Gather Food - Winter is Cor

plugged

# OVERVIEW

Students write JavaScript on getcoding.io to solve increasingly difficult challenges involving moving a squirrel to gather nuts.

## OBJECTIVES

1. Students write basic JavaScript to solve simple navigation problems.

## AGENDA

### Length: 45 minutes

1. Warm-up
2. Help the Squirrel Gather Acorns
3. Pair Idea Exchange
4. Resume Helping the Squirrel Gather Acorns
5. Unplugged Exit Ticket

## VOCAB

Code Editor - The place where coders assemble their program.

## MATERIALS

1. Lesson 8 | Warm-up Worksheet
2. Lesson 8 | Exit Ticket

3. Laptops/Computers
4. Scratch paper grids
5. Small turtle cutout for each student
6. Magnetic turtle
7. Scratch paper grids
8. Pencils
9. Whiteboard

# WARM-UP

**Length: 10 minutes**

Students practice writing basic javascript to create a simple Pixel Bot drawing.

Prep: Hand out Lesson 8 | Warm-up Worksheet

| Teacher Actions | Student Actions |
|---|---|
| **1** Individual Work: Ask students to write the code to produce the Pixel Bot image in the [Lesson 8 \| Warm-up Worksheet] [warm-up]. Consider reminding students of the proper JavaScript syntax (see Elements on the worksheet). | **1** Students individually fill out the Warm-up Worksheet. |
| **2** Draw the Pixel Bot image on the whiteboard and code the solution with the students, randomly calling on one student at a time to provide each next line of code. (Note the problem can be solved in different ways. Students should follow the class' ongoing code which may differ from their own solution). | **2** If called on, students call out the next line of code. |

# HELP THE SQUIRREL GATHER ACORNS

**Length: 15 minutes**

Students write code in JavaScript on the getcoding.io platform to help the squirrel gather acorns. Students are practicing simple sequences.

Prep: Have the getcoding.io platform open on your browser and projected on the wall. Students should also have their own computers.

| Teacher Actions | Student Actions |
|---|---|
| 1   Walk students through the getcoding.io platform. Show students how to:<br><br>• open activities<br>• use the Code Editor (where to type)<br>• see elements<br>• run code<br>• step through the code one line at a time<br>• change the speed | |
| 2 | 2 |

Ask students to browse to getcoding.io and start moving through the challenges in the Calling Functions squirrel activity. Explain the goal of the activity: Move the squirrel to the nut and pick it up. Tell students they are free to continue on to the second squirrel challenge when they are ready.

Students start solving the challenges in the Calling Functions squirrel activities.

**3** When students get stuck, we suggest using the Read, Write, and Debug protocols to support students. Ask students to imagine being on the Coder team from the group activities. They should try to play the roles of the writer and navigator. Then, ask students to imagine being a Bot to understand how the computer reads the code.

# PAIR IDEA EXCHANGE

**Length: 5 minutes**

Talk with a peer about how the code is working.

Prep: None

| Teacher Actions | Student Actions |
|---|---|
| **1** Ask students to pause their progress and talk with a neighbor about their current problem. What is their plan? What have they tried? Is there anything standing in their way? Important: Ask students to offer questions instead of solutions. | **1** Students pause their progress and talk with a neighbor about the problem they are currently trying to solve. |
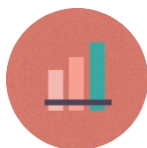
# RESUME HELPING THE SQUIRREL GATHER ACORNS

**Length: 10 minutes**

Students continue writing code in JavaScript on the getcoding.io platform to help the squirrel gather acorns.

Prep: None

| Teacher Actions | Student Actions |
|---|---|
| 1  Ask students to resume coding individually in the Calling Functions squirrel activity. | 1  Students resume coding. |

# UNPLUGGED EXIT TICKET

**Length: 5 minutes**

Students individually fill out an exit ticket focused on simple sequence.

Prep: Hand out Lesson 8 | Exit Ticket.

| Teacher Actions | Student Actions |
| --- | --- |
| **1** Individual Work: Ask students to fill out the Exit Ticket. Draw their attention to the Elements on the Exit Ticket worksheet because they differ ever so slightly from the squirrel elements. | **1** Students fill out the exit ticket. |