



Custom Content How-To Guide

With the Custom Content tool you'll be able to create content on CodeHS to use with your students. You'll be able to create individual activities, all the way up through full courses. Content and courses will have a similar structure to the current CodeHS courses, with various content types and customized organization. In addition, at any time you'll be able to control which of your classes have access to content and which ones don't. The following guide helps you to create your first custom course.

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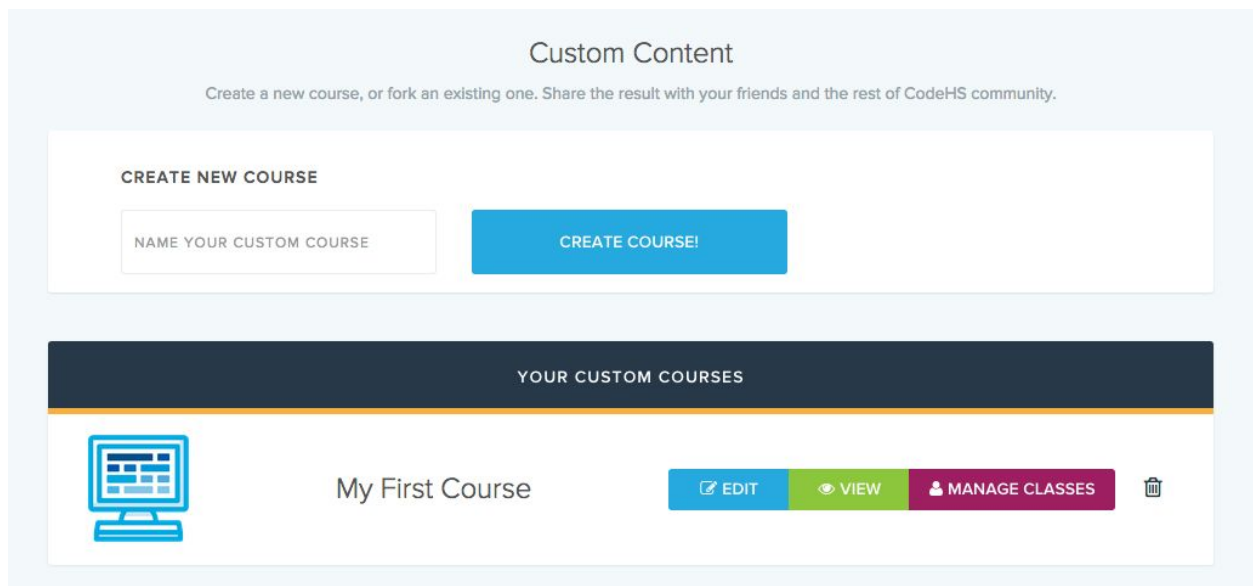
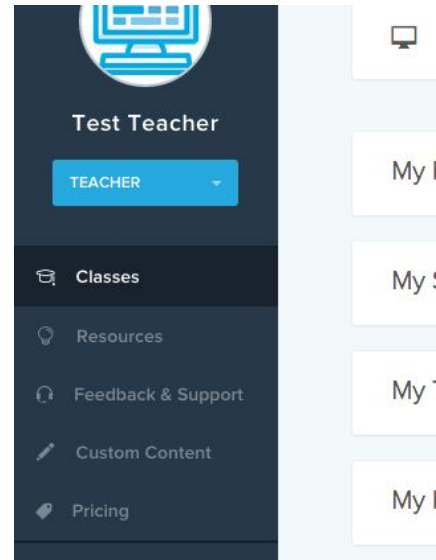
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Getting Started

You can access the content creation tool from codehs.com/customcontent, or any page with the teacher sidebar (e.g. your teacher page). You'll see from the screenshot on the right, that it's the fourth link on the sidebar.

By clicking this link, you'll be taken to the course management page (shown in the screenshot below), where you can create your first course. CodeHS courses contain modules, modules contain lessons, and lessons contain items. To help you get started each course will be created with one module and one lesson within that module.



Item Creation

Creating items is very straightforward. Simply choose an item type, a programming language and a program type, as demonstrated by the screenshot below. The following sections describe what is needed to create each type of item.

TITLE: one

1 Choose an Item Type

- Exercise
- Challenge
- Example
- Notes
- Quiz
- Resource
- Video
- Free Response

2 Choose a Programming Language

- JavaScript
- Python
- SQL
- HTML

3 Choose a Program Type

- Karel
- SuperKarel
- UltraKarel
- Graphics
- Graphics (no console)
- Console

CREATE ITEM

Item Types

Exercises, Challenges, and Examples

Exercises, challenges, and examples are the only item types that you will also need to choose a programming language and a program type. Exercises and challenges are roughly the same except the icon shown is different. Challenge items are designated to be harder than exercises. Examples are created in the same way as exercises and challenges except that they don't have a solution and will pass once submitted.

To write the code for these items use the starter and solution code editors, shown in the screenshot on the right. The solution code will be for your reference and won't be used for anything else. The starter code will be what is shown to students at the beginning of a problem.

Starter Code

```
1 function start()
2 {
3
4 }
```

Solution Code

```
1
```

SAVE CODE

Note: The code you write won't be saved automatically, but the blue "save code" button will appear. Make sure to save your code when you are done.

The cheat sheet section allows you to add notes to the left sidebar in the editor. You can style the documentation, as well as descriptions using [Markdown](#).

DOCS

```
move();  
move();
```

If you've chosen a Karel program type, make sure you edit the starting worlds and solution worlds for the item. If you need help creating Karel Worlds, please refer to the [Karel World section](#). Karel items will automatically use the autograder to make sure student programs match the solution world after being run.

Quizzes

Quiz items consist of one or more multiple choice questions. For each question you can add multiple answers and for each answer you can optionally add a message that will be shown to the student if that answer is chosen. Make sure to click the blue "Save Question" button when you're done editing.

The screenshot displays the quiz editor interface. At the top, it shows "Question #1:" followed by three buttons: "SAVE QUESTION" (blue), "CLONE" (orange), and "DELETE" (red). Below this is a text area for "Question Text" containing the placeholder "Question Text Here".

The main section is titled "Hide (2) Answer Choices" with a dropdown arrow. It contains two answer choice rows. The first row is labeled "INCORRECT" on the left and has a red vertical bar. It includes a text input for "Answer Text" and a text input for "Message Displayed Upon Answer" with a close button (X) on the right. The second row is labeled "CORRECT" on the left and has a green vertical bar. It also includes a text input for "Answer Text" and a text input for "Message Displayed Upon Answer" with a close button (X) on the right.

At the bottom of the answer choice section is a blue button labeled "+ ADD NEW ANSWER CHOICE".

Clicking on an answer that is "Incorrect" will toggle it to be the "Correct" answer and will toggle all other answers to be "Incorrect."

Notes and Resources

Notes and resources are the simplest type of custom content that you can create. Notes consist of just text, so you will be given a text area to write your notes and viewing the item will show the text (markdown is supported). Resources are Google Docs that you may have created already. You will need to know the doc ID. For example here is the url for this google doc:

https://docs.google.com/document/d/1yw_gN88iGug70Y8diWjEdO865clswUtS23NpCsXwPBs

The section in green is the part of the url that you want to enter in to add it to the resource item.

Videos

There are two options for creating video items. You can either enter in a YouTube ID or you can enter in a Vimeo ID. Students will be able to choose whichever option you make available. Along with the video you can add presentation slides if they are available. Similar to the resources, it requires a doc from Google. For the slides you can enter either the doc ID or you can paste in the whole url.

Free Response

Free response items look very similar to a regular exercise or challenge, but don't have anything to run. The answer to the question will just be entered to the editor, all you have to do is provide the question for the item.

Unit Test

Unit Test items are very similar to exercises but require solution code to work. You will be able to create test cases to test student code against the saved solution code. Once you have saved solution code, the option to add test cases will show up in the Autograder section below the code editors.

Unit Tests SAVE TESTS

doubleNum (12)

doubleNum (-8) ✖

ADD TEST CASE

The function name used to make the test call will be determined from the saved solution code. If the function name shown is not correct, check your solution code to make sure you've written it correctly. Enter the parameters for the test case in the input box, using commas to separate each parameter. After editing test cases a "Save Tests" button will appear, make sure to click this button to save the changes you've made. Adding a test or removing a test will also save all the tests.

In the editor, students will be shown the test cases that you've created. Once they've written their code they will be able to test it against the solution code that you've written. The screenshot on the right shows what students will see on the editor page.

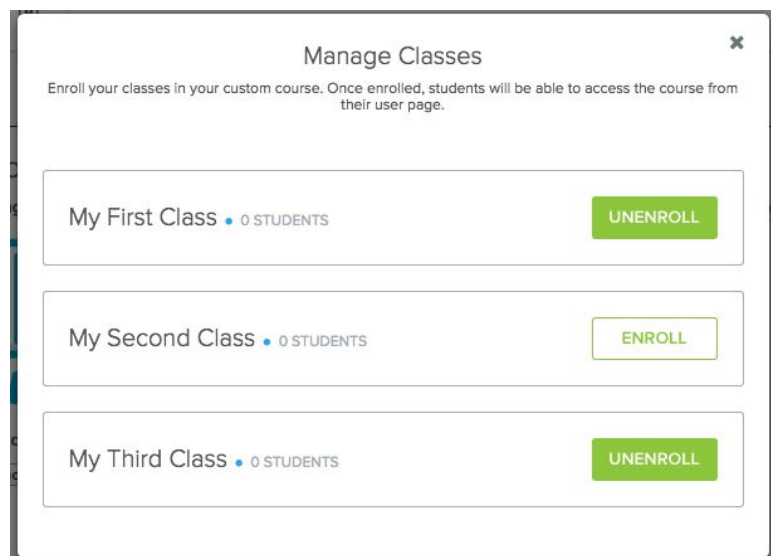
Unit Test Results

▶ RUN CODE	EXPAND ALL	MINIMIZE ALL
Test	Pass	Message
doubleNum(12)	✘	Not quite
Expected result:		24
Your result:		-16
doubleNum(-8)	✔	Great!

Class Enrollment

Each course has its own permissions, so you can enroll each class individually in a course. In this way you can have a different course for each of your classes or even restrict access to the course only at certain times. You can access enrollment options at any time by clicking on [MANAGE CLASSES](#) which can be found on the course management page or in the navigation bar at the top of the course editor.

This will bring up a popup as pictured on the right. You can toggle enrollment by clicking on the green buttons, filled in buttons means the class is in enrolled in the course, while transparent buttons indicated classes not enrolled in the course.



Karel Worlds

To create your own Karel Problems with custom Karel Worlds. First choose either JavaScript or Java and then choose a Karel type. Near the bottom of the editor you will see this  button, which will take you to the Karel World Editor

As shown on the right, your problem will by default have a world created already. Clicking “Add New World” will create a world that by default will be a “Custom World.” These world will only show up for you when you are looking at the item, and will show up in the “Custom Worlds” section shown in the screenshot to the right.

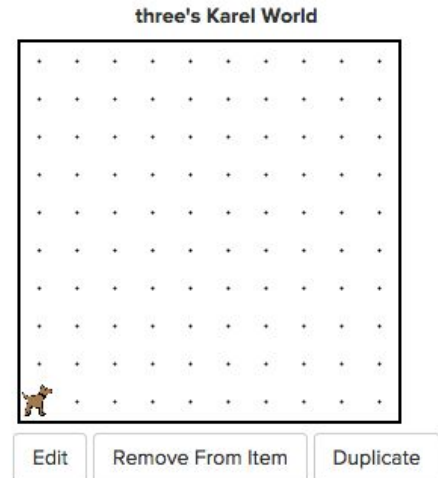
To create worlds viewable to your students you will need to publish the world. If the world you are editing has not been published to the item you will see a “Publish” button near the bottom. Once published, your students will also be able to view this new world.

You can add a solution to a custom world while you are editing it by clicking on the “Create Solution” button. This will create a duplicate of the world you are working on as a base for your solution world. The solution world should not be published and will automatically be attached to the original world. When editing the main world as shown in the screenshot below, the solution world will now appear below the main world.

If you’ve created an UltraKarel problem you will be able to also add colored squares to the world. The rightmost option will be the color menu, shown here on the right. The random color option will show up as a rainbow square but Karel can’t actually paint a rainbow square. The program will be correct if the square ends up being painted any color.

three

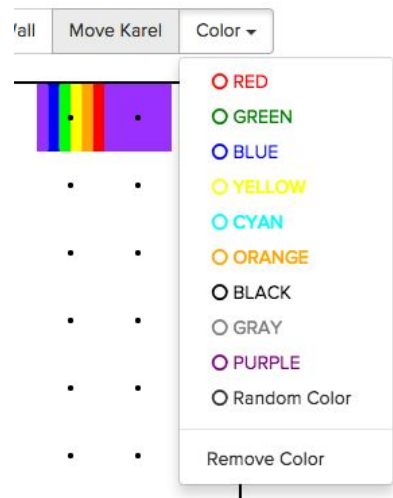
Public Worlds



Custom Worlds

You have no custom worlds.

[ADD NEW WORLD](#)



Name

Karel start row

Karel start column

Karel world width: 10

Karel world height: 10

Karel start direction

Make sure to publish the world

Select action

Solution

Extra Features

Releasing Items

By default every item that you create will be accessible to your students. To hide a specific problem you can toggle the switch controlling whether the item is released or not. The switch is located below the section where you choose the item configuration, as shown in the screenshot to the right.

Students will still be able to see that the item exists in the lesson, but will be

Item Type

Exercise
 Challenge
 Example

Programming Language

JavaScript
 Python
 SQL
 HTML

Program Type

Karel
 SuperKarel
 UltraKarel

RELEASED

redirected to a page stating that the items is not accessible at the moment. As the creator of the item you will still be able to view it and test it out before it has been released to your students.

Moving Items between Modules

Below the title for each item you will notice a button that says “Move to Another Module.” This will allow you to move items between modules, so if you want to copy an item into another module, you can first duplicate it and then move the copy to the other module. Moving the item will delete it from the current module and move it to the end of the last lesson of the new module.

When you click on the button you will be presented with a dropdown of all the modules that you’ve created. They will be organized based on course to make it easier for you to find the one you want. You will see a green box pop up in the top left corner of your window if moving the item was successful. The box will be read of the item was not moved.

