

What am I learning today?

Main Ideas/ Questions

Scatterplot

Notes

**Scatterplots** – Displays a relationship between 2 quantitative variables measured on the SAME individual

\*\*\***Each** axis gets a variable and a LABEL

\*\*\***Each** individual will be represented as an ordered pair on the coordinate graph.

Explanatory and Response Variables

**Explanatory Variable (x)** – EXPLAINS or causes changes in the response variable; this is the independent variable

**Response Variable (y)** – Measures an outcome or result of a study; this is the dependent variable

**Examples:** Determine if there is a clear explanatory and response variable or if it is just a relationship between two variables.

a) The amount of time spent playing video games and a student's GPA.

EXPLANATORY: Amount of time playing video games  
RESPONSE: GPA

b) The height of a person and their shoe size.

EXPLANATORY: Height  
RESPONSE: Shoe size

c) A student's score on the Physical Science EOC and their score on the Geometry EOC.

EXPLANATORY: n/a      Just a relationship  
RESPONSE: n/a

d) The amount of subscribers on a YouTube channel and the number of views for their latest video.

EXPLANATORY: Amount of subscribers  
RESPONSE: number of views

**Main Ideas/  
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Examples

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**Example 1:** Construct a scatterplot for the following.

Ninth grade boys at a school go backpacking every fall. Before leaving, their backpack is weighed. Here's the data from 8 students one year:

<b>Body weight (lbs.):</b>	120	187	109	103	131	165	158	116
<b>Backpack (lbs.):</b>	26	30	26	24	29	35	31	28

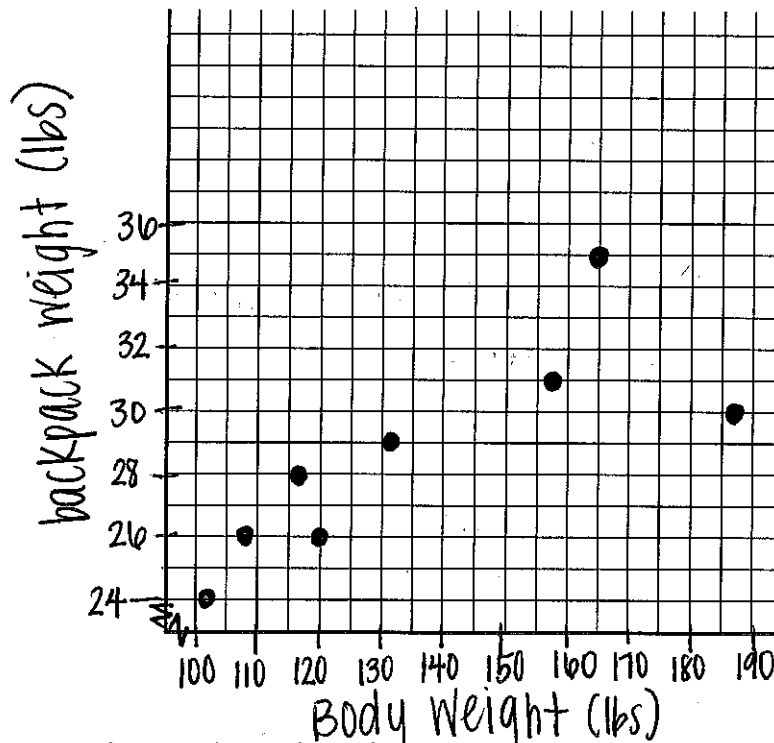
1. Decide which variable is the following:

Explanatory(x): *Body Weight*

Response(y): *Backpack weight*

2. Label and scale axes.

3. Plot individual data values.



4. Draw a conclusion about the relationship of body weight and backpack weight in complete sentences.

*As body weight increases, backpack weight increases.  
positive relationship.*

**Summary**

Summarize the lesson in your own words