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Lesson Plan Title: Using Scratch to Learn Pattern Recognition

Grade Level: 4th

Lesson Objective(s)
Students will be able to identify at least one pattern in a given scratch project in order to demonstrate their understanding of pattern recognition.

Vocabulary/ Academic Language (Language Function)
Pattern - Something that happens multiple times *Recognition* - Realizing that something exists *Identify* - Indicating what or who something is

Assessment/Evaluation
Formative (Informal): Students will demonstrate their understanding of the lesson objectives by identifying a pattern in the scratch program. Students will either get an incomplete or complete based on the effort they put into the activity.

Instruction

Set/Motivator: Show the students the scratch project (game) that they will be analyzing to get them interested.

Instructional Procedures/Learning Tasks:
1. Students will watch the scratch project run through once.
2. Students will open the scratch project on their own desktop computers.
3. Students will receive a worksheet with the following questions:
   a. What is the point of this game?
   b. Who/What are the two characters in the game?
   c. What is one of the patterns you can see in this game?
   d. Are there any other patterns you notice?
   e. Do you think the patterns are important to the game? Why?

Questions and/or activities for higher order thinking:
1. How are patterns important?

Closure: After the students hand in their assignments to be graded (complete/incomplete) the teacher will (1) ask the students what patterns they found and then (2) give the students the examples that were not found.

Material/Resources:
1. Scratch Program
2. Scratch Project
3. Desktop Computers (Classroom Set)
4. Activity Worksheet

Adaptations to Meet Individual Needs:
1. Students who are identified as ELL will be given the materials in their native language to help them complete the activity to the best of their abilities.
2. Students with IEPs will get modified instruction or materials to help them complete the activity to the best of their abilities.
    a. IE/ Students with a hearing issue may be given a scratch project that has a movement in place of the sound block so it is easily identifiable.

Management/Safety Issues:
1. Students should be constantly monitored in order to keep them on task as well as make sure they are using their computers in a safe and responsible way.