Lesson Plan Template

# Breakthrough Denver

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| **Getting Yourself Ready** | | | | |
| **Materials**:  Website: <http://sunshine.chpc.utah.edu/javalabs/java12/fnm/act1/lab.htm> | | **Your Preparation**: | | **Agenda (w/times)**:  Do Now(15 minutes)  Teaching(10 minutes)  Practice(20 minutes)  Homework(5 minutes) |
| **Getting Your Students Ready** | | | | |
| \***Do Now**: Practice calculating speed by completing the interactive lab on the screen | | | | |
| **Objective**: Continue practicing writing a Hypothesis  Learn Independent and Dependent variables  Should be more specific.  What will Students be able to do?  Identify the independent variable given a hypothesis? | | | **Proving behavior**: Identify the independent and dependent variable given a hypothesis or an experiment?  Your instruction is abou defining not identifying. | |
| **Purpose**: Understanding dependent and independent variables and being able create an experiment is an important science skill. Why? To design a good experiment, we need to only have one independent variable and one dependent variable. If I am measuring the effect of wearing Nike HiTop 3456s have on vertical leap. I need to use the same kid and different sneakers. Otherwise, if I use more than one kid, I wouldn’t be only be testing the shoe I would also be testing the kid. Also, if I tested how many times they could jump instead of just how high, I would be testing something else as well. Experiments need to be clean and to be clean you need one indep. And one dependent variable. | | | | |
| **Teaching** | | | | |
| Step 1: Introduce variables | Say: In order to create a successful experiment you have to think about what variables affect the lab. A variable is any factor, trait, or condition that can exist in differing amounts or types  See: Definition on the Science Word Wall  \*Do: Repeat the definition of variables  See above | | | |
| Step 2: Define Independent Variable | Say: There are three kinds of variables; Independent, Dependent, and Controlled. The first kind of a variable is the Independent Variable- the one that is changed by the scientist, only one independent variable in an experiment  See: Definition on the Science Word Wall  \*Do: Repeat the definition of independent variables  You should have some evidence here of how you will define for kids to understand. Evidence that you have come up with wordings that kids can latch onto. | | | |
| Step 3: Define Dependent variable | Say: The next kind of variables are dependent variables; dependent variables are the ones that change based off of the changes of the independent variables  See: Definition on the Science Word Wall  \*Do: Repeat the definition  Same here. | | | |
| Step 4: | Say:  See:  \*Do: | | | |
| Step 5: | Say:  See:  \*Do: | | | |
| Step 6: | Say:  See:  \*Do: | | | |
| **Practice** | | | | |
| \***Structured Practice** (3-4 additional examples led by teacher with gradually quickening pace, helping students approach automaticity by manipulating time, materials, and group size) | | | | |
| Time: 5 minutes  Materials:  Group Size: Individual | Example 1  Use the question that the class made a hypothesis for the day before and identify the independent variable | | | |
| Time: 5 minutes  Materials:  Group Size: Individual | Example 2  Use the question that the class made a hypothesis for the day before and identify the dependent variable | | | |
| Time:  Materials:  Group Size: | Example 3 | | | |
| Time:  Materials:  Group Size: | Example 4 | | | |
| \***Guided Practice** (the proving behavior of the objective monitored by the teacher) | | | | |
| Assignment: (from proving behavior)  Find the independent and dependent variable in the Independent vs. Dependent variable SpongeBob sheet | | | Criteria for Mastery:  Get three of the examples right | |
| Independent Practice (Homework) | | | | |
| Explain Homework:  For the Questions and Hypotheses that you wrote for homework the day before come up with an experiment with independent and dependent variables | | | | |
| **Closure** | | | | |
| Explain Closure: | | | | |

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| **VIP** | | |
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