



Learning Ratios With *Star Wars*® Pit Droids®

Curriculum Connection: “Problem solving in Grades 6–8 should promote mathematical learning.” *Principles and Standards for School Mathematics*

Lesson Plan (Grades 5-8):

In *Star Wars Pit Droids*, go to Game Puzzles in the *Puzzle Chooser*. Choose Game Puzzles at the top, by clicking on that circle. Go to Training (the last entry on the list). Select the puzzle from the **Pit Droids Puzzle Chooser**.

In this puzzle, students will get practice with the Ratio Direction Arrow. These arrows redirect pit droids with a specific rule. For example, a 2:1 Ratio Arrow will redirect 2 pit droids, then allow 1 pit droid to pass, then redirect 2 more, etc.

Arrange students in pairs and let them solve the training puzzle. After students have played, give students a challenge.

Ask questions that deal with the conversion of ratios into fractions, decimals and percentages. They should be able to formulate solutions and use ***Star Wars Pit Droids*** to solve math problems creatively.

Ask them:

- If there were 100 pit droids, how many would go into each goal?
- What percent of the pit droids would be passing through if the ratio is 1:3?
- If $\frac{1}{5}$ of the pit droids successfully go through the puzzle, what percent would that be?

Have student pairs explain their problem solving strategies to the whole class.

For a challenging assignment, have students write out ratio problems to represent the number of pit droids that go into each goal for each puzzle they solve.

Try working the problem from a different angle. Have students design a puzzle where 30% of the pit droids need to end up at a particular goal. This would be more challenging due to the fact that they only have ratio arrows with which to work.

Now, challenge the groups to go on to play a game like Ratio/Patterns. (You'll find this puzzle using *Puzzle Chooser*, Game Puzzles in Mos Espa Market.)

(Thanks to educator Tim Evans for helping brainstorm teaching ideas for our products.)

