left hand. If the value of the right hand is smaller than the value of the card in the right hand, then the left hand will switch to the lower card. If the value of the card in the right hand is greater than the card in the left hand, then the right hand will move on to the next card. This will keep on going until there are no cards left. Once there are no more cards, the left hand will raise and say "I found it!", displaying the card with the lowest value.

13. https://www.khanacademy.org/computer-programming/herandez-zanella_bitmoji/4839620689051648

14. https://www.khanacademy.org/computer-programming/herandez-zanella_dancing_bitmoji/6300431072673792

15. https://www.khanacademy.org/computer-programming/hernandez-zanella_racing_bitmoji/6586405664374784

16. https://www.youtube.com/watch?v=njzy4a6jHP0&ab_channel=EdwinHernandez-Zanella

17.

highScore	0, 6
score	0, 5, 6, 0
ID	Value

18. <https://docs.google.com/document/d/1hbFmhHlxLGEEooj-l4ggJnQ-Pce19zezxy4FucUHT4/edit?usp=sharing>