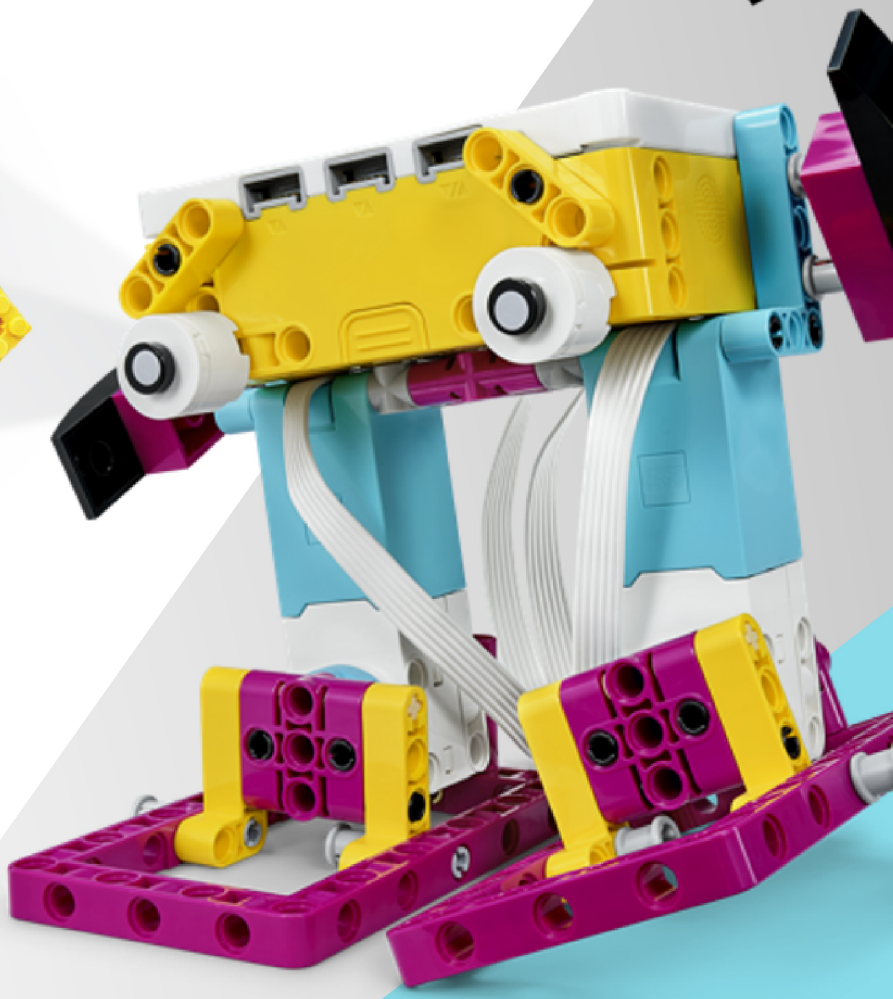
SPIKE™ Prime

Projects

6



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LESSON PLANS

Teacher Guide

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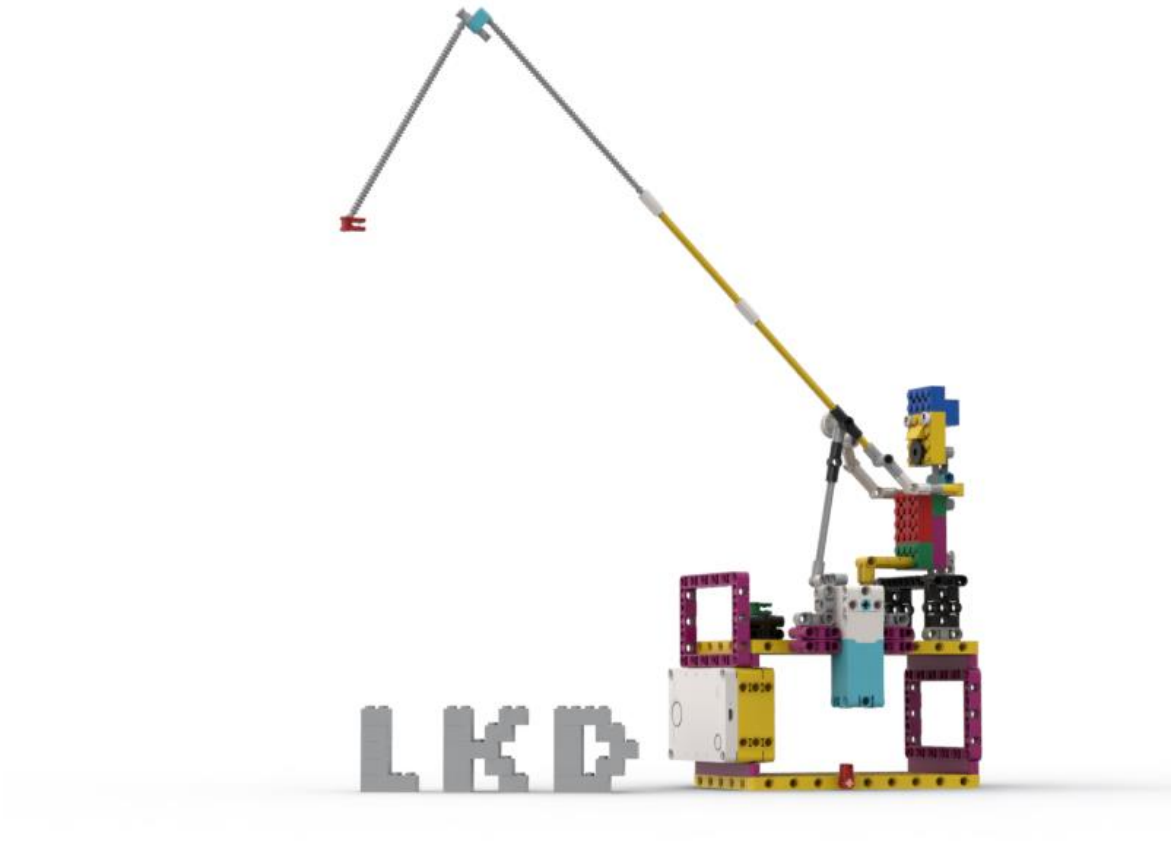
Fisher Man

Teacher Book - SPIKE Prime Project

Can you be a hunter gatherer?

Recreational fishing is fishing for pleasure or competition. It can be contrasted with commercial fishing, which is fishing for economic profit, or subsistence fishing, which is fishing for survival.



Ignite a Discussion

Start a discussion by asking relevant questions, like:

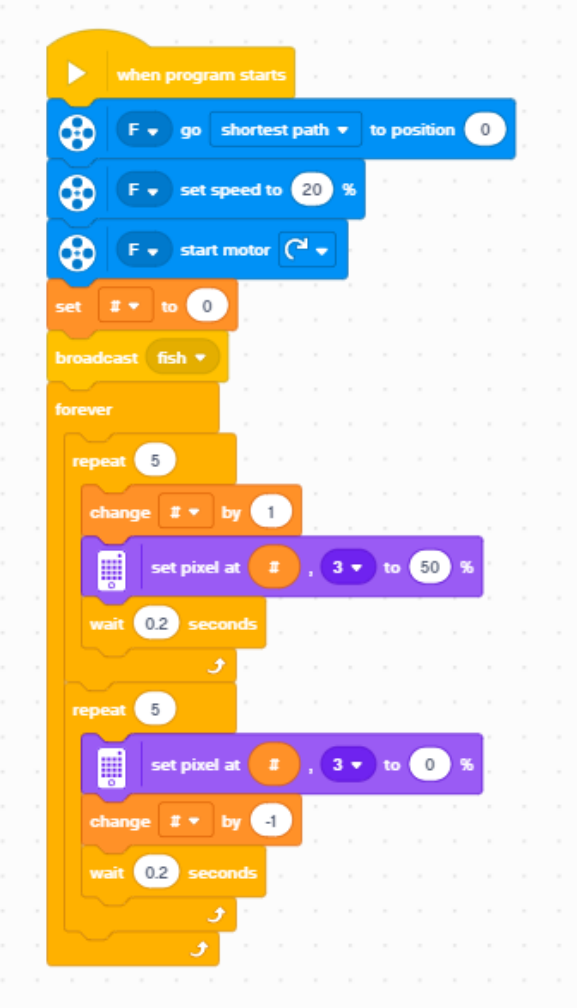
- What are the qualities of a good fisherman?
- Why is patience and the art of intelligent waiting important?
- What did hunter gatherers do to sustain themselves?

Have your students watch the video to see what they are about to do.

Build your Fisher Man.

This fisherman is here to catch some fish.

Let's try this code first.



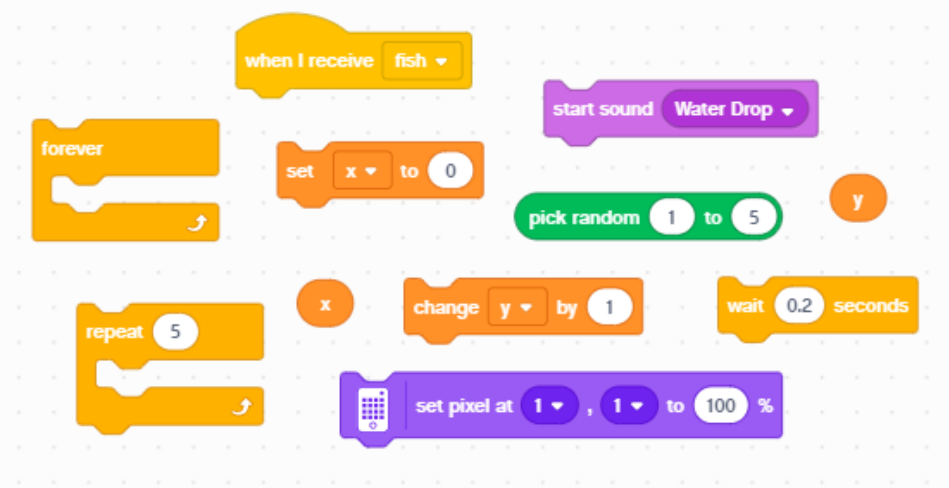
This program will display the fishing rod on the screen.

Now go fish.

Display a fish on the screen as a pixel of 100% brightness that randomly appears on the first row (y-coordinate =1 and x-coordinate=random 1 to 5.) and make the fish swim across the screen (change y by1.)

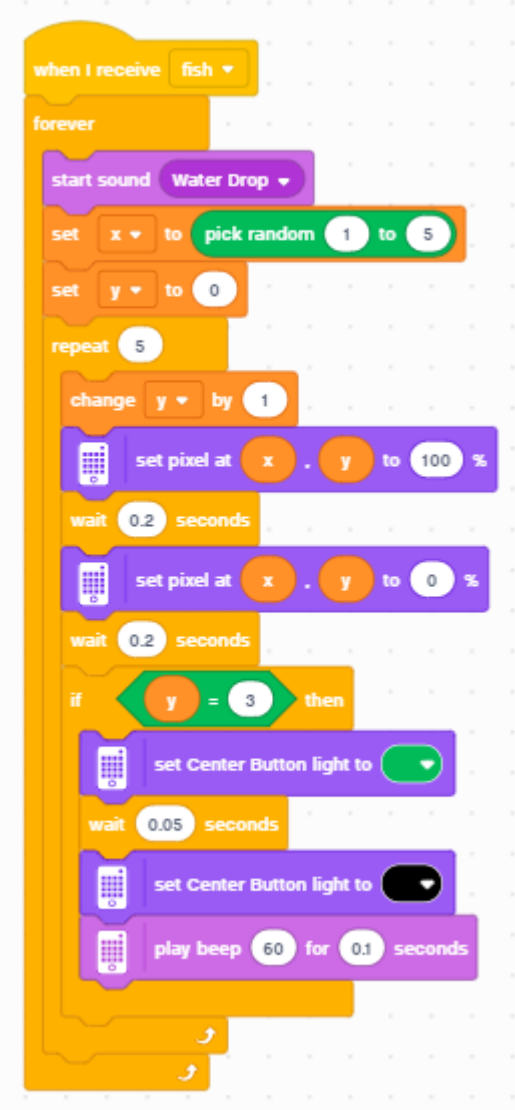
When the fish touches the fishing line that is on the screen light up the center button to green light.

(HINTS)



Think about using these code blocks.

Possible Solution



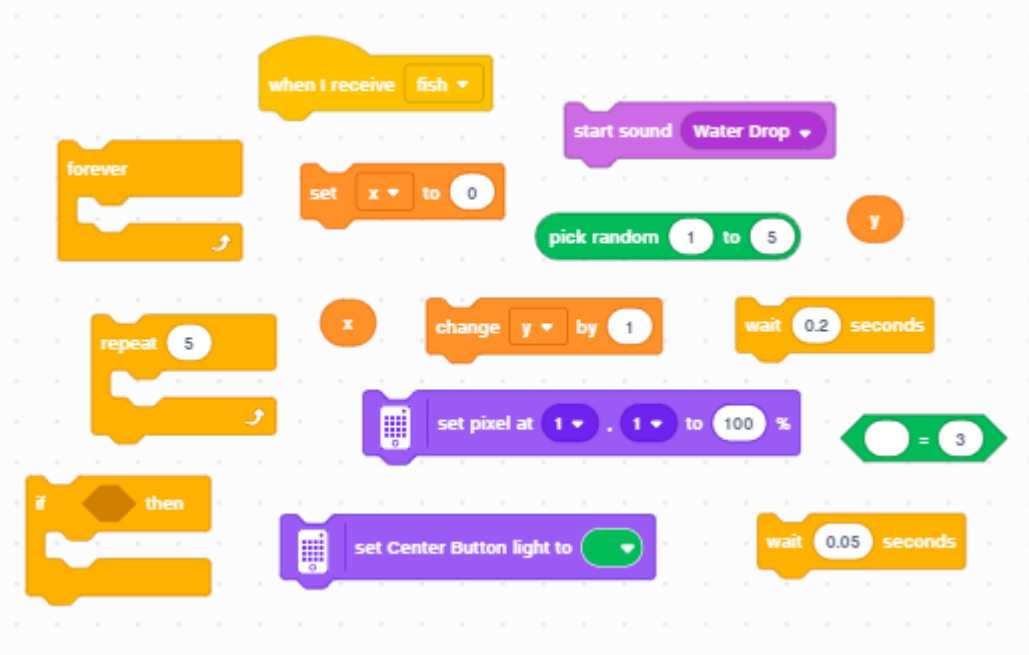
1. **When message Fish is received**
2. **Forever set x to random number 1 to 5 and y to 0**
3. **Repeat 5 times to light up the fish pixel x,y and if y=3 (fish touching the fishing line) turn on green center button light**

EXTRA CHALLENGE

School of Fish

Display another fish on the screen.

(HINTS)



Think about using these code blocks.

Differentiation

Simplify this lesson by:
- Play a sound every time the fish touches the fishing rod.

Take this lesson to the next level by:
- Think of a way to create a scoring system for every time you catch a fish.

Assessment Opportunities

Teacher Observation Checklist

Create a scale that matches your needs, for example:

1. Partially accomplished
2. Fully accomplished
3. Overachieved

Use the following success criteria to evaluate your students' progress:
- Students can describe the function of an object.
- Students can describe the benefit of an object's features against needs.
- Students can construct effective arguments.

Self-Assessment

Have each student choose the brick that they feel best represents their performance.

- Blue: I can describe how things work
- Yellow: I can describe in detail how things work and I can highlight what it's good at.
- Violet: I can convince someone that I've invented the coolest thing in the world.

Peer-Assessment

Encourage your students to provide feedback to others by:

- Having one student score the performance of another using the colored brick scale above.
- Asking them to present constructive feedback to each other so that they can improve their group's performance during the next lesson.

You're hooked!