

Adventures in Math Land

Number Sense Using Scratch Jr.

By: Jen Perry

Duration: 60 minutes

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 1-3	Math and Technology	Across Canada	Scratch Jr.

Overview

As a culminating activity of a place value math unit, students will use their understanding of numeracy (including odd/even, place value, skip counting and greater than or equal to) to create a Scratch Jr. game.

Prep Work

- Students should have previous experience with Scratch Jr.
- Students should have had practice with numeracy skills including place value (tens and ones with students), skip counting, spelling number words, and greater than and less than.
- Photocopy student response sheets for each student or pairs.

Lesson

Depending on Ipad availability, this lesson can be completed in pairs, individually or set up as a math

Key Coding Concepts

- ✓ Algorithms

Terminology

Algorithm

A step-by-step set of operations to be performed to help solve a problem.

Curricular Connections

Math Outcomes:
Number Sense

References

Scratch Jr Learning Blocks
Reference Guide

<https://www.scratchjr.org/learn>

centre.

1. Give students 10 minutes to freely explore Scratch Jr.
2. (2-5 minutes) Review Scratch Jr. motion, sound, looks, and triggering blocks. (see reference guide). These coding blocks can be displayed on a Smart TV or printed off.
3. Review (5 minutes) Hand out Math Land Student Response sheet to students; review and answer questions students may have.
4. Tell students that they are going to take Cat on an adventure to Math Land and must follow the directions in the response sheet. Using a pencil they should also complete the chart. When Cat is all done answering the questions, students can make Cat do a silly dance.

[/blocks](#)

Blocks to be printed

<https://www.scratchjr.org/pdfs/blocks.pdf>

Differentiated learning:

Pre-readers: Teacher could read out instructions. With support, students can complete the chart below.

Assessment

Assessment FOR Learning:

- Listen to students math conversations about number sense - are they talking about place value? Are they able to complete the response sheet independently?
- Listen to students use of coding language? Are they identifying the names of the blocks?

Assessment OF Learning:

- Review completed Student Response sheet.
- Teachers can also review Ipads and view Scratch Jr. game (students should record which Ipad they used on their response sheet)






Extensions




Students can write their own instructions using mathematical terminology and give to a peer to use to create their own game.

*Provide each student with this document. Adjust steps instructions according to curriculum outcomes and student abilities.

Name: _____

Ipad #: _____

Step	Instruction		Answer	Evaluation By teacher
1.	Add a green flag		-----	-----
2.	Have the cat move right an even number of steps that is less than 10. What is your number?	Move Right 		
3.	Have the cat move up an odd number of steps that is less than 20. What is your number?	Move Up 		
4.	Have the cat turn right a number that is less than 25 and more than 10. What is your number?	Turn Right 		
5.	Choose a background that has an even number of trees in it. How many trees does it have?			
6.	Have your cat hop any number of times that has a number 2 in the tens place. What is your number?	Hop 		
7.	Have the cat say the number word 7. How do you spell 7?	Say 		

8.	Have the cat say the number word 8. How do you spell 8?	Say 		
9.	Record yourself skip counting by 5s starting at 5 and ending at 100.	Play Recorded Sound 		
10.	Have your cat grow to a size that is less than 20 and has a five in the ones place. What is your number?	Grow 		

Congratulations Cat made it through Math Land!! Use the motion blocks to create your own a super silly dance!