Sample Problems for Univariate and Bivariate Data Lesson

The following example problems can be used to help students differentiate between univariate and bivariate data.

1. You have the ages of the 15 students at the park.
   - What type of data is it?
   - What would you use to display the data?
   - Write one sentence describing the data.

Student	A	B	C	D	E	F	G	H	F	G	H	I	J	K	L
Age	5	6	9	12	15	10	6	13	14	7	12	11	16	14	7

2. The teacher records students grades on a test and the number of days until their next birthday and wants to know if there is a relationship.
   - What type of data is this?
   - What would you use to display it?
   - Is there a relationship?

Student	Test Grade	Days until birthday
A	100	10
B	82	300
C	97	254
D	77	28
E	84	211

Answer to Sample Problems

1.
- Univariate data because there is only one this that varies: age.
- Box Plot, Stem and Lear, Bar Graph, or Pie Chart
- Student answers will vary, but some sample answers include:
  - The average age of the students at the park is 10 and a half.
  - There are two 12 year-olds, two 7 year-olds, and two 14 year-olds, but those are the only modes.

2.
- Bivariate data because both the test score and the number of days until the student's birthday are changing.
- Scatter Plot
- No relationship
- This is the graph from the **Regression** applet for this data: